

# TIME USE

GROUP - 3

Course: Introduction to Gross National Happiness | IIT KHARAGPUR

-By Dr. Saamdu Chetri

## ACKNOWLEDGMENT

First and foremost we would like to extend our gratitude to Professor Saamdu Chetri for providing us such a platform to work on Time use which will be beneficial to the whole IIT Kharagpur community. We also thank him for guiding us so well in the topic and really making the 'Gross National Happiness' subject very interesting. We would also like to thank all the people of IIT Kharagpur who cooperated with us and wholeheartedly took the survey.

The list can be found at this link:

<https://docs.google.com/forms/d/e/1FAIpQLSdj4VU9g2SlvOOG4SKGHedR5y34y-ZrLlfOjbtnUwKXkg9KLg/viewform>

We thank our group members for doing rigorous research on the topic of Time use, and also for constructive criticism and ideas without which this project would not have been possible. We also thank everyone who shared our form and thus helped to carry out our project.

## PROJECT MEMBERS

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## Gross national Happiness: A superset of Time use

GNH is a modern-day philosophy which quantifies the collective happiness and well being of a population. The phrase 'Gross national happiness' was first coined by the 4th King of Bhutan, King Jigme Singye Wangchuck, in 1972 when he declared, "Gross National Happiness is more important than Gross Domestic Product." The concept implies that sustainable development should take a holistic approach towards notions of progress and give equal importance to non-economic aspects of wellbeing. One of its variables is Good Governance which evaluates how people perceive governmental functions and evaluate public service delivery. It explores people's level of participation in elections and government decisions, and their assessment of various rights and freedoms.

The community envisioned in Gross National Happiness is set deeply in nurturing ecology, just as an individual is deeply bonded to a community.

The 2010 Gross National Happiness survey of 7,146 people asked them to rate their subjective well-being on a scale of 0–10. The national average was 6.066 for 2010 suggesting a very good level of happiness in Bhutan in spite of its being a least developed country with a low per capita income.



His Majesty the Great Fourth of Bhutan said that Gross National Happiness means "Development with Values", thus encompassing the four major themes –

Sustainable and equitable socio-economic development

Environmental conservation

Preservation and promotion of culture

Good governance.

Gross National Happiness evaluates the population on the domains –

Psychological well being

Health

Time use

Education

Cultural diversity

Good Governance

Community Vitality

Ecological Diversity

## INTRODUCTION

Time use analyses the nature of time spent on activities like work, leisure, care and sleep, and highlights the importance of maintaining a harmonious work-life Balance.

It measures how people experience and spend their time and how it affects our physical and mental Well-being.

Time use has 3 major characteristics:

### Working hours:

One needs to work for their living, to fill their stomachs and earn money to buy a home to live under and feed their family. Work is a crucial part of one's life. Many people have different jobs. They have different working hours. For example, a software engineer works for 9 hours a day. For students, education is the stepping stone to an occupation/job, so we consider education as their job.

8 hours is considered to be the ideal time one needs to spend in a day on their jobs

### Sleeping hours:

Sleep is clearly beneficial for a person's health and impacts nearly every area of daily life. In general, most adults need an average of seven to eight hours of sleep for proper functioning. But sleep requirements can vary substantially and some people, such as nuns and monks, would prefer and find it much healthier to devote more time to meditation and other spiritual practices than sleeping.

Eight hours is considered the amount necessary for a well-functioning body.

### Leisure hours:

A normal person has to have some time to take care of himself, doing his chores, helping his family, spending time on hobbies, movies, eating food and for hygiene. Leisure time is the time left in a day for the person apart from work and sleep. If a person works for long, he gets low leisure period

Ideally, a person needs to spend the remaining 8 hours for his health maintenance and other activities.

### Work-life balance:

There is a complex relationship between work and personal life of individuals. In the present context, the concept of Work-Life Balance (WLB) has gained immense significance. We define Work-life balance as satisfaction and smooth functioning at work and home without any role conflict. Work-life balance can be defined as a measure of proper control as to how, when and where people work. Proper work-life balance can be achieved when an individual is able to fulfil all his/her needs in respect to family, work and society. Within the social sciences, there is much contemporary concern regarding work-life balance.

With increasing demands and pressures of work-life, conflicts between work and personal roles seem to be increasing. Changing demographics of the workforce has been the primary force for the increased focus on family-work issues. Organizations, where there is sound work-life balance practices and policies, experience better financial outcomes. These benefits include: lower rates of absenteeism, increased productivity; improved customer experience; improved recruitment and retention; reduced overheads; more motivated, satisfied and equitable workforce. Work-life balance is a term that is always used in the context of employees, but nowadays students are also overburdened due to their academic workload and career issues. All this adds to the stress among students leading to imbalanced work-life equations. Thus, there is a need to study work-life balance issues, vis-à-vis students.

A student will be having a perfect work-life balance if he spends 8 hours each on academic work(study), sleep and leisure.

## Initial Research

The Ministry of Statistics and Programme Implementation (MOSPI) has done a time use survey in 6 states of India, namely Haryana, Madhya Pradesh, Orissa, Tamil Nadu, Gujarat and Meghalaya. Their extensive research consisted of mappings out time usage of people in various activities, such as product-related activities(labelled as SNA activities), household activities and taking care of elderly, children, etc(labelled as extended SNA activities), and personal care activities and learning(labelled as non-SNA activities). There were also data showing how men and women varied in their time usages across various activities.

Their findings showed that an average person spends 71% of their time in non-SNA activities, ie personal care, leisure and learning(or studying, in case of a student).SNA and extended SNA activities contributed to 18% and 11% of their time respectively.

Another interesting fact was the use of time for personal care. It was discovered that people in the age group 15-59 gave 95 hours a week to personal care, as compared to 98 hours for ages 6-14 and 124 hours for people above the age of 60.

The survey also showed that women in 4 states slept for 2 hours less than men and also gave less time to personal care than men. It was however noted, with some measure of happiness, that both men and women spent about 45 min per week on meditation.



However, this study took into account people of all age groups and walks of life, which made it difficult to gauge how an average student spends his/her time. So we looked into another study, this time focusing on college students. The below table shows the results of the aforementioned study:

Sleeping	8.7 hours
Leisure and sport	4.1 hours
Educational activities	3.3 hours
Working and related activities	2.4 hours
Other	2.3 hours
Traveling	1.4 hours
Eating and drinking	1.0 hour
Grooming	0.8 hour

## Time use at IIT KGP

Based on our interpretations from the above 2 studies, we came up with 8 indicators which we felt best depicted the time students of IIT Kharagpur spent their time.

### Indicators

#### 1. Studying and related activities:

Studies are of course an important part of college life and thus an essential indicator of how a student spends time on his/her education.

#### 2. Sleep:

Sleep is another integral part of life. Without getting a proper amount of sleep, no one can give their best performance.

#### 3. Social Media:

Since the rise in popularity of smartphones and the spread of the internet, social media has become a hub of information and communication tools essential for a college student.

#### 4. Physical Health:

Physical activities are necessary to blow off steam and to ensure the physical well-being of a person. We might feel lethargic to do some physical exercise but it is very important. Physical exercises activate the brain and allow it to function to the fullest. One needs to spend time on physical exercises

## 5. Social Interaction:

Likewise, interacting with friends and family is important for the mental well-being of a person and is a way to lighten the mood when someone is feeling down.

## 6. Mental health:

Mental health is very crucial but ignored by many people. Mental health plays an important role in one's life because the healthier one is mental, the happier he is and the better he can thrive through pressures. We need to have regular practices of meditation/yoga to keep our minds healthy and bring peace into our lives.

## 7. Eating:

Nutrition is essential for any living being to survive and we as humans need to take time to eat, the time one spends to eat also affects their health. One should take time to eat food but shouldn't be taking hours to complete a meal.

## 8. Extra-curricular activities:

To blow some steam off of working pressures and family pressures one needs some entertainment to relax his mind, meditation will relax us but, we need to take our mind away from that and extracurricular activities do that. So One needs to be engaging in extracurricular activities frequently.

## METHODOLOGY

- Taking into consideration the indicators mentioned before, we decided to conduct a survey focused towards IIT Kharagpur students to get accurate results for the time use questions in order to see how the pandemic has affected their time usage and work-life balance.
- We prepared a form that contained various research questions asking about how much time they daily spends on each activity.
- Then a Google form was created and circulated through WhatsApp and other messenger groups to as many students as possible requesting them to diligently fill the form.
- We tried to collect the responses from students of different departments so that our study would be based on a much larger set.
- Then after acquiring sufficient data, we analysed and plotted the graphs and noted some significant trends in that and we noted down as survey results

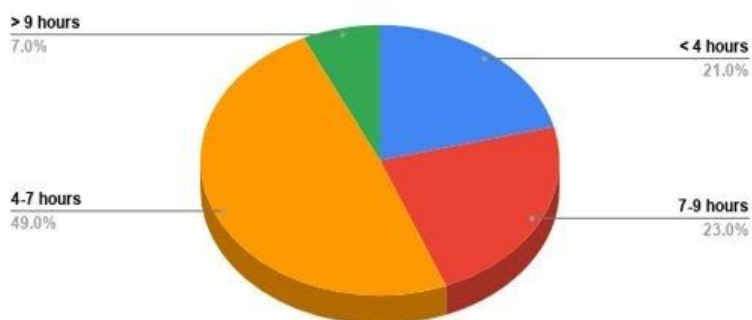
TOTAL RESPONSES : 100

Access all responses [here](#)

## SURVEY DATA

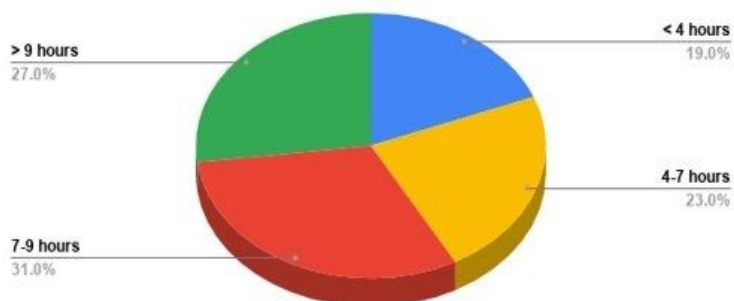
### Before pandemic

How much time did you spend on studying and attending classes?



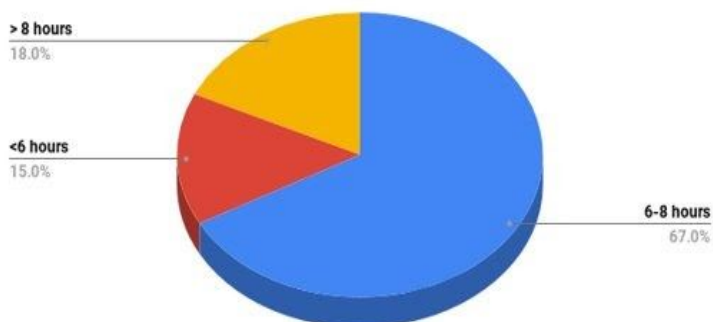
### During pandemic

How much time do you spend on studying and attending classes?



### Before pandemic

How much sleep did you get everyday?



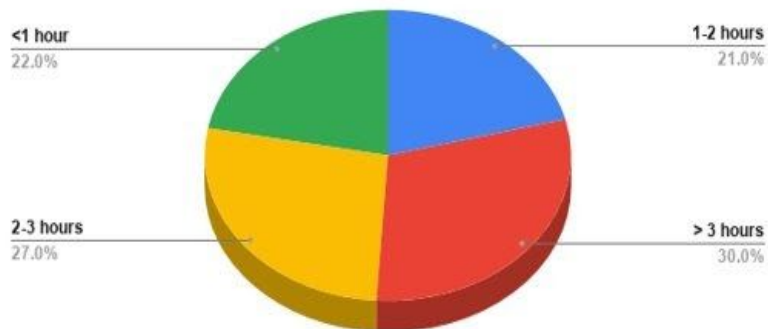
### During pandemic

How much sleep do you get everyday?

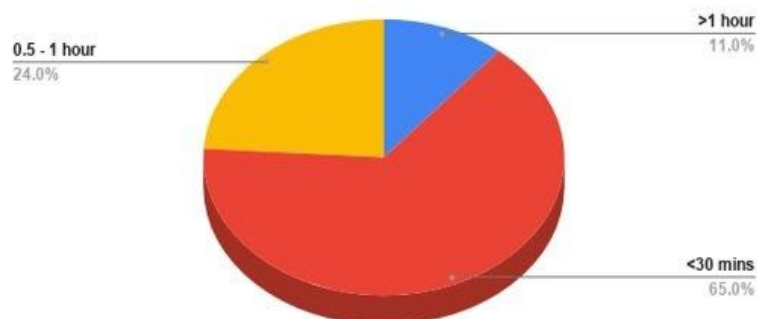


Before pandemic

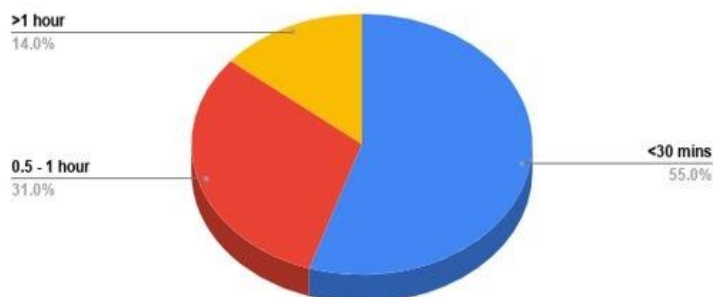
How much time did you spend with your friends and wing mates?

During pandemic

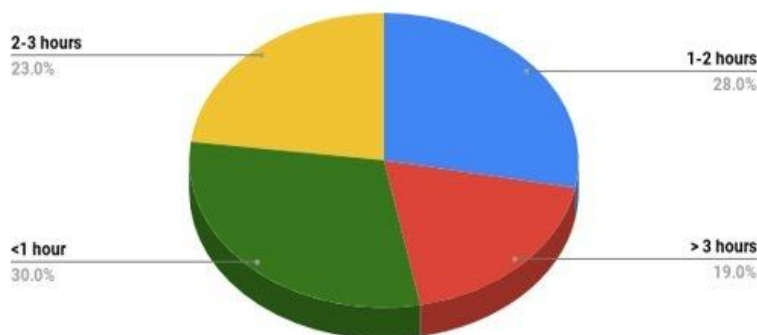
How much time do you spend interacting with your friends?

Before pandemic

How much time did you spend interacting with your family?

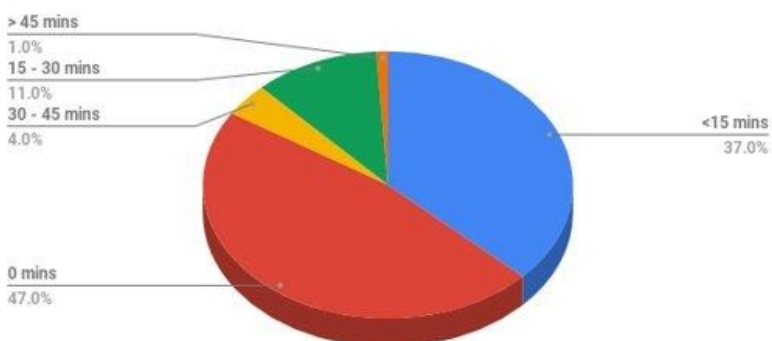
During pandemic

How much time do you spend with your family?



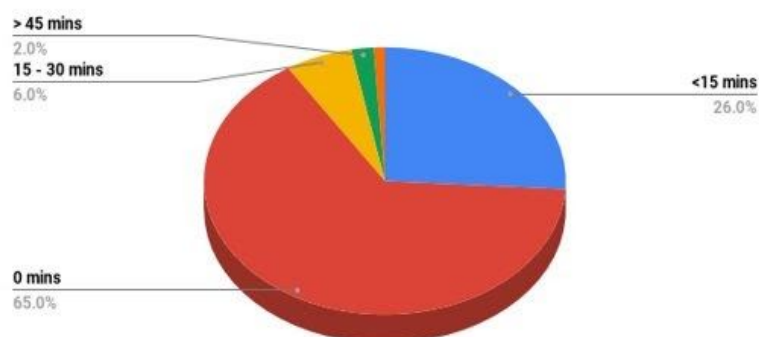
### Before pandemic

How much time did you devote to meditation and relaxation practises ?



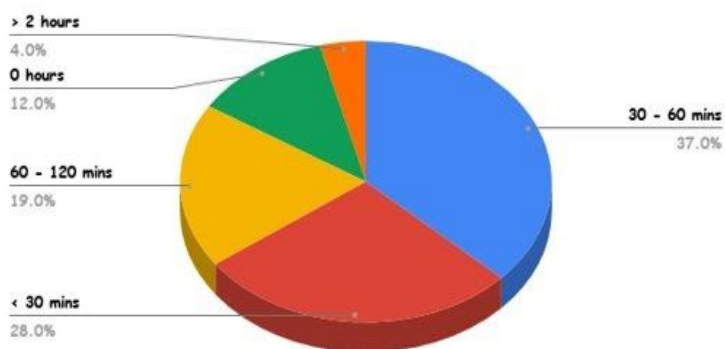
### During pandemic

How much time do you devote to meditation and relaxation practises ?



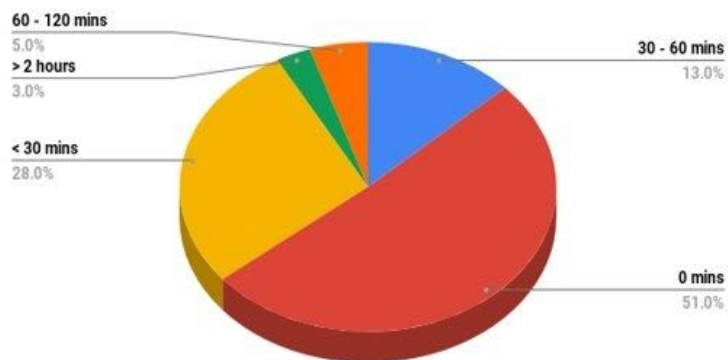
### Before pandemic

How much time did you spend playing games and sports?



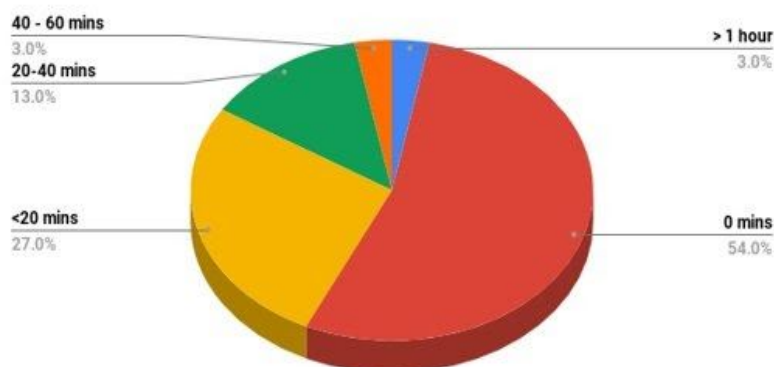
### During pandemic

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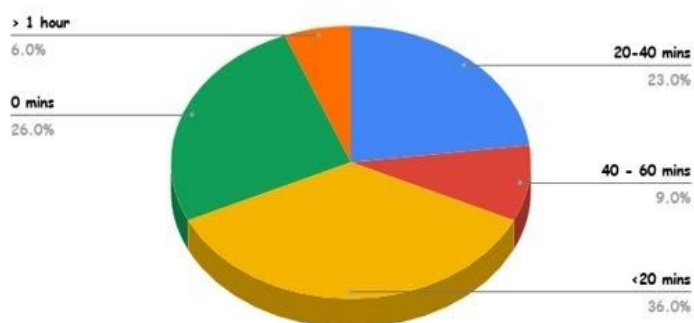
### Before pandemic

How much time do you spend exercising/cardio everyday?



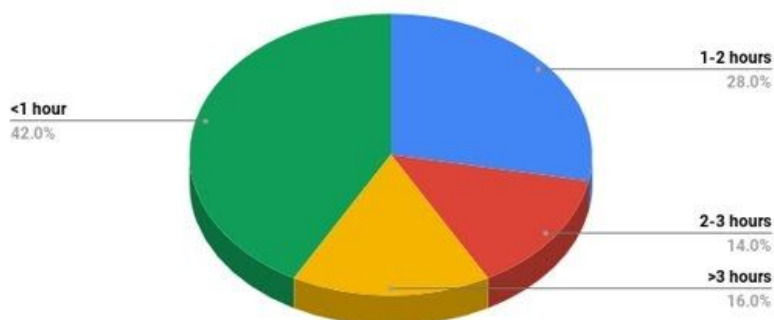
### During pandemic

How much time did you spend exercising/cardio everyday?



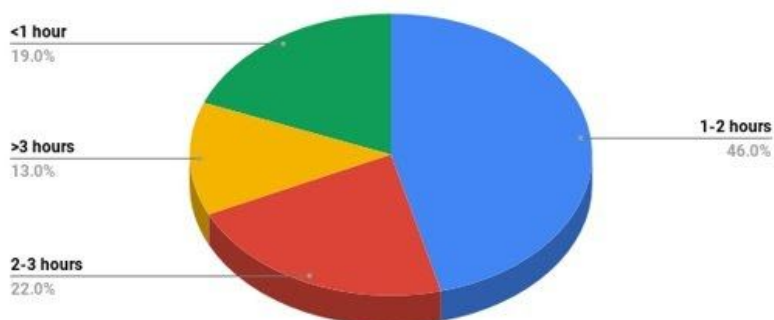
### Before pandemic

How much time do you spend on social media ?



### During pandemic

How much time did you spend on social media ?

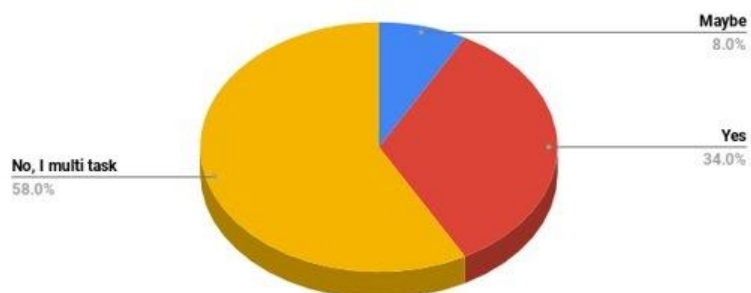
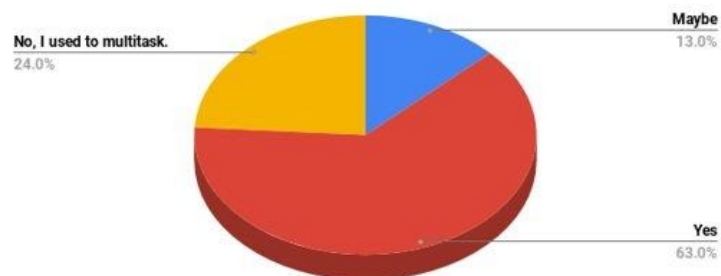




Before pandemicDuring pandemic

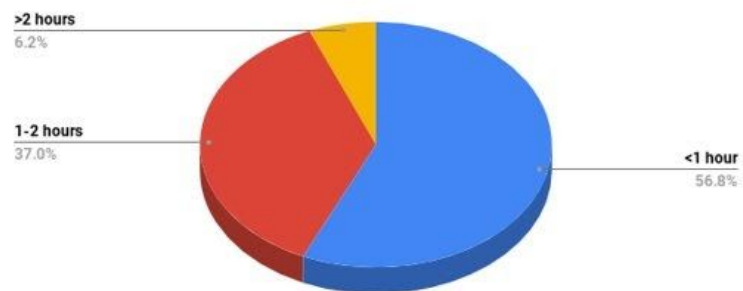
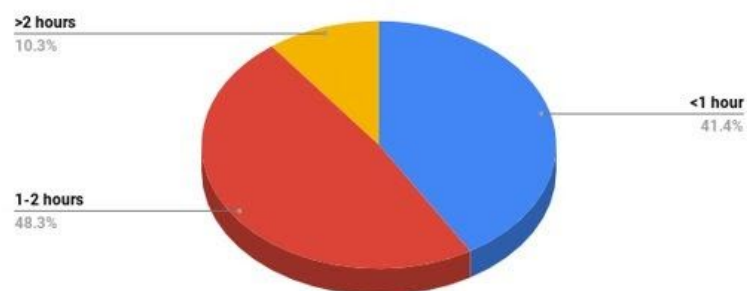
Have you dedicated time for lunch and breakfast or you used to multitask?

Do you dedicate time for lunch and breakfast or do you multitask?

Before pandemicDuring pandemic

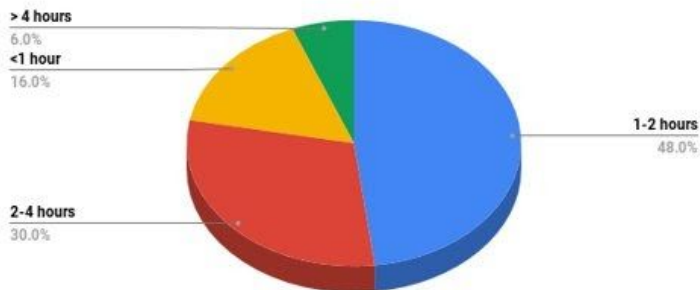
If yes, How much time did you spend on your nutrition intakes (per day)?

If yes, How much time do you spend on your nutrition intakes (per day) ?



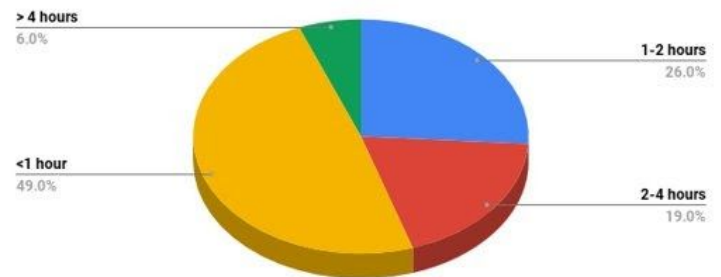
## Before pandemic

How much time did you spend on doing extra curricular activities like movies and music, mobile games etc.?



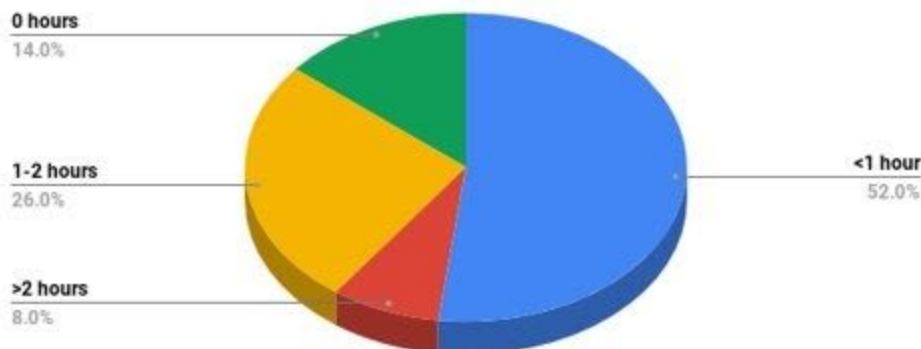
## During pandemic

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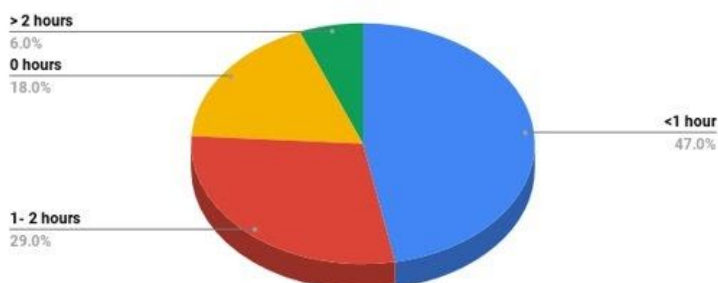
## During pandemic

How much time do you spend on doing home chores / helping your family?



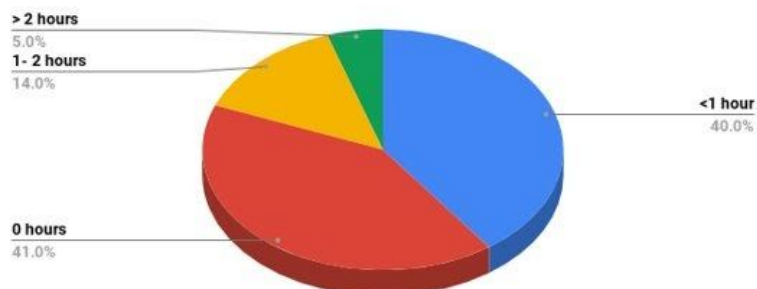
### Before pandemic

How much time did you spend on your hobbies (other than already mentioned) / following your passion ?



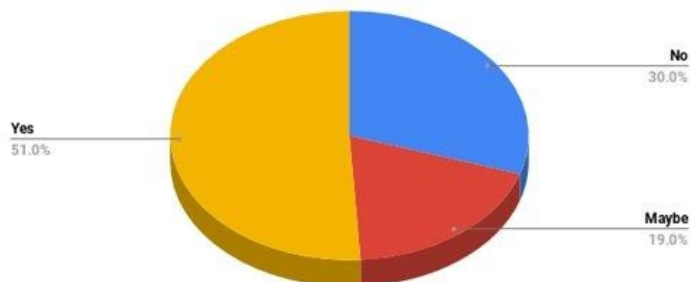
### During pandemic

How much time do you spend on your hobbies (other than already mentioned) / following your passion ?



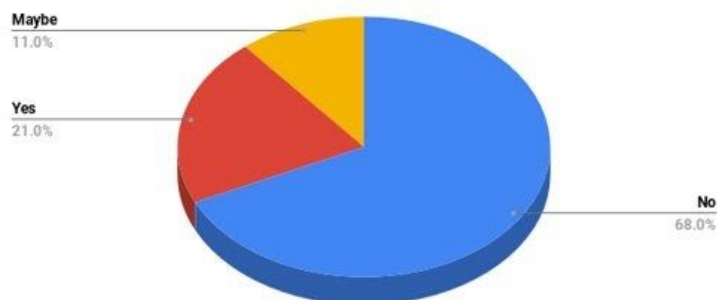
### Before pandemic

Do you feel you had enough time each day for yourself?



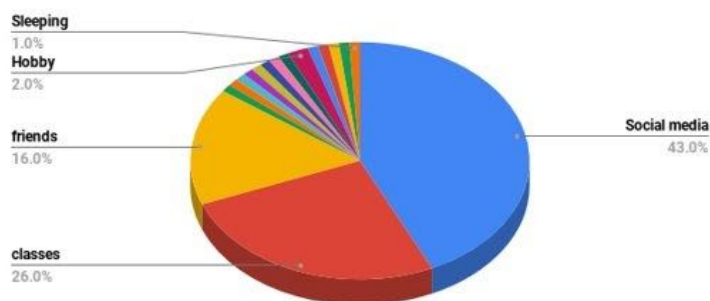
### During pandemic

Do you feel you have enough time each day for yourself?



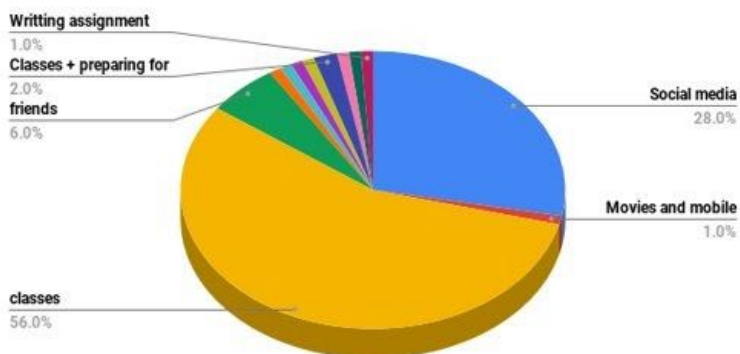
### Before pandemic

Where do you feel you have devoted more time than is required?



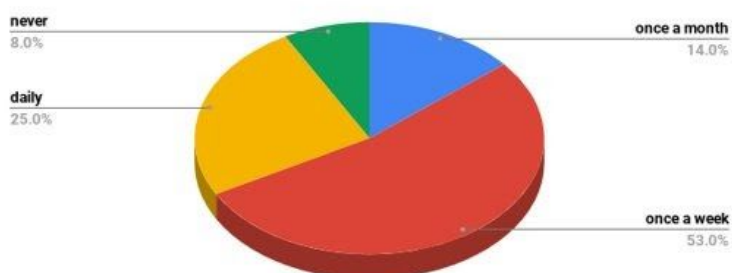
### During pandemic

Where do you feel you devote more time than is required?



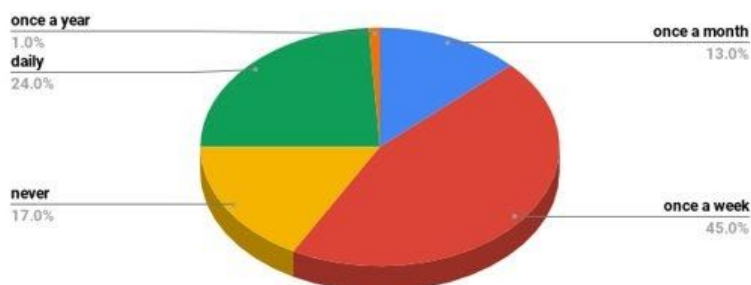
### Before pandemic

How frequently did you take some time off to recharge your batteries, de-stress yourselves and self reflection?



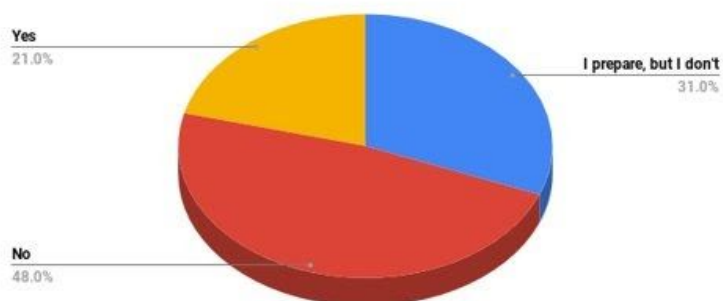
### During pandemic

How frequently do you take some time off to recharge your batteries, de-stress yourselves and self reflection?



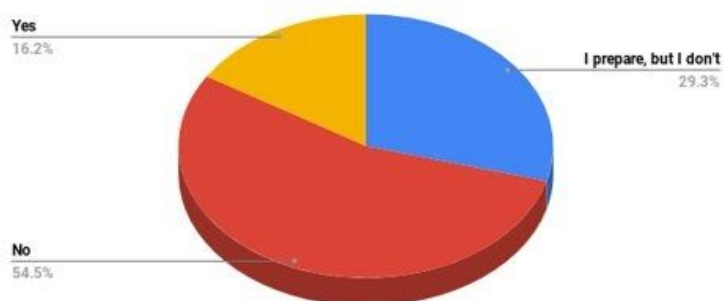
## Before pandemic

Did you organize your time daily (i.e prepare a time table) ?

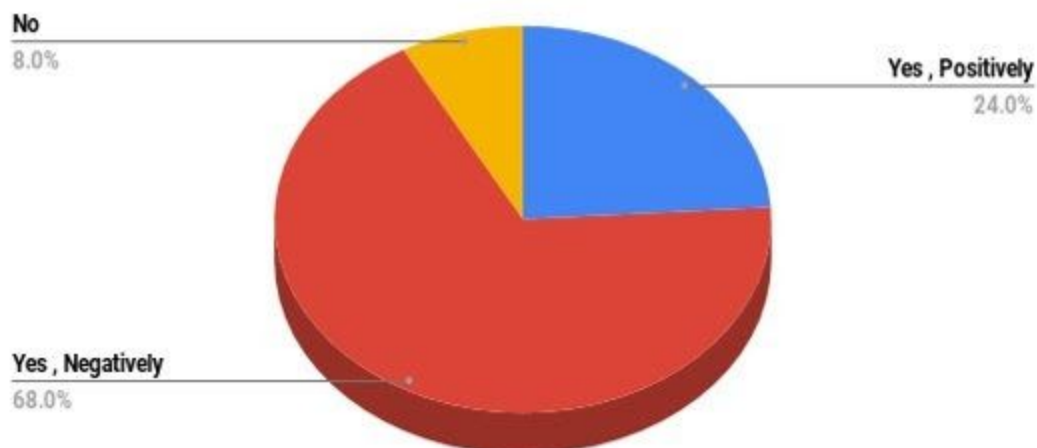


## During pandemic

Do you organize your time daily (i.e prepare a time table) ?

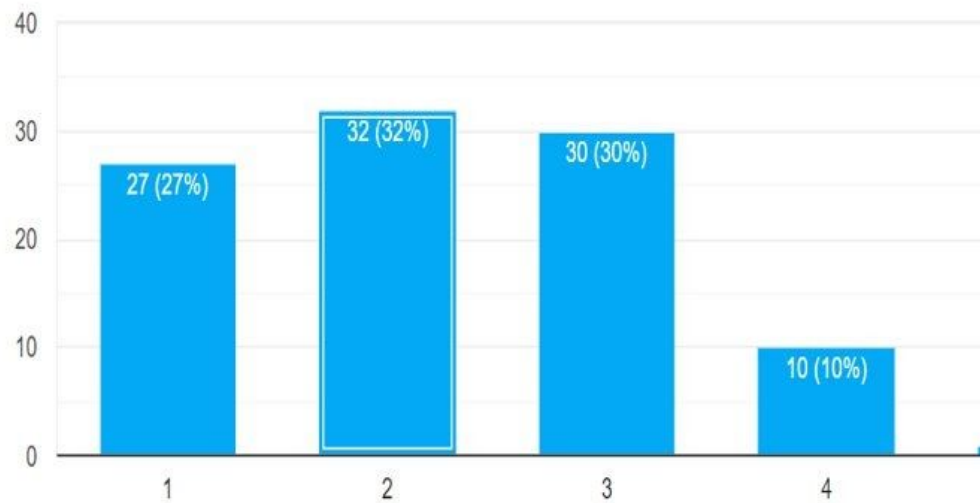


Do you think this pandemic has affected your life style in terms of your time usage?



### 3.2 Are you satisfied with your work-life balance ?

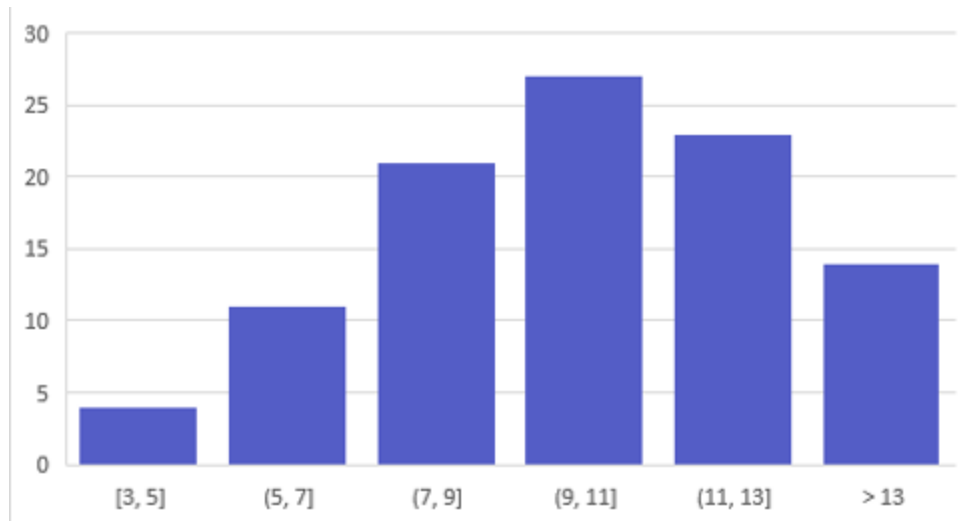
100 responses



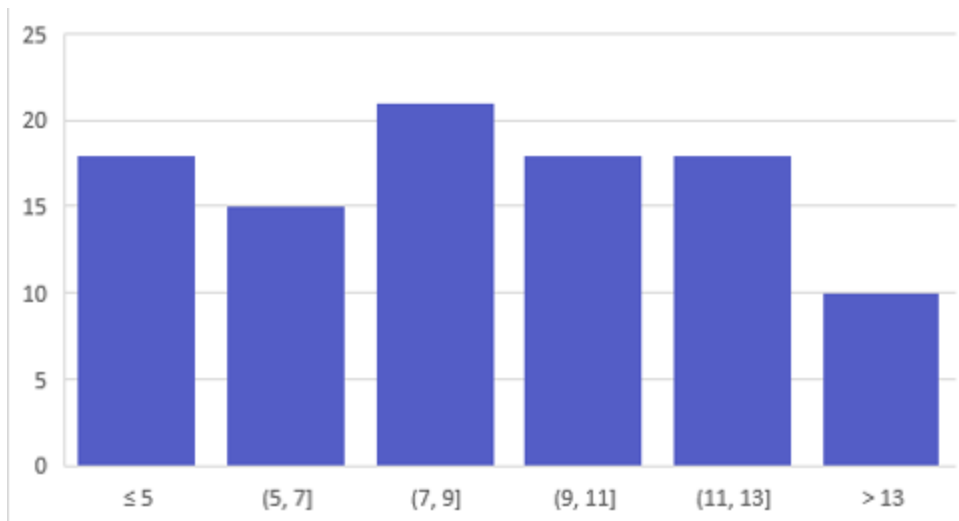
## Analysis of data

- We have analysed the data from the 'during pandemic' section in order to get results on how the student is utilising his time now.
- We have taken the data of time usage of students before the pandemic in order to assess how the pandemic has affected one's lifestyle and work-life balance.
- We have taken the time spent by a student apart from sleep and educational related, as leisure time.
- For work-life balance, We have considered the ideal sleep time, work time and leisure time to be 8 hours each. We have calculated the error in sleep time, work time, leisure time using the below equation  
error = ratio of the difference in time spent and the ideal time to the ideal time  
i.e error =  $| \text{timespent} - 8 | / 8$ ;
- Then we added up all the errors corresponding to all the three categories and this is the deviation of a person's time usage with respect to a perfectly work-life balanced usage. Lesser the error, the closer he is to a balanced life.

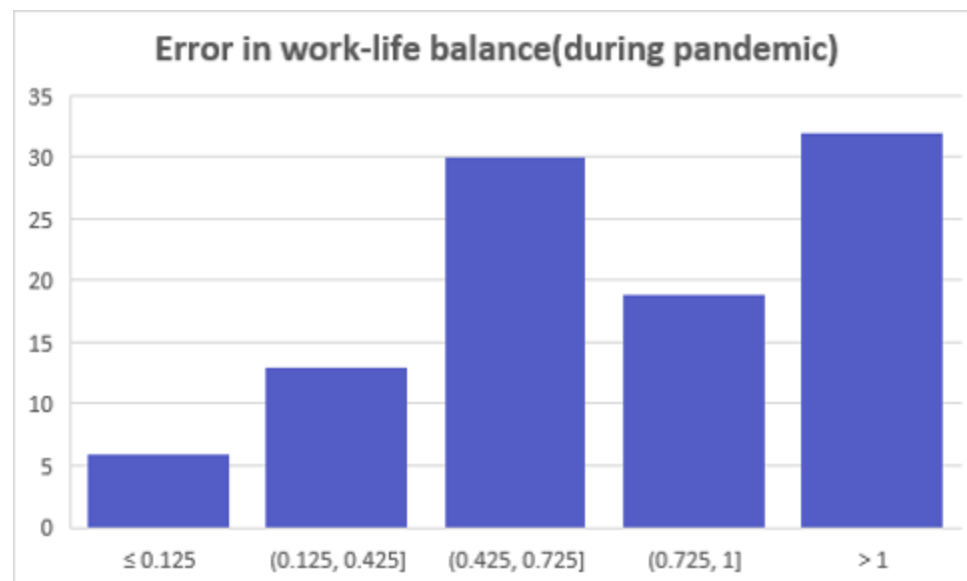
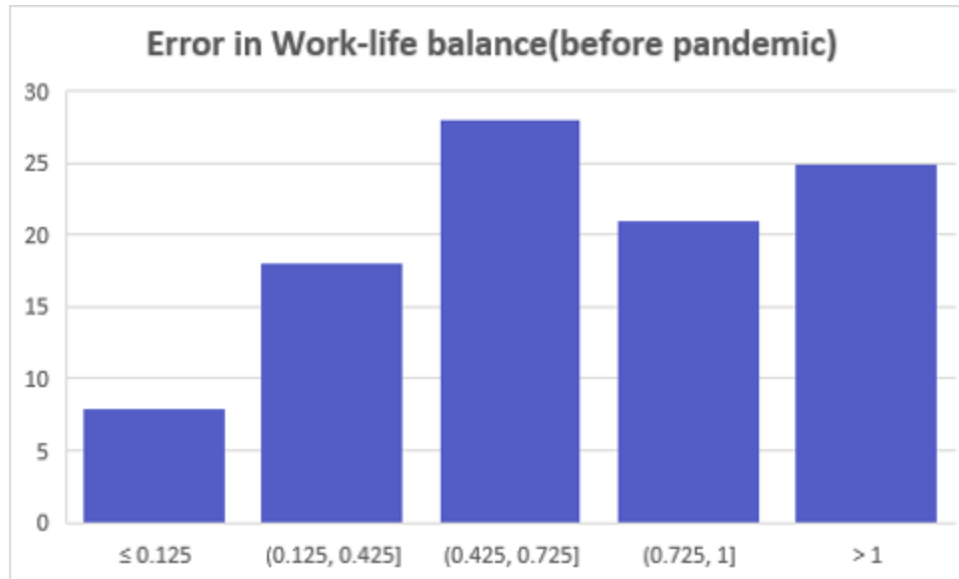
Time spent on leisure(before pandemic)



Time spent on leisure(during pandemic)











## RESULTS FROM THE SURVEY

- If we see the time spent on attending classes and studying during the pandemic, a high majority of 58% spend more than 7 hours and more than one-fourth of the students dedicate more than 9 hours. Considering 6-8 hours of sleep, more than 9 hours is greater than 60-70% of the time awake. Comparing this time with the data from other charts, especially with the data of food intake, about 60-65% are multi-tasking while breakfast, lunch. This shows the tight schedule people are having.
- While taking into account the time spent on studying and attending classes before the pandemic, when in college, 70% of the students spend less than 7 hrs and similar results supporting this are seen from the data of time dedicated for food/nutrition intake, that is, 65-75% of the students have dedicated time specifically for food and were consuming peacefully without multitasking. This mostly should be accounted for the limited time for the semester and syllabus cannot be reduced because of the importance and uses of the subject for upcoming courses.
- Looking at the data of sleep students are getting each day, during pandemic almost 40% are not even getting the bare minimum of sleep which is 6hrs. Though can be accounted for the excess time being consumed for studies as seen above, ironically, not getting a minimum amount of sleep, in turn, has negative effects on studies. Looking at the same before the pandemic, 85% of the students were getting the necessary amount of sleep that is 8 hours and the majority of the people were and a great majority were getting both necessary and sufficient amounts of sleep.

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- During the pandemic, one of the important things that were affected highly is the time spent with friends and social interactions. Almost 90% of the students are not spending even 1 hour of the time interacting with their friends. Social interaction is very low and this has negative effects especially for students, where previously everyone used to stay together.
  - We can see that prior to the pandemic situation, 80% of the students spend more than an hour with friends and 30% of the students spend more than 3 hours interacting with friends and wingmates. Although spending too much time with friends may result in wasting time in some cases, a minimum amount of interaction is very essential and has many benefits.
  - During the pandemic, if there is anything that can be seen as positive signs, one of them is getting to spend quality time with family. We can see that 70% of the students spend more than an hour with family(probably even more percentage on weekends when there are no classes) and not even a mere 15% used to spend at least one hour with their family before the pandemic, even that little time used to be mostly on phone.
  - Looking at the amount of time devoted to meditation and relaxation practices during the pandemic, a whopping 65% don't even spend at least one minute for meditation or other relaxation practices. This is very concerning, especially during these stressful times both academically and the pandemic.


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- Seeing the data on how much time students are spending playing sports and games during the pandemic, more than 50% are not playing at all and even in the remaining 50%, about 30% are not even playing for a mere half an hour. This has a negative impact on the physical health of students as most of the physical exercise comes from playing sports. Prior to the pandemic, we can see that 88% of the students used to play sports regularly and 60% of the students used to play for at least half an hour.
  - During the pandemic, 54% are not at all exercising even for a minimum amount of time, which might have been okay when they were able to play sports like a lot of physical exercises can be achieved from sports and people were getting the minimum exercise to not be physically unfit. But as we discussed above, students are not getting to play sports and hence their physical health is being affected. If we see before the pandemic, 74% of the students spend at least a minimum amount of time exercising and only 26% are not spending any time on exercising. This can be attributed to the fact that gymnasiums and other indoor areas used for exercises are closed due to the pandemic and many people will not be having instruments or other requirements used for exercise.
  - When we see the time students are spending on social media, only 19% are spending less than an hour which is probably adequate time considering it as a purpose for entertainment and to de-stress. When comparing this with data from prior to a pandemic, 42% of students were spending less than an hour on social media. This can be due to the decreased social interaction and students may be turning towards social media for interacting with friends. It is fun and useful only when used appropriately and for an appropriate amount of time.

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- During the pandemic, about half of the students are spending less than an hour on extra curricular activities like movies etc., which increased quite a bit when compared to times before pandemic where only 16% used to spend less than an hour on these. This again might be because of the excess workload students are facing as discussed in the beginning results.
  - When students were asked whether they feel that they have enough time in a day, we can see that 51% yes has been dropped down to 21% yes. Majority of the students (68% of them) feel that they don't have enough time in a day. This is because of the extensive class schedule, where students are not having enough time for their daily chores and do not have sufficient leisure time.
  - We can see that many students think that they are spending more time than required on social media before (43%) and during the pandemic(28%). This is because students when they start surfing on the internet, they tend to carry on without sensing that they are wasting time on it. 56% of the students feel that classes are consuming more time than required, this is because of the compressed semester and because of heavy load in the form of assignments and tests.
  - When asked about the frequency in which students take time off to reflect upon themselves, we saw that there is an increase in the number of students (from 8% to 18%) where they either never or reflect once a year. We need to reflect upon the work that we have done and make improvements as frequently as possible.

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- Majority of the students (48% before and 54% during the pandemic) do not have any timetable to follow. They at least need to have a draft on when and what he/she needs -to do in a day. 30% of students prepare one but they do not follow it which is as good as not preparing it altogether.
  - 68% of students responded “yes, negatively” when asked about how the pandemic has affected their lifestyle. 24 % of people who said the pandemic affected them positively, this attributes it to the time they are being able to spend with their family and the quality nutrition they are taking as they are staying home.
  - For each person we have summed up the time they spent on the activities other than sleep, study(we called it,leisure time),and we have found that 21% students have spent roughly the ideal time of 8 hours, but a huge population of students (64%) have spent at least 9 hours. During the pandemic, the number of students following the ideal time haven’t changed but the number of students who have spent more than 9 hours dropped down to 46% and this dropped percent has shown up in the less than 7 hours category,which is because this online semester is not making students to spent their time on the activities other than study.
  - We see that very few students (8%) were close to having a work-life balance, now only 6% of the students are close to having a perfect work-life balance. 81% of students are not even close to having a work-life balance. This is because of long durations of classes during this online semester. Even before this pandemic, 74 % of students were way off. This says that students are not using their time wisely/ unhealthy usage of time as they say. All in all, it appears that the balance was not very affected by the pandemic.worse was worsened. The students who had the balance weren’t much affected by it or rather adapted to the situations real quick.

## CONCLUSIONS

- Adequate sleep is essential to feeling awake and alert, maintaining good health and working at peak performance. Majority of the students have less than 6 hours of sleep, which is both harmful to productivity and general well-being. For a balanced work-life balance, one should have 8 hours of sleep every day. Good sleep allows our bodies to repair themselves and our brains to consolidate our memories and process information.
- Staying connected with friends makes us feel more connected to the world. Majority of the students spend very little time with their friends. This is not good as staying connected with our mates keeps our brains active and engaged and also sharpens our minds and reduces the risk of cognitive decline. So it is good for everyone to stay connected with their mates.
- Majority of the students spend interacting with their families this is good because family time offers many benefits, including building confidence, creating a stronger emotional bond between family members, improving communication skills, better performance in study place and reduced behavioural issues, as well as providing an opportunity to make memories built on fun, laughter and togetherness. So it is very important for one to spend interacting with his/her family.
- Majority of the students are not giving time for meditation or other relaxation practices. This may lead to dangerous disorders such as higher blood pressure, feeling sick more often, lack of focus and also sometimes it may lead to depression with increased workload. So it is very important for everyone to practice meditation and relaxation processes regularly for a proper work life balance.

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- Not all knowledge and learning comes from classes and studying. Majority of the students stopped spending time on playing sports and games this is a serious issue because playing sports and games helps us to learn about teamwork almost every sport requires a group effort and missing out on that may have negative effects in near future. Missing out on all these has quite a negative impact on students due to the pandemic. It is not possible to play outside so, it would be better if they play some physical games/exercises in their homes.
  - Social media has changed the way people interact with each other. Majority of the students spend more time on social media. Social media allows people to communicate and remain in contact with loved ones as well as it allows people to find others with similar interests. It also helps us to improve technological and communication skills. But being on social media for a larger amount of time is not productive and not worth wasting time. Majority of the students need to reduce their activity on social media.
  - Finally we say that work-life balance is very crucial in one's life. Many of the students from our survey weren't having it. The pandemic hasn't affected the students who were balanced. They need to balance their sleep and work times. There will be some days where you have to dedicate time to work but one needs to have balance in every aspect of their life and especially in their time usage.