Data Visualisation Survey Project

Final Report

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Introduction

This project aims to investigate the impact of covid-19 on the student population's health and well being.

Breaking the investigation down into sub research questions, we have created a survey designed to investigate the student populations' behavior and experiences during the covid 19 pandemic.

Due to the recent reports of the steady decline of mental health among university students (Anderson, 2020), we have also attempted to investigate the universities themselves by surveying students about the support services in place.

Research Questions

For the purposes of this study we have evaluated health and well being under 3 sub categories of interest. These categories consist of physical, mental and social well being.

The following research questions have been used to investigate the impact of Covid-19 on the student population.

What impact has covid-19 had on the psychological well being of the student population ?

What impact has covid-19 had on the physical health of the student population ?

What impact has covid-19 had on the student populations ability to socialise ?

We have also included an additional section to help us understand the support given to students by their universities.

Have University institutions provided adequate support during the covid-19 pandemic ?

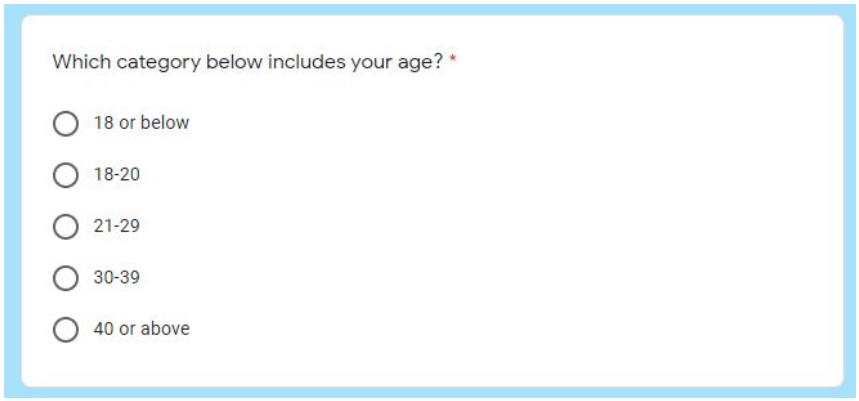
Survey Sample

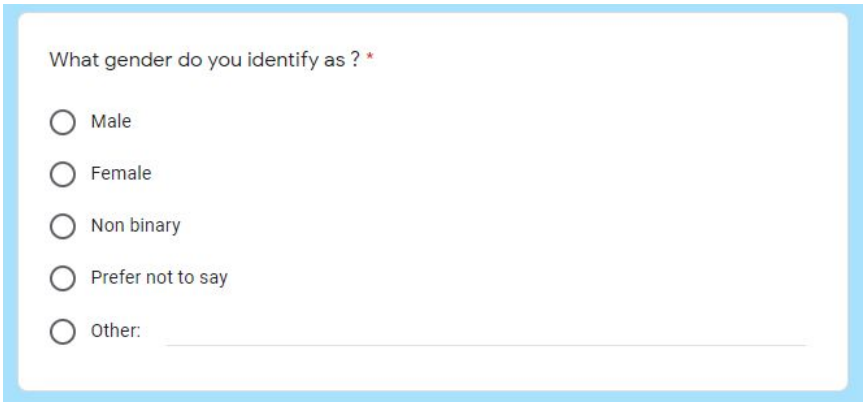
Due to time restraint , resources available and the current Covid-19 restrictions in place, it is unrealistic for us to collect data representative of the current student population. In order to obtain sufficient data we have had to ‘convenience sample’ the local student population available to us.

In terms of impact on our investigation, Our response data is biased towards the student population of the computing cohort, here at goldsmiths University. Although the data collected by this study is not exclusive to the student population of goldsmiths, any conclusions and analysis made from the results will take this bias into consideration.

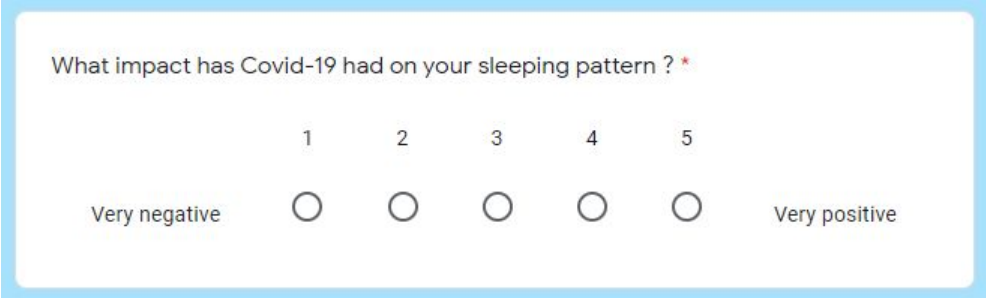
Survey Design

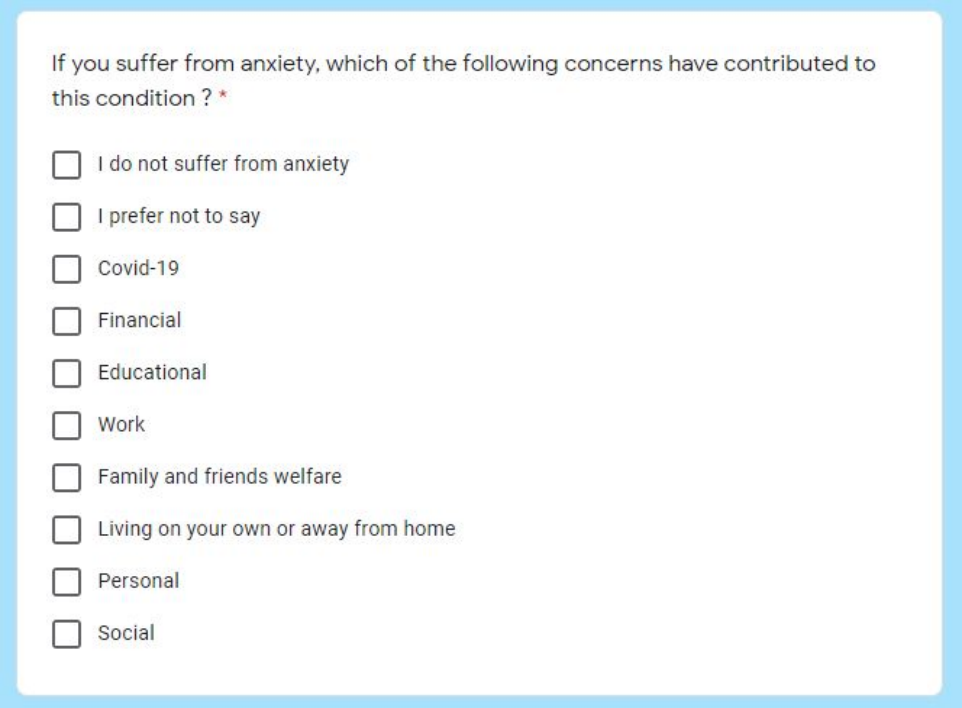
This initial section aims to evaluate the various sub demographics of the student population. Through these questions we are able to collect various nominal values that can help us gain information about our audience and potentially help us draw conclusions about specific demographics when asking questions later on in the survey.

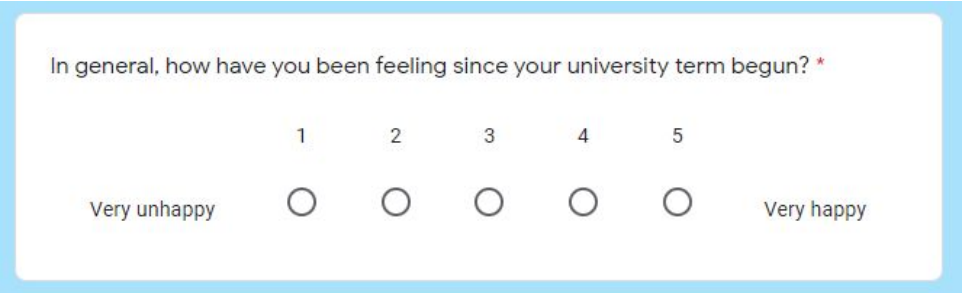




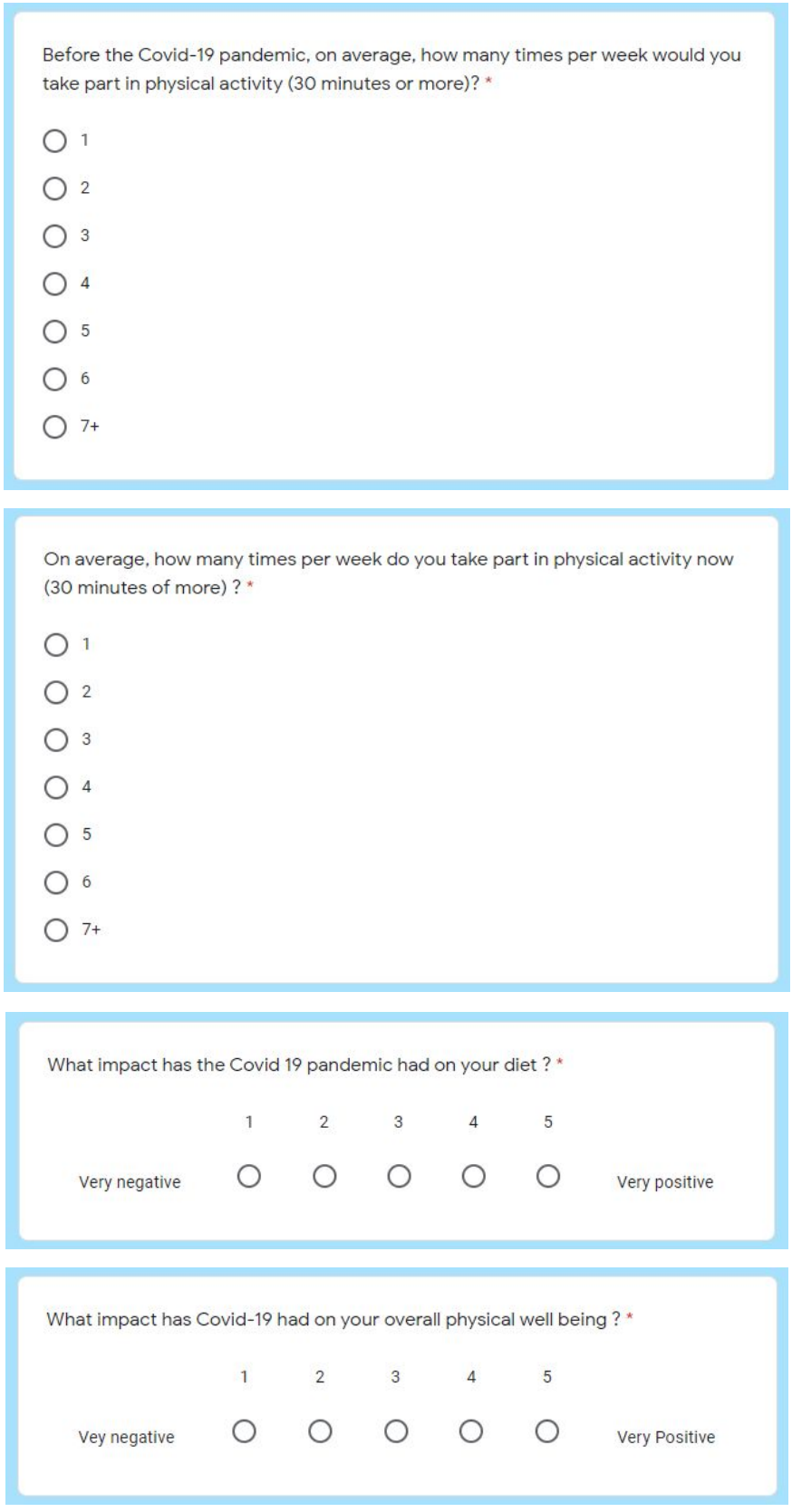
These questions will enable us to collect ordinal and nominal information about the psychological impacts. Three of the most relevant questions in this section will be used to analyse and draw conclusions from.



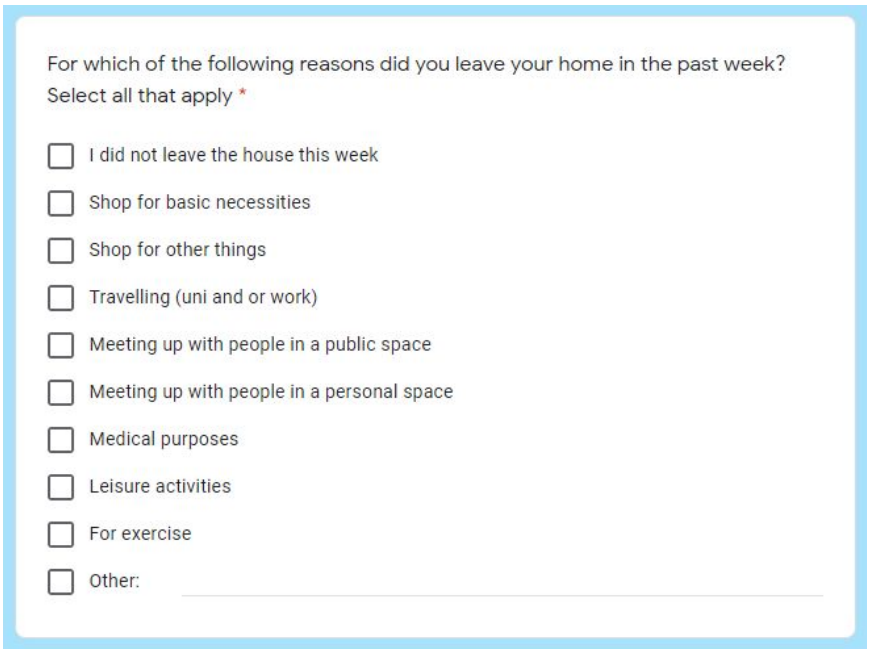


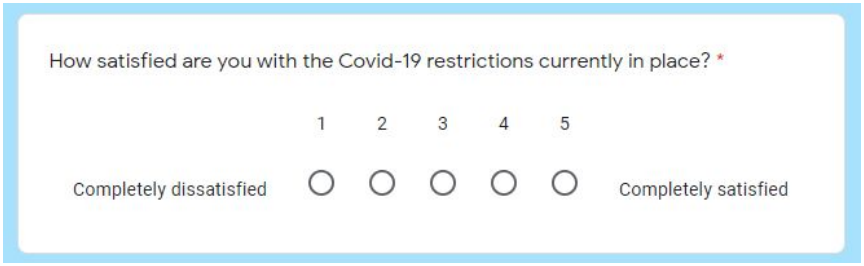


These questions enabled us to gather nominal and ordinal data. We used physical activity, diet and physical well being to draw conclusions from.

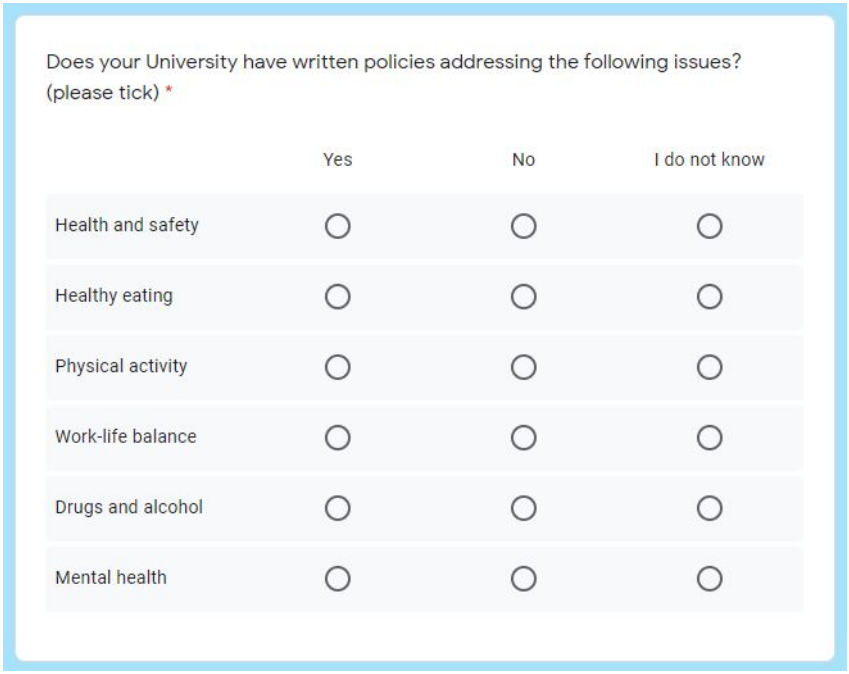


Most questions in this section of the survey are ordinal, with only two nominal questions in the form of a rating scale. From these questions we will analyse the social impact Covid-19 has had on university students.



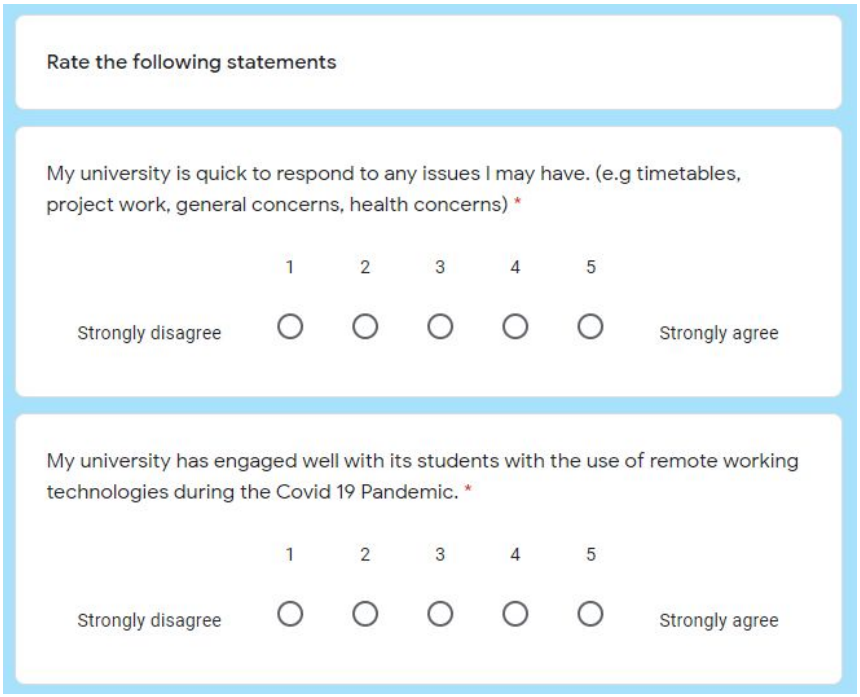


These universities support based questions series of nominal and ordinal values to assess the availability of support and the overall performance of the participants place of study.



Does your University have written policies addressing the following issues? (please tick) *

	Yes	No	I do not know
Health and safety	○	○	○
Healthy eating	○	○	○
Physical activity	○	○	○
Work-life balance	○	○	○
Drugs and alcohol	○	○	○
Mental health	○	○	○



Rate the following statements

My university is quick to respond to any issues I may have. (e.g timetables, project work, general concerns, health concerns) *

	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

My university has engaged well with its students with the use of remote working technologies during the Covid 19 Pandemic. *

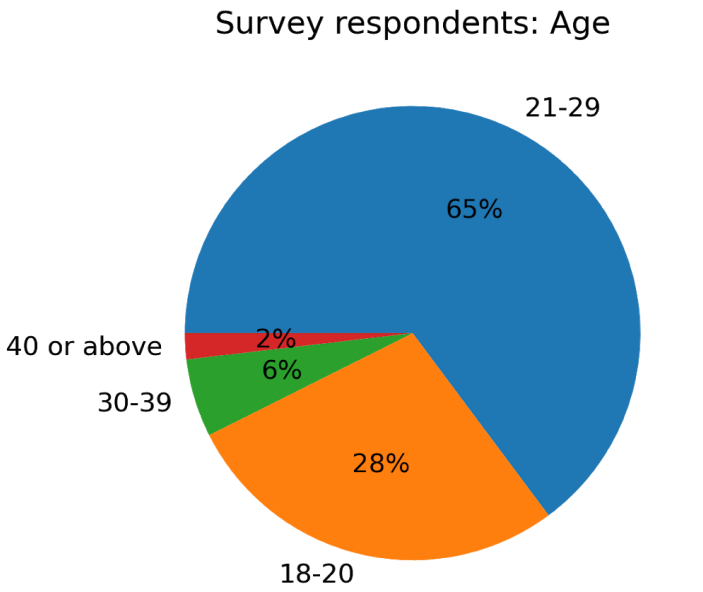
	1	2	3	4	5	
Strongly disagree	○	○	○	○	○	Strongly agree

Survey Analysis

Demographic Analysis

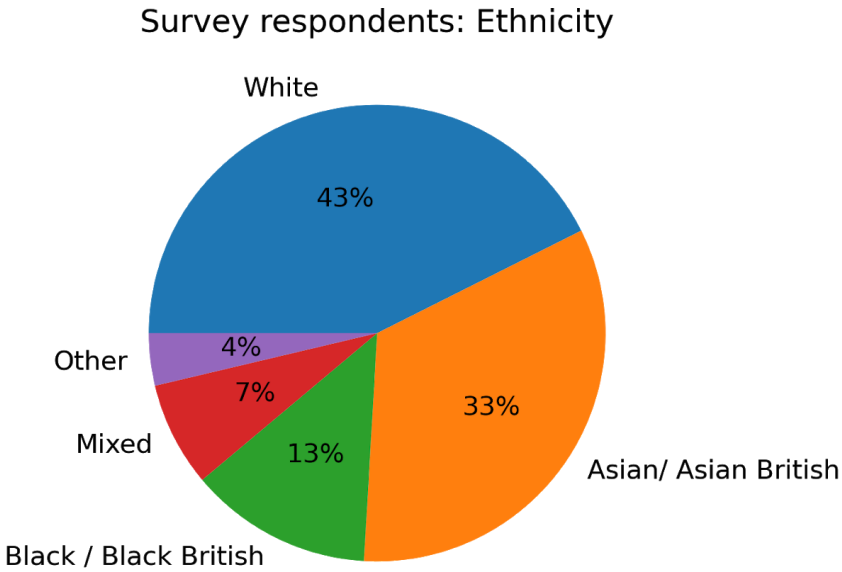
Using the convenience sample approach we were able to survey a total of 54 students. The following 3 visualisations show the percentage representation of each demographic. For the purposes of this report we have highlighted the 3 key demographics relevant to the results of our investigation. Figures 1.4, 1.5 and 1.6 highlight the difference between our own sample representation and that of a sample taken from a leading institute of higher education statistics (Higher Education Statistics Agency, n.d).

Looking at these results we can see various demographics that are both under and over represented. As a result our investigation is very susceptible to bias and we can conclude that convenience sampling is an inefficient way to collect good data about a specific population.



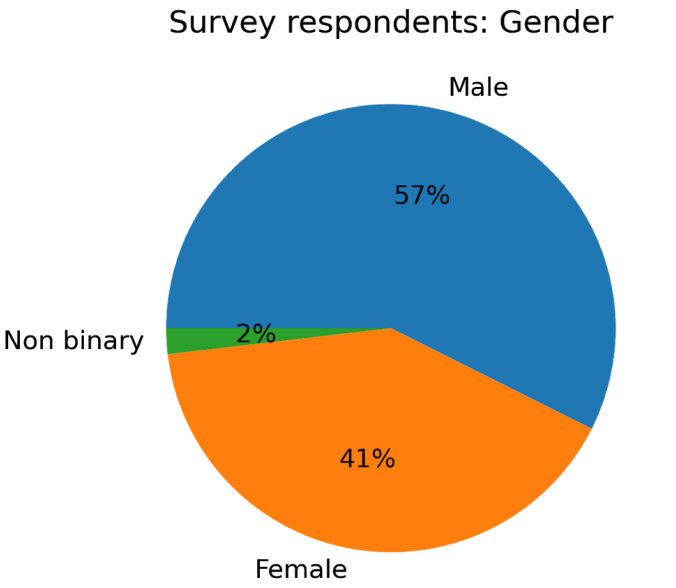
21-29	18-20	30-39	40 or above
35	15	3	1

Figure 1.1



White	Asian/ Asian British	Black / Black British	Mixed	Other
23	18	7	4	2

Figure 1.2



Male	Female	Non binary
31	22	1

Figure 1.3

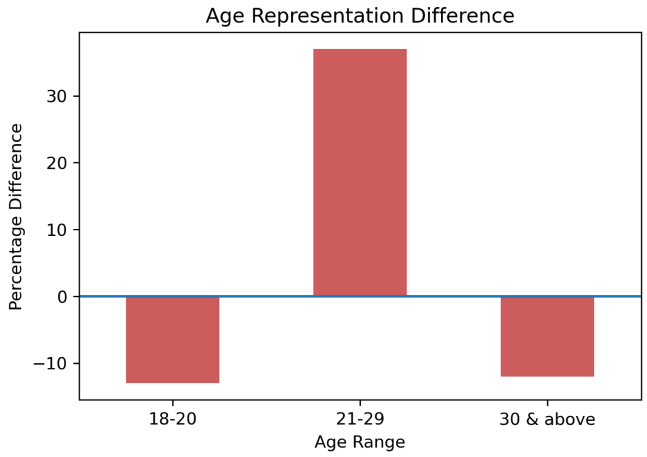


Figure 1.4

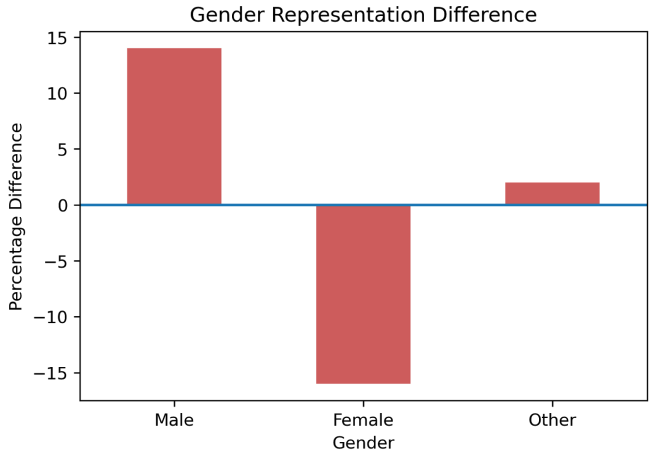


Figure 1.5

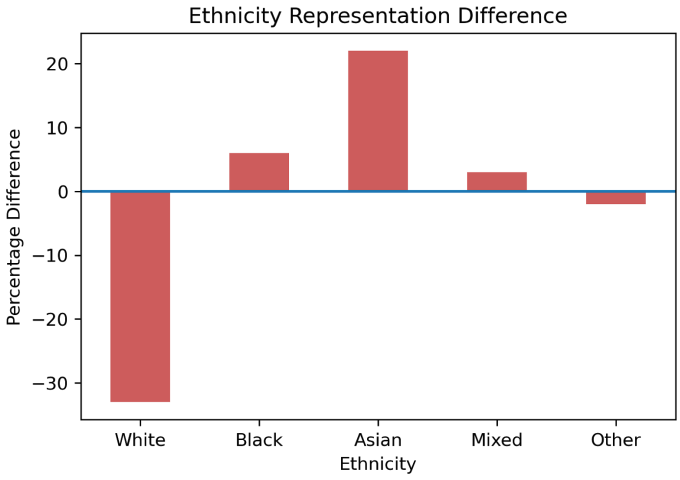


Figure 1.6

Physical Well Being Analysis

Figure 2.1 shows that the majority of people took part in physical activity once per week, meaning the mode is 1. We do however see a break in the pattern of decreasing amounts of activity per week, as 6 people answered 7+. We can clearly see from the figure 2.1.2 that there is a reduction in physical activity due to the frequency increase of response "1".

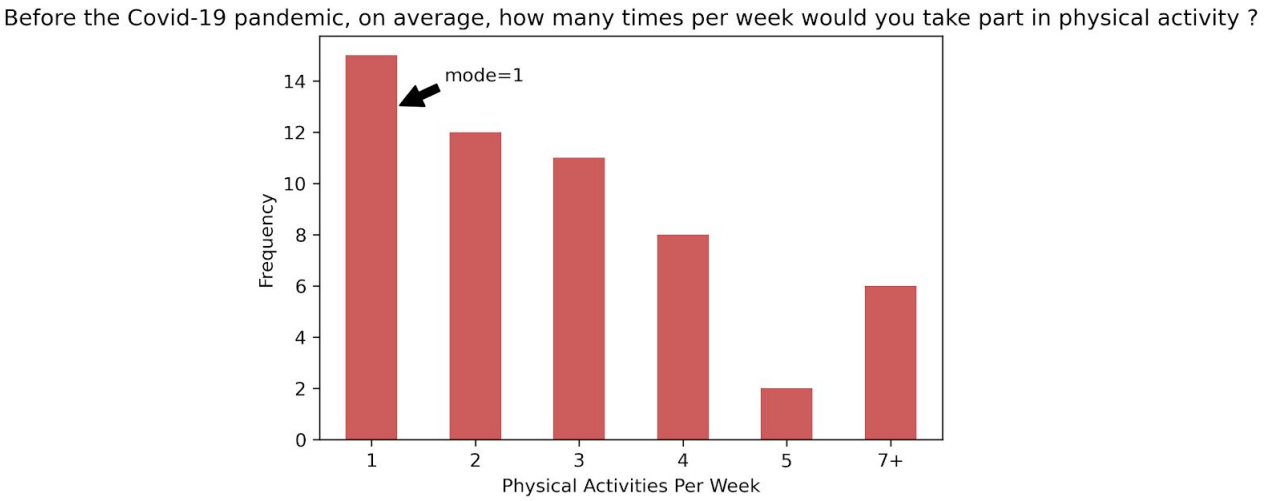


Figure 2.1

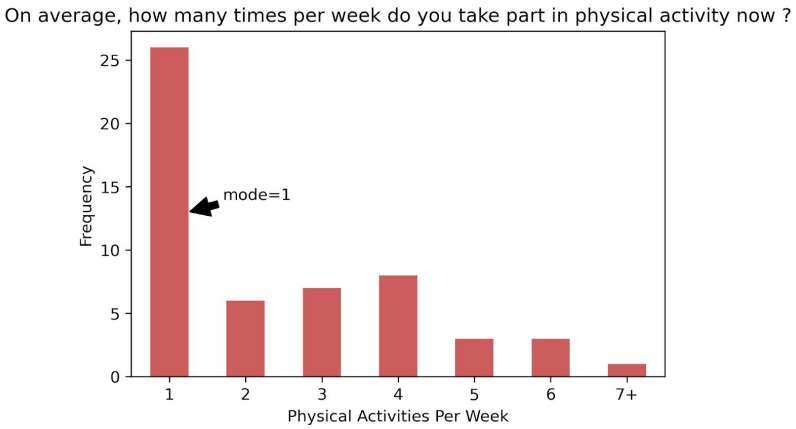


Figure 2.1.2

Figure 2.2 shows that the most commonly selected answer (the mode) was "No Impact". However, a total of 22 people answered that it has impacted them either negatively or very negatively, whereas only 10 people answered positively or very positively. This indicates that although the most common answer was "no impact", it would seem a more negative response has been recorded.

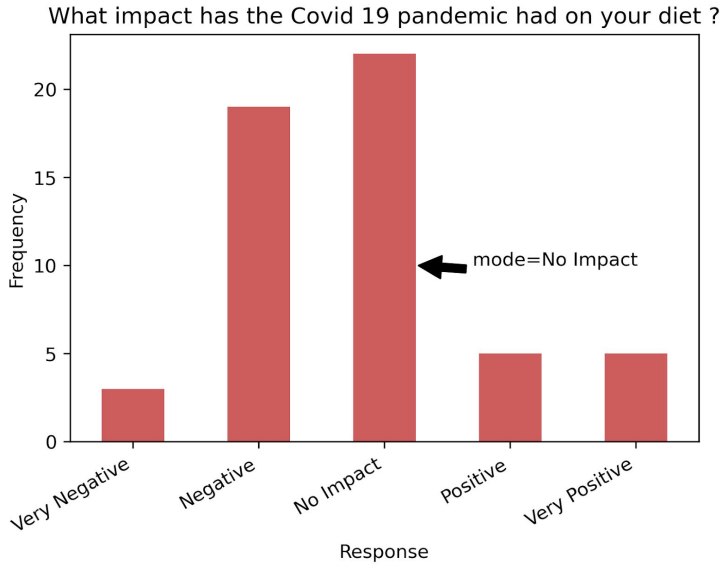


Figure 2.2

Figure 2.3 shows again, the most frequently selected answer was “No Impact” with 21, however, 24 people have said that their physical well being was either negatively or very negatively, showing that the majority of people have been impacted negatively.

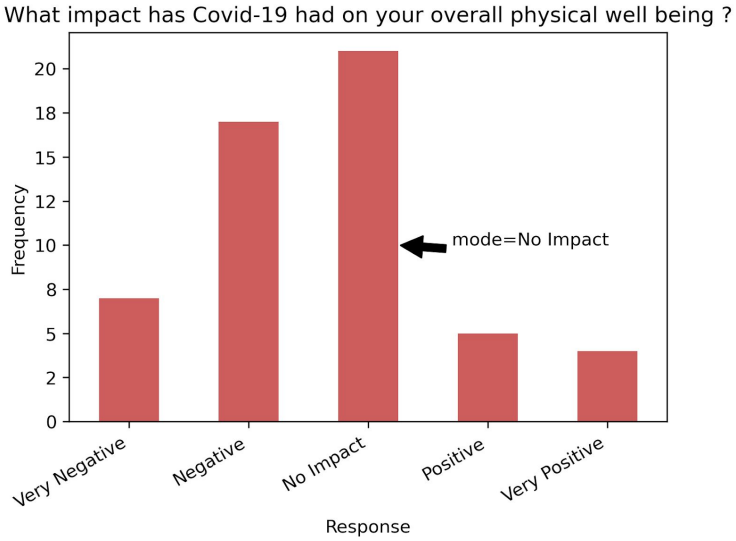


Figure 2.3

Figure 2.4 shows that the majority of people aged 18-20 answered that their physical well being was negatively impacted, whereas people aged 21-29 mostly answered no impact at all. We did have a small number of answers from people aged 30-39, where this also showed their physical well being was negatively impacted. The one answer we had from a participant over 40 has been

very negatively impacted physically by Covid-19. However, we have decided to exclude this as it was such a small sample size (1).

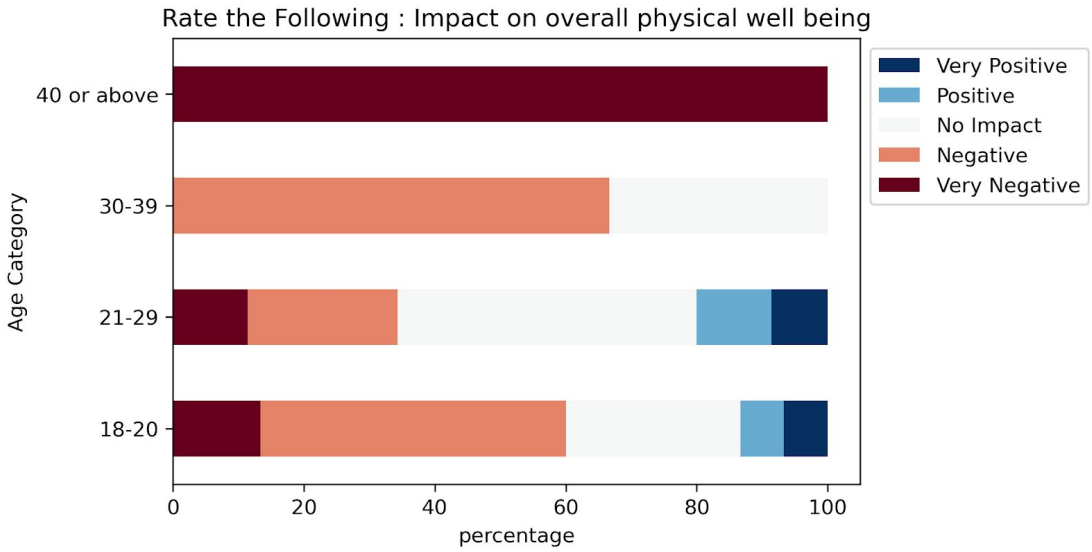


Figure 2.4

Social impact analysis

The Figure 3.1 graph clearly shows that the main reason that people leave their homes is to shop for basic necessities. However, the second most popular response is for meeting up with people in a public space. Showing that although social contact is discouraged, people still need to socialise in a public setting to go about their day.

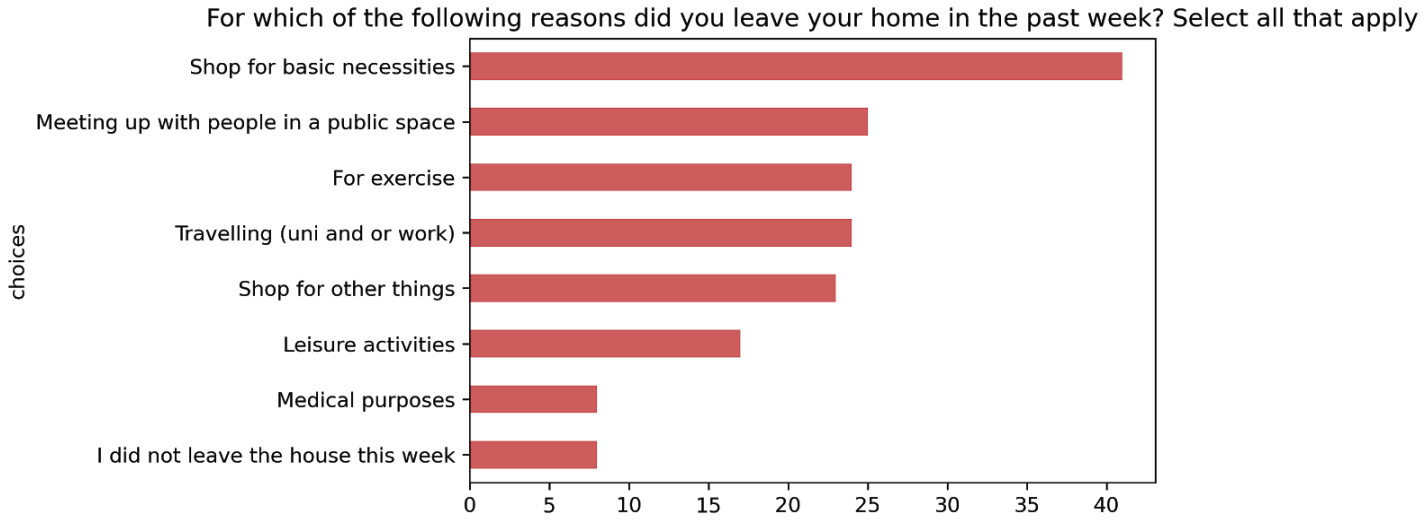


Figure 3.1

The Figure 3.2 shows that the 21-29 group has a broader range of responses on their satisfaction levels, with unsatisfied and satisfied responses being relatively close in percentage, 34% and 31% respectively. Whereas the responses from the 18-20 group are more geared towards negative satisfaction levels, with unsatisfied responses making up 66%.

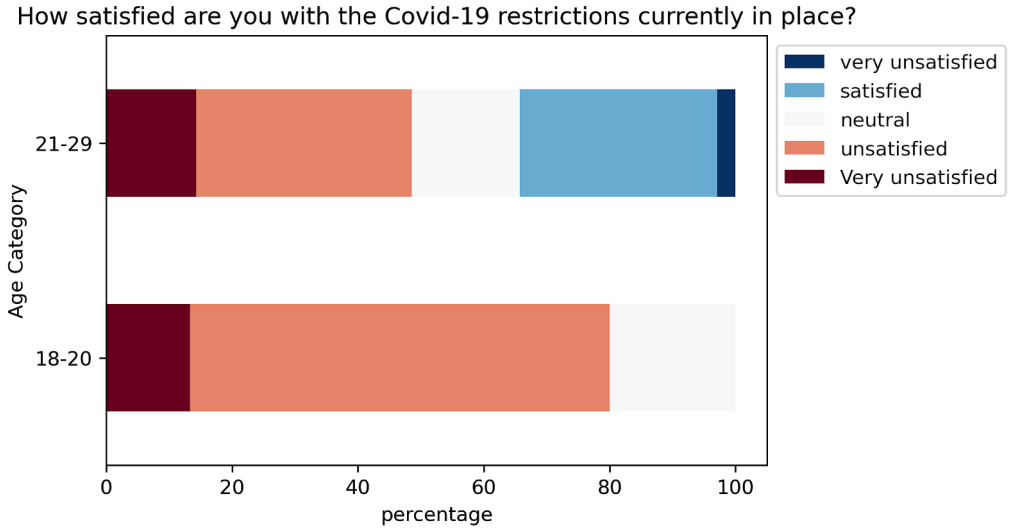


Figure 3.2

From Figure 3.3 we can see that the social impact rating of participants that have and that have not had to self isolate, are both swayed towards the negative end of the rating scale. With participants in the “yes” category having a combined “negative” and “very negative” rating of 75%. While the participants that answered “no” had a combined “negative” and “very negative” rating of 68%.

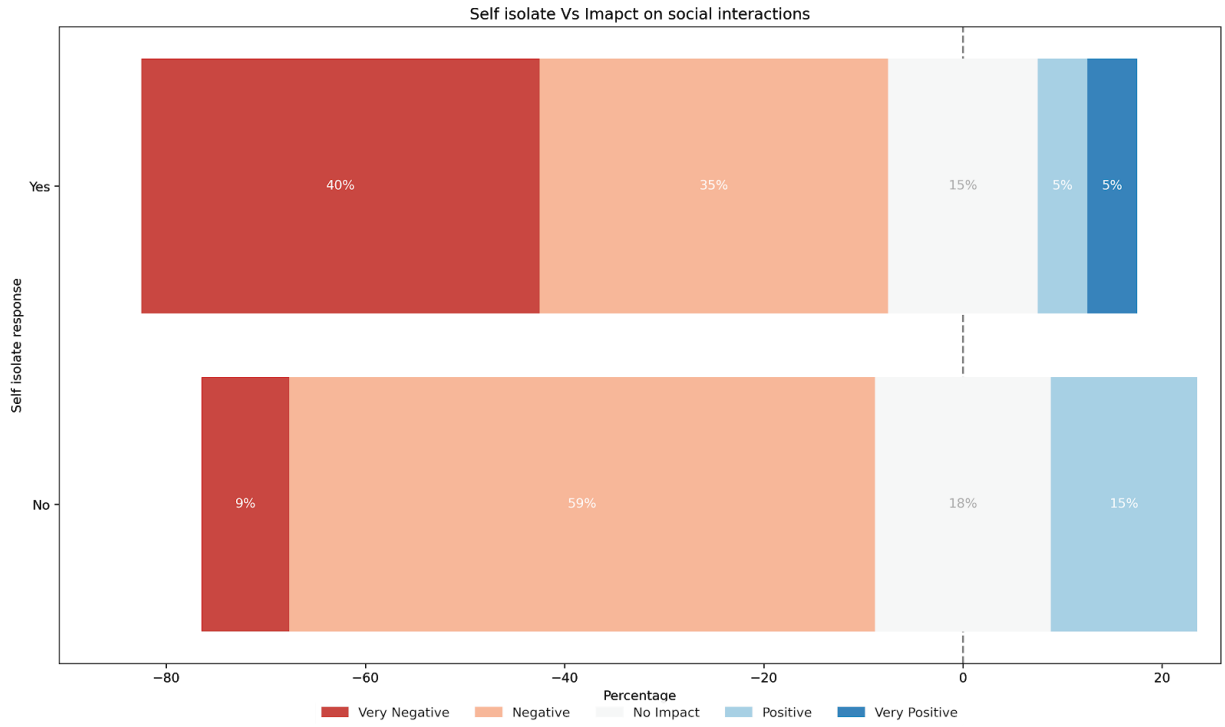


Figure 3.3

University Support Analysis

Figure 4.2 shows the response made by students when asked about the availability of written policies about various 'health and wellbeing' topics. Only 2 topics demonstrate a mode of a 'Yes' response, with the remaining modes being 'I Don't Know'. Like the previous visualisation this could be seen as a clear sign of miscommunication or a pure lack of support for specific areas of student life.

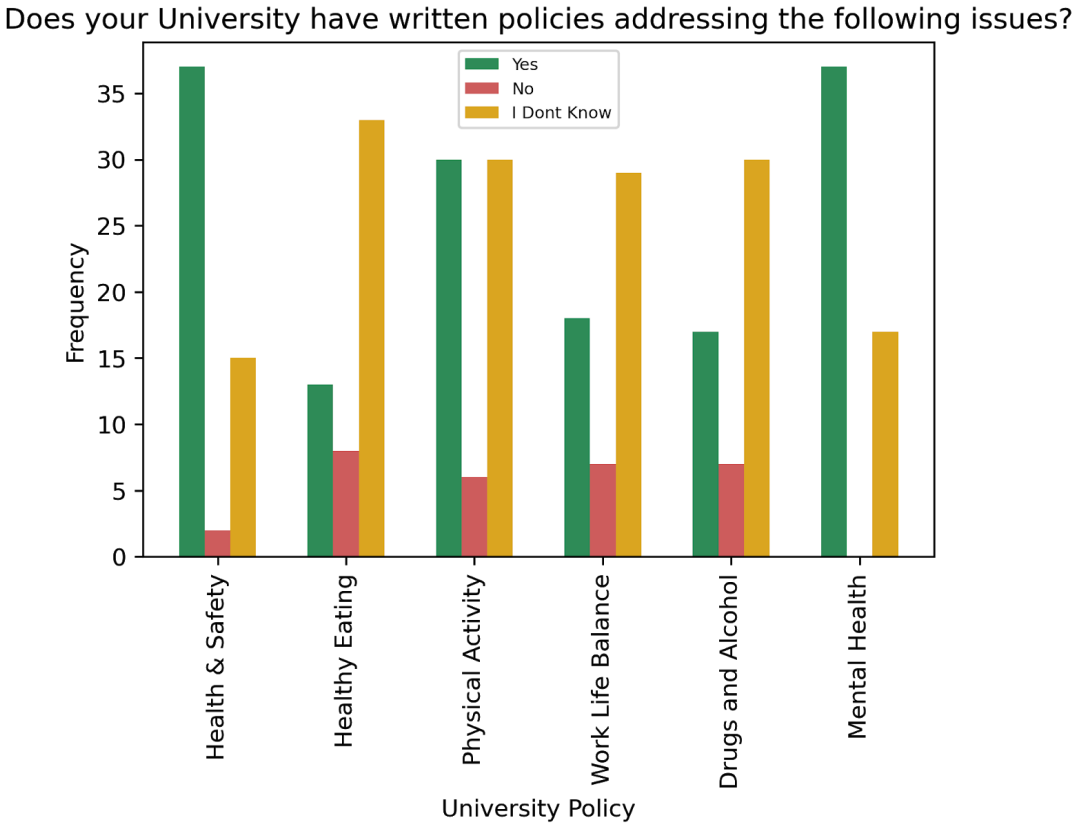


Figure 4.2

Figure 4.3 shows a normal distribution of responses around the mode value of 'Neither Disagree nor agree'. Filtering out this value we can then investigate the students that had a non neutral view. Dividing the remaining responses into 'Agree' and 'Disagree' categories, we can see that 20 reponses fall into the 'disagree' category while only 13 fall into the 'agree' category (Figure 4.4). This distribution implies that more students feel that universities are not doing enough to keep up with student demands with regards to support.

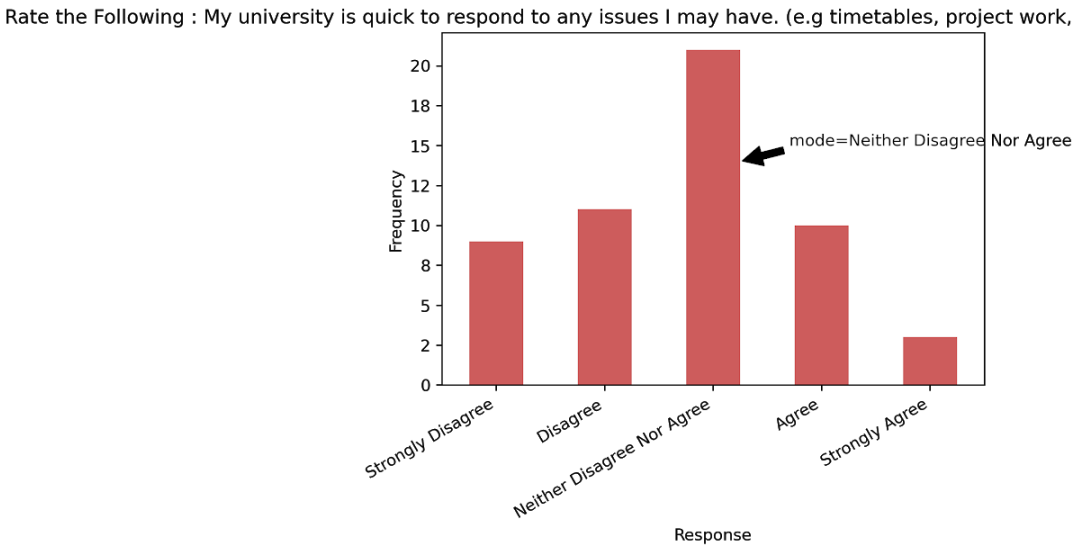


Figure 4.3

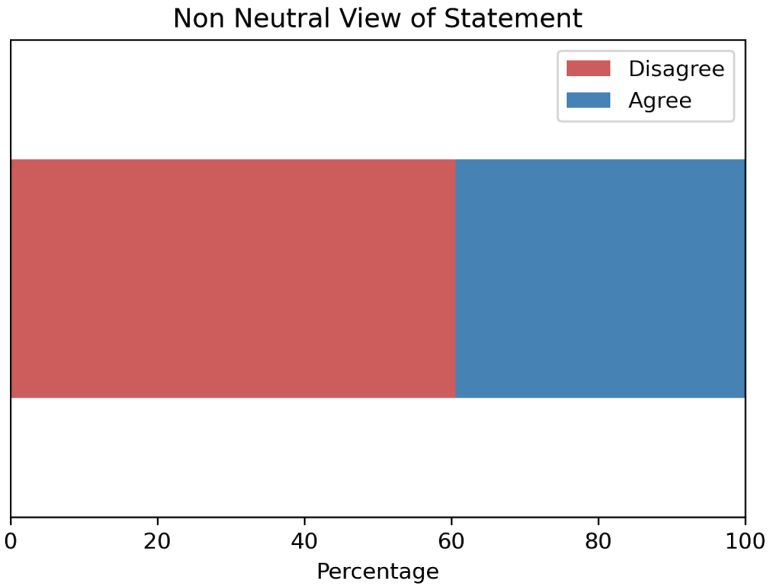


Figure 4.4

Figure 4.5 breaks down the data shown in Figure 4.3 by showing the distributions in relation to the age category. Looking at both representations we can see a fairly normal response rating from the older students. However this distribution swings further towards the negative amongst the younger participants.

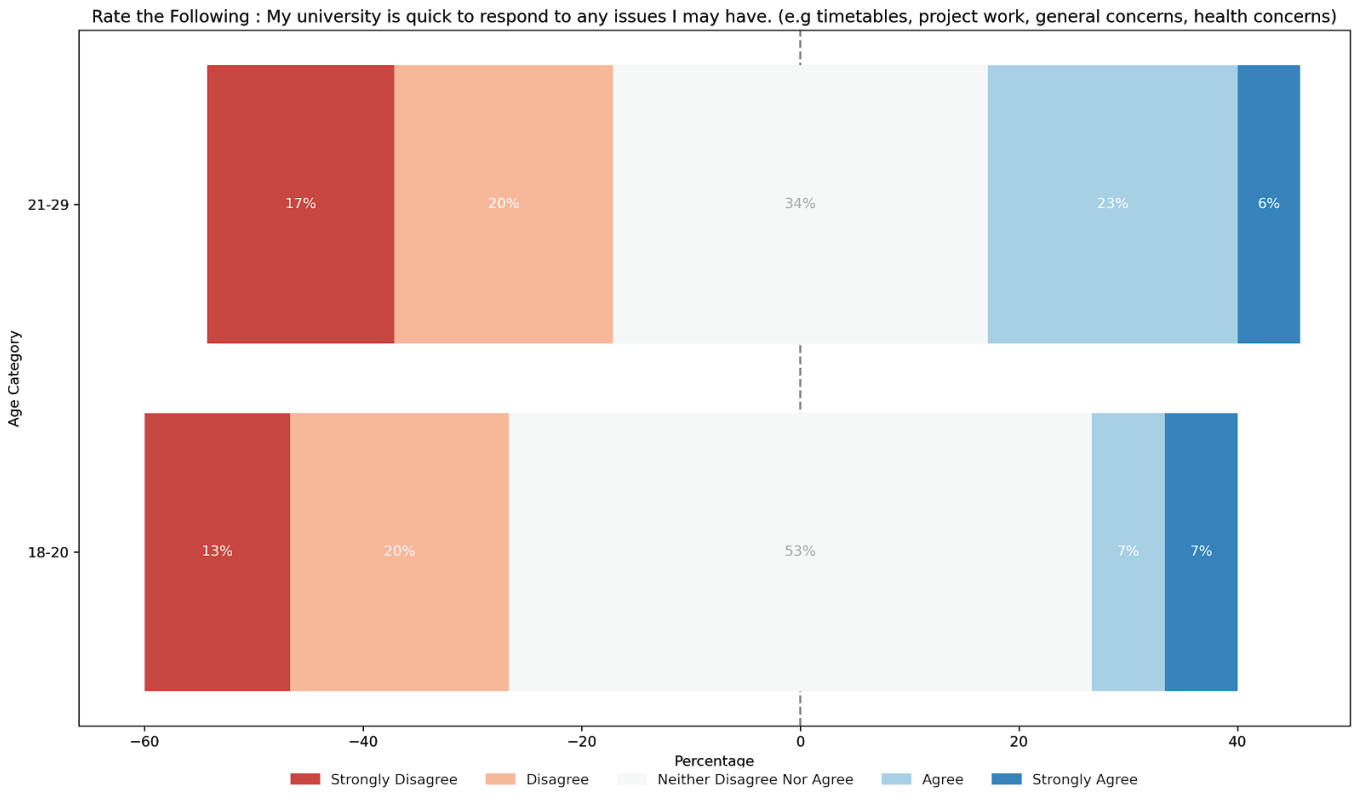

Rate the Following : My university is quick to respond to any issues I may have. (e.g timetables, project work, general concerns, health concerns)
Age Category
21-29
18-20
17%
20%
34%
23%
6%
13%
20%
53%
7%
7%
−60
−40
−20
0
20
40
Percentage
Strongly Disagree
Disagree
Neither Disagree Nor Agree
Agree
Strongly Agree

Figure 4.5

Psychological Impact Analysis

Figure 5.1 represents the emotional state of university students since the term began (September 2020, during the covid-19 pandemic).

This question was asked to investigate how the current circumstances were affecting students emotionally. A majority of 37% said they were 'Unhappy', after which 27% said they felt 'no impact'.

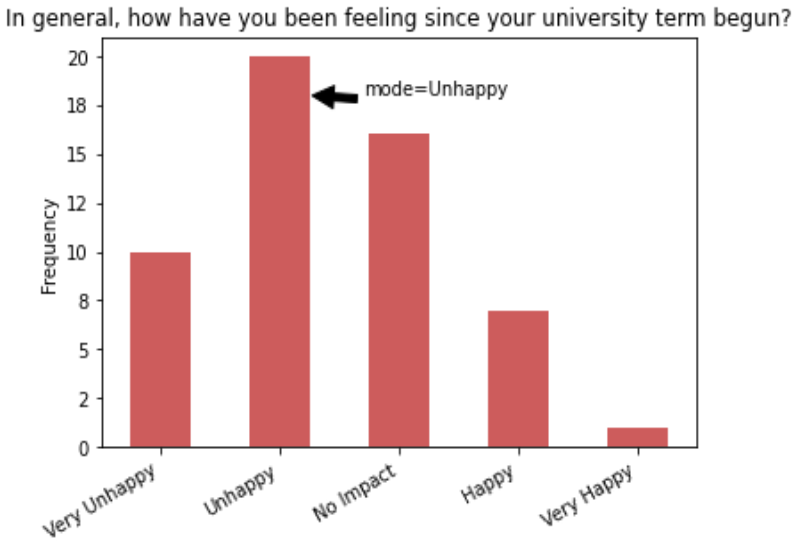


Figure 5.1

To understand further the data of Figure 5.1. The age demographics have been used too. The representation Figure 5.2, shows that nearly 47% of 18-20 year olds are unhappy since the university term bagan. Compared to 21-29 year olds 31% were 'unhappy'.

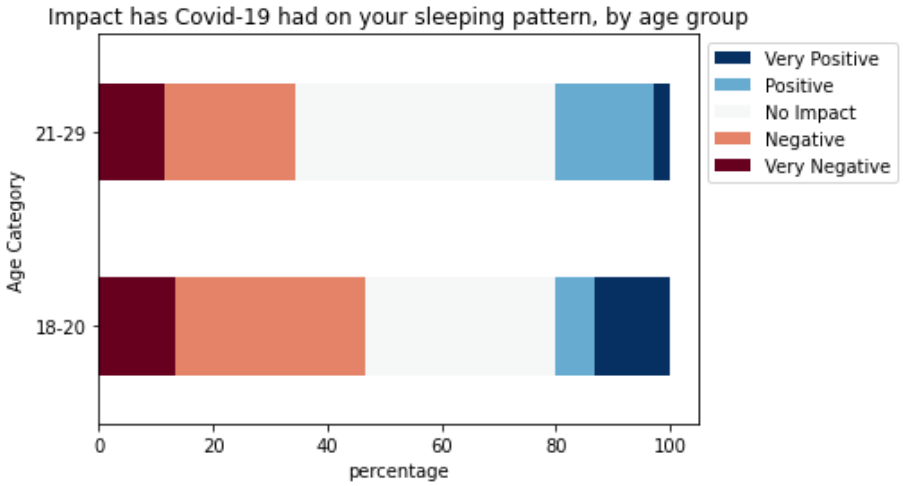


Figure 5.2

Figure 5.5 is a visualisation of the reasons that have caused anxiety to university students. This question was asked to investigate how the current circumstances were affecting students psychologically . A majority of 46% said their most common anxiety contributing factor was 'Educational'. The next most common reason was 'Financial' with a 31%.

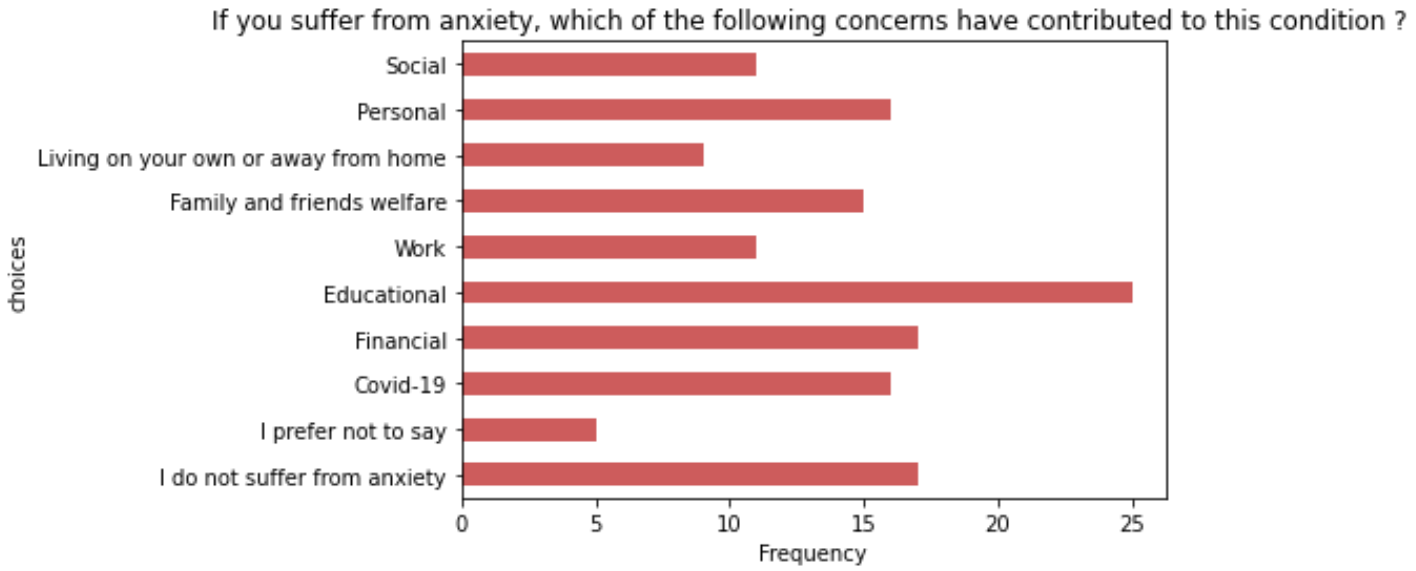


Figure 5.5

Conclusion

The overall impacts on the student population have been : ‘No impact’ for physical impact with a majority of 39%. ‘Slightly negative’ for social impact, with a majority of 50% claiming to be experiencing a lack of social interaction. ‘Slightly negative’ for psychological impact, where 47% of students said that their major contributing factor to anxiety was educational.

To conclude, Covid-19 has had a slight negative impact on all aspects of ‘health and well being’. We found that this could be due to the university support structure in place which lacks communication with students, where more than 50% of students said they ‘don’t know’ about certain types of support available.

Future improvements to be made for a fairer visualisation, would be to increase the sample of population to represent the country’s student population. That would provide us with a broader range of data, resulting in improved accuracy in findings.

Appendices

Additional survey design images

Do you have any long-standing illness, disability or infirmity (Long-standing means anything that has troubled you over a period of time or that is likely to affect you over a period of time) *

- Yes
- No

Whilst studying do you live at home or on campus ? *

- At home
- On campus

Use the following diagram to help you answer the following questions

In which region of the United Kingdom is your home located *

- 1 - Scotland
- 2 - Northern Ireland
- 3 - Wales
- 4 - North East
- 5 - North West
- 6 - Yorkshire and the Humber
- 7 - West Midlands
- 8 - East Midlands
- 9 - South West
- 10 - South East
- 11 - East of England
- 12 Greater London
- 13 - Outside the United Kingdom

In which region of the United Kingdom is your university campus located ? *

- 1 - Scotland
- 2 - Northern Ireland
- 3 - Wales
- 4 - North East
- 5 - North West
- 6 - Yorkshire and the Humber
- 7 - West Midlands
- 8 - East Midlands
- 9 - South West
- 10 - South East
- 11 - East of England
- 12 - Greater London

Have you started / increased the use of any of the following as a result of Covid-19? (tick all that apply) *

- [ ] Smoking
- [ ] Drinking
- [ ] Taking recreational drugs
- [ ] Comfort eating
- [ ] None of these apply to me

How do you feel your mental state has changed since the Covid-19 Outbreak? *

	1	2	3	4	5	
Deteriorate a lot	○	○	○	○	○	Improved a lot

How would you describe your current physical health ? *

	1	2	3	4	5	
Very bad	○	○	○	○	○	Very good

Does your university have an on site gym? *

- ○ Yes
- ○ No

If yes, has it been open during the Covid-19 Pandemic ?

- ○ Yes
- ○ No

If yes, How often do you use it?

- ◯ Daily
- ◯ Every other day
- ◯ Weekly
- ◯ Rarely
- ◯ I do not use the gym facilities

Have you had to self isolate at any point during the Covid-19 pandemic ? *

- ◯ Yes
- ◯ No

How much of an impact has the Covid-19 pandemic on your social interaction between friends, family and/or work colleagues ? *

	1	2	3	4	5	
Very Negative	◯	◯	◯	◯	◯	Very Positive

During the Covid-19 pandemic, have you broken social distancing rules outlined by the government? *

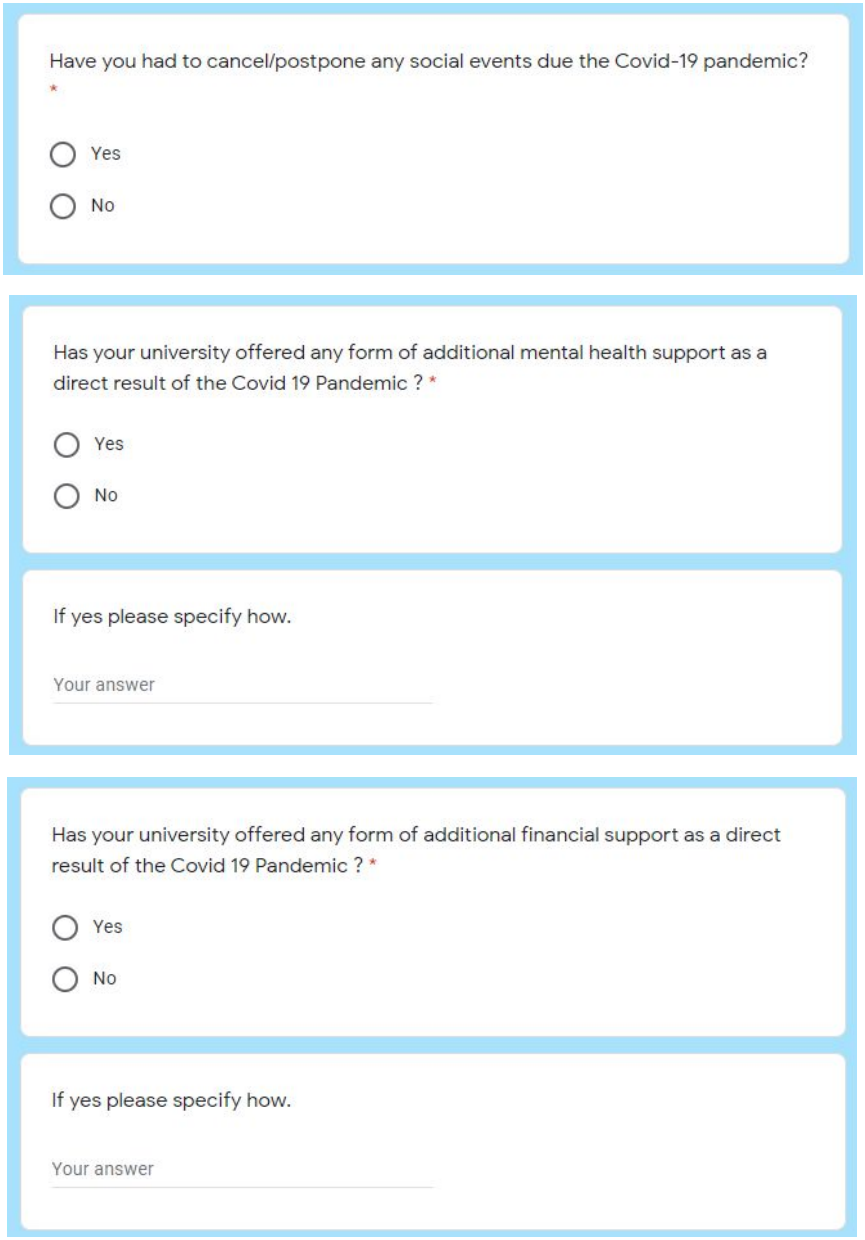
- ◯ Yes
- ◯ No

If yes, for what reason ?

Your answer

What is your local Covid alert level? *

- ◯ Tier 1 (Low)
- ◯ Tier 2
- ◯ Tier 3 (High)
- ◯ I do not know what alert level my region is in.



Handling NAN Reponses

Figure 4.1 visualises the response to the question 'Has your university offered any form of additional mental health support as a direct result of the Covid-19 pandemic?'. The frequency distribution of the results implies that the majority of students (57%) have been made aware of additional support. Surprisingly though, is how close this poll ended. With 43% of students responding 'No', there is clearly a lack of support or communication regarding this issue.

Those who responded yes to this question were then asked to supply an example of the support given. Out of the 31 'Yes' responders, 11 of those could not or refused to give an answer. This could also support the idea of a lack of communication between student and institution.

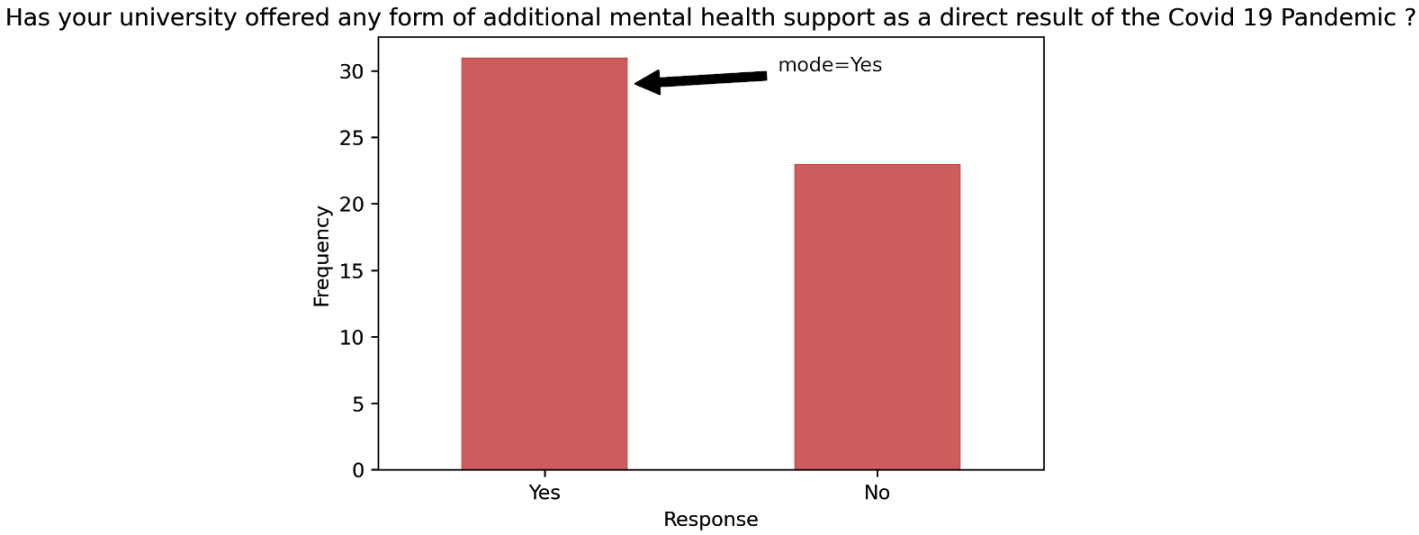


Figure 4.1

Figure 4.2 shows the response made by students when asked about the availability of written policies about various 'health and wellbeing' topics. Only 2 topics demonstrate a mode of a 'Yes' response, with the remaining modes being 'I Don't Know'. Like the previous visualisation this could be seen as a clear sign of miscommunication or a pure lack of support for specific areas of student life.

The question in Figure 5.3 was asked to investigate covid-19 was affecting students' sleeping pattern negatively.

A majority of 47% said they had 'No Impact', after which 26% said they felt a 'negative' impact.

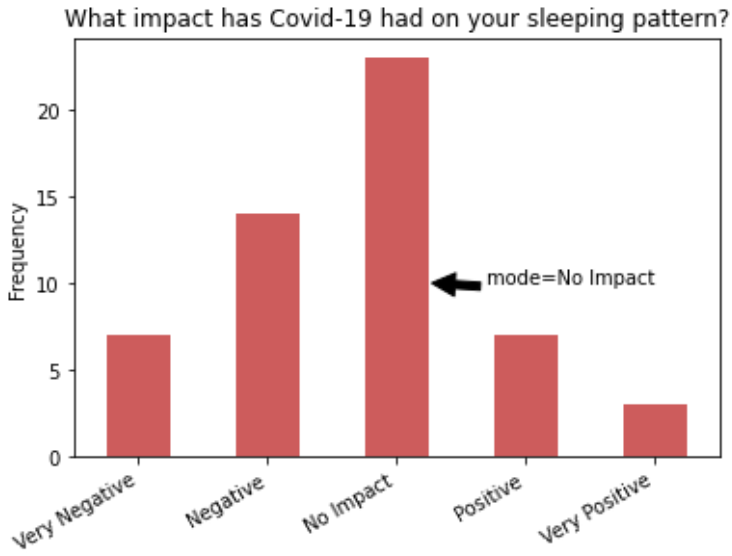


Figure 5.3

To understand further the data of Figure 5.3. The age demographics have been used too. The representation Figure 5.4, shows that nearly 46% of 21-29 year olds had no impact in their sleeping pattern. 33% of 18-20 said their sleeping pattern was 'negative due to covid-19.

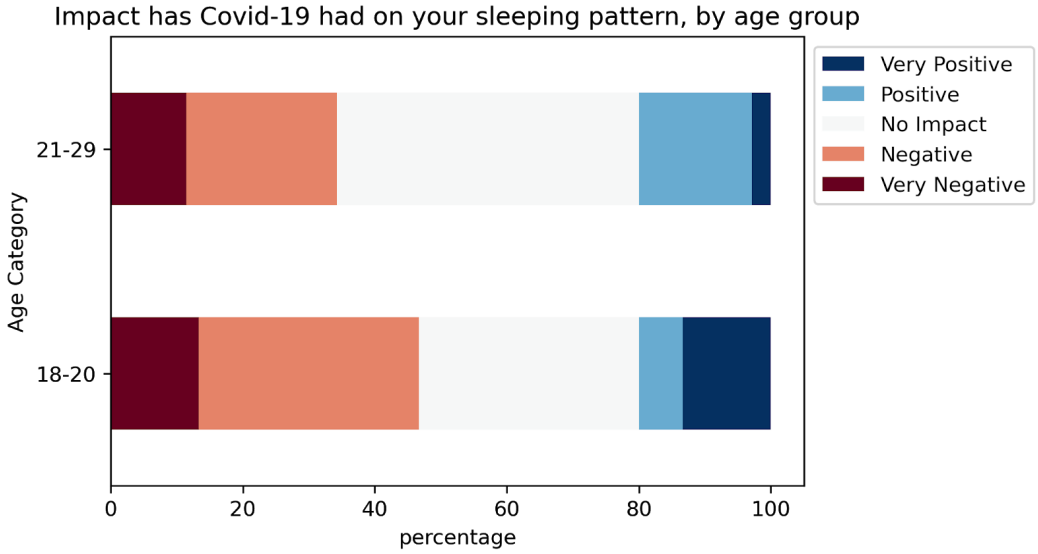


Figure 5.4

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