



# UT-STUDENT WELLBEING DURING COVID-19 JULY 2020

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## PREFACE

The Executive Board of the University of Twente asked for a survey to be done before the end of the academic year 2019-2020 among both students and employees to assess wellbeing during Covid-19 and to get input on possible future policy measures.

Due to the short time frame, it was decided to make use of an existing survey of the Athena Institute of VU Amsterdam for the students. I thank Dr Elena Syurina, her colleagues Dr Sarju Rai and Dr Teun Zuiderent-Jerak and their student assistant Cato Wiegers for their efforts to make this possible in, not only due to Covid-19, stressful months.

Dr Nadine Köhle of UT-BMS-Psychology, Health & Technology and her student assistant Lea Berkemeier BSc provided the statistical analysis and the analysis of the final question. I thank them a lot for their time and efforts especially as we had to decide not to report on all of our findings.

Dr Kim Middel of the UT-language centre and her colleague Dr Christina Flann helped me out with the final editing of this report at short notice which was a most helpful support.

Finally, I thank Drs Renate van Luijk of S&P/SACC and Marijke Stehouwer MA, coordinator international affairs of ET, for their speedy feedback on the final draft.

Due to a combination of circumstances, data analysis and reporting took much longer than expected and it was decided to make an executive report rather than a scientific report. This decision enabled us to give a quick and relevant indication on the current wellbeing of students and their needs to the UT-organisation rather than to try to make a contribution to the ever-growing scientific knowledge base about student wellbeing (during Covid-19).

Annet de Kiewit, October 2020

## MANAGEMENT SUMMARY

To explore students' experiences and needs during March 2020-July 2020 and allow input for future measures, a survey was distributed to all students on July 9<sup>th</sup> 2020 which was available until July 31<sup>st</sup> 2020. The survey was designed by the Athena Institute of VU Amsterdam within the framework of an international study. The overall response was 1187 which is 10% of the student population. To interpret the results, comparisons were made to the results of a selection of other recent studies.

In the study of Kelders et al. (2019), next to international students, female students, LGBTQ+-students and students with a functional impairment were identified as at-risk groups. In this study it was only possible to compare the situation of NL and non-NL students. In Spring 2021 the RIVM/Trimbos-monitor will be launched, which will make analysis possible for all at-risk groups.

### **Main findings:**

#### ***Somatic symptoms***

Students did experience significantly more somatic symptoms during Covid-19 than before Covid-19. Symptoms which scored high and increased most were:

- Feeling tired or having low energy
- Trouble sleeping
- Headaches
- Backpain

#### ***Psychological symptoms and concerns***

Among the items with the highest score concerning psychological wellbeing were the items related to **positive** feelings like:

- I have felt I have someone to turn to when things go wrong
- I have felt OK about myself
- I have felt warmth or affection for someone

When making a distinction between NL and non-NL respondents, it turns out that only NL respondents scored high on items related to positive feeling while non-NL respondents scored significantly higher on items related to negative feelings like:

- I have felt tense, anxious or nervous
- I have felt unhappy

Students were asked about their worries. Respondents worry most about academic demands (52.5% often or all the time) and world affairs (41% often or all the time) and least about accommodation (12%) and religious matters (3%). Non-NL respondents worry about what may be considered pre-conditions of wellbeing: finances, accommodation, health and job prospects. Not many NL-respondents are listing these aspects as a cause of worry.

On average 11% of the respondents were highly worried (4-5) about getting Covid-19. Ten percent of the respondents who answered this question considered themselves at risk/vulnerable when it comes to Covid-19. In a majority of the cases a (lung) disease (asthma, immune disease) was mentioned as the reason.

#### ***Lifestyle and social habits***

The following significant lifestyle changes can be observed:

- Less consumption of alcohol
- Less exercise
- More sleep, walking outdoors, caffeine and relaxation/meditation

Overall satisfaction with diet decreased for one third of the respondents. Satisfaction with lifestyle decreased for over 60% of the respondents.

The study shows a steep increase in use of social media and online social interaction and on the other hand a decrease of offline social interaction and volunteer work. Almost 60% of the respondents were somewhat or extremely satisfied with their social relationships in the past week.

Findings are in line with findings at other universities in The Netherlands and over the world. Also main findings are in line with results from RIVM-research (RIVM, 2020).

In almost all cases the results for non-NL respondents are significantly worse than for NL-respondents. So more physical and psychological symptoms, less satisfaction with lifestyle and social relations and more worries and anxiety.

### **Measures**

Regarding Covid-19-measures, respondents were most observant of handwashing and staying at home as much as possible.

Asked about measures of the University of Twente which were helpful the following were mentioned most by the 532 respondents who answered this question (45% total number of respondents):

- Online education (35%): classes, tutorials, group work and exams
- Information updates per email (13.5%)

Also mentioned: regulations and support by student guidance staff.

Asked about possible measures, over 62% of the respondents provided at least one suggestion. Most suggestions were for the university (39% (=178) of the respondents made a suggestion), followed by the government (24%) and society in general (11%). Top-5 of most frequently mentioned suggestions (% of 178 who made a suggestion to university) were:

- Offering support for students' educational needs (personal contact with teachers, more guidance with internship/graduation projects, working places at home)(17%)
- Lowering academic expectations workload (16%)
- Opening/offering on-campus study facilities (13%)
- Offering more information, being more transparent of information flow and decisions (11%)
- Offering support for students' (mental) health (10%)

### **Discussion and conclusions:**

The fact that differences for NL and non-NL respondents are significant for (almost) all items stands out. This survey points to what may be an important cause of this difference: twice as many international respondents as NL respondents worried all the time or often about what may be considered pre-conditions of (mental) wellbeing: finances, accommodation, health and job prospects which can only be influenced by an educational institute to a limited extent.

The changes in both lifestyle and social relationships may be an indication for the (individual) response to the (perceived) lack of wellbeing. NL respondents showed fewer changes or changes that may be considered healthy, whereas non-NL respondents (had to) make more changes either for the better or for the worse. Many non-NL respondents seemed to be in a web of negative symptoms and thoughts. It is unclear, however, whether changes in lifestyle and social habits are a result of symptoms and thoughts or are causing the symptoms. What can be concluded, however, is that lifestyle habits of NL respondents changed less and that they are more satisfied with their habits.

This study points to the importance of the educational setting as one of the pre-conditions of (mental) wellbeing as respondents indicated that education-related measures helped them and would have helped them. It can be expected that the educational needs of students will be different in a hybrid model. It may very well be the case that NL students significantly favour measures on-campus over online alternatives whereas non-NL students are more pre-occupied with measures that guarantee feasibility, even at, or preferably at, the cost of on-campus presence. Perceived risks/anxiety may increase this difference.

Alongside the outcomes of this study, the experiences of the CCOW-3 working group, the SWIP-project team and the student guidance staff in the past months were used to formulate recommendations that can be summarized as:

**Recommendations:**

1. Focus on the educational needs of students both in online and on-campus situations even though these needs may not be fully Covid-19 related and will vary among the population
2. Not only focus on the workload of the staff, but also on the work pressure of the students: online education seems to be more strenuous for students as well, even if it is not reflected in number of hours spent
3. Provision of Covid-19 information and management of expectations remains a main point of attention both at university, programme and course level
4. Try to avoid closing down safe places for self-study and places to meet for self-study with fellow student(s) or friend(s) to allow increase in focus/concentration/energy and avoid social isolation.
5. Try to avoid closing down safe (sport) facilities to allow students to maintain a healthy lifestyle. Offer a programme to support a healthy lifestyle
6. Acknowledge the worries about pre-conditions of wellbeing of (upcoming) international students (finances, accommodation, health(-care)) and seek for further improvement of provision of information and/or management of expectations and/or services. Re-invest in SKC (studiekeuzecheck) especially for non-NL students after formulating a vision on student wellbeing
7. Make sure sufficient student guidance capacity is available to allow for both pro-active and re-active actions and implementation of (financial/Covid-19 related) regulations
8. Continue the SWIP-project with extra attention for formulation of a vision on student wellbeing, involvement of (international) students, effective communication about support/instruments available and, in line with recommendations of Pei et.al., 2020), (increase of) self-efficacy of students in a hybrid education environment. Allow for a clear division of labour with project(s)/initiatives which focus on (hybrid) education, diversity & inclusion and recruitment & SKC

# 1 AIMS AND BACKGROUND OF THE STUDY

## 1.1 AIMS OF THE STUDY

To explore students' experiences and needs during March 2020-July 2020 and allow input for future measures, a survey was distributed to all registered students on July 9<sup>th</sup> 2020 which was available until July 31<sup>st</sup> 2020.

The survey was designed by the Athena Institute of VU Amsterdam within the framework of an international study (Syurina et.al., 2020; Wiegers, 2020).

It was acknowledged that several studies related to student wellbeing were done recently (i.e. Kelders et. al. (2019), Pei et.al. (2020), Lohuis et.al. (2020) and study association Sirius and more will be done in the near future such as Bridge the Gap (Endedijk et.al., Fall 2020) and monitor (RIVM/Trimbos, Spring 2021). Nevertheless, it was decided to add this survey to allow **all** students to have input given the extra-ordinary Covid-19 situation.

### **Aims**

1. Gain insight into how students experienced the situation in July 2020 in terms of somatic and psychological complaints, individual and social habits.
2. Exploring the needs of students by assessing their perception of societal and institutional Covid-19 measures.

Based on the results, recommendations for policy and management will be formulated.

## 1.2 RESEARCH DESIGN AND RESPONSE

### 1.2.1 Research design

The survey was distributed in English only via the server of the VU Amsterdam. No changes were made to the design of the survey to allow for comparison of results and due to time limitations. In the announcement two additional instructions were provided to the respondents being:

- The explanation of "your country" as used within the survey. "Your country" being the country of residence (not country of origin)
- The fact that it was not possible to move back and forth within the survey and/or to store intermediate results

As well as this the survey had the following characteristics:

- It was possible to skip any questions which resulted in a response rate per question
- Many of the questions were open questions allowing the use of the survey in different countries but also resulting in time-consuming and complicated analysis of results

The survey was distributed among all registered students July 9<sup>th</sup> 2020 and open until July 31<sup>st</sup> 2020 which made the response period comparable to those in other countries (May 15<sup>th</sup>- June 5<sup>th</sup> 2020). It should be noted that for many students the academic year finished on July 10<sup>th</sup> 2020 and the two last week had been exam weeks. No reminder was sent.

The survey consisted of five parts (see the Appendix for the survey and Syurina et.al., 2020 and Wiegers, 2020 for the justification of the design of the survey):

- Demographic questions, including living conditions and employment situation
- Somatic complaints using PHQ-15 expanded with change in severity during Covid-19 pandemic
- Psychological complaints using GP-CORE expanded with a student worry scale

- Individual and social habits of the participants and how these have been affected by the COVID-19 situation
- The last section of the questionnaire asked a combination of open and closed ended questions about the students' perceptions of the varied societal and institutional COVID-19 measures

### 1.2.2 Response

The overall response was 1187 of respondents, which is 10% of the UT student population (<https://www.utwente.nl/organisatie/feiten-en-cijfers/historie/#totaal-aantal-ingeschreven-studenten>). Average age of the respondents was 23 (ranging from 17-50). It can be expected that those students not feeling well responded more often than students feeling well. This is the case in all wellbeing research based on self-reporting.

In Table 1 (following page) response per category is presented. Field of study is grouped per faculty.

Table 1 reveals multiple possible problems with the representativeness of the sample:

- Female respondents are overrepresented
- It is not possible to make a satisfying distinction between BSc- and MSc-respondents based on either latest completed study degree, field of study or study year: figures deviate too much from UT-population figures. Based on "Last completed study degree" master students appear to be overrepresented whereas based on "Study year" they seem to be underrepresented. In the study of Kelders et al. (2019) the same question was asked but not as an open question which resulted in better quality responses
- The possibility to skip any of the questions resulted in a different number of respondents per question. It was decided to report number of respondents for each result as it was different per question and even per item.
- The open questions resulted in interesting but sometimes hard to interpret outcomes:
  - Over 10% of the respondents were not sure that the UT is a public institute
  - Almost 10% of the respondents seem to consider the UT, a research university, to be a university of applied sciences
  - Field of study ranged from "Mathematical Biology" to "Engineering", "Management" or "Technology". This may be an explanation for the somewhat lower response especially for the faculty BMS and ET as these responses were categorised under "Other".

Based on the responses, it was decided for further analysis only to distinguish faculties and NL-non-NL respondents. No analysis was made based on gender and/or BSc/MSc.

Finally, it was decided based on preliminary results to only report about differences between NL and non-NL respondents. The reason for this was that faculty data showed little differences which may not be explained by differences between NL and non-NL students. There was no time to do this (post-hoc) analysis.

To interpret the results, comparisons were made to the results of other recent studies:

- RIVM: among inhabitants of the Netherlands in the past months
- Syurina: among students in the Netherlands, Ukraine, Italy, Germany and Finland in May/June 2020 using the Athena Institute survey
- Wiegers: detailed report about the results of a comparison of results of the Netherlands and Ukraine using the Athena Institute survey
- I-graduate: among a selection of 3000 UT-students and compared to other universities in June 2020
- Lohuis: among Dutch university employees and students in June 2020



- Pei: among UT-teachers and –students of a selected range of programmes in June 2020
- The number of respondents in all surveys except the study of RIVM is lower than the number of respondents in this survey. The level of representativeness of most studies is unknown.

**Table 1 Response per category**

<b>Gender (N=988)</b>	<b>N (% of respondents)</b>	<b>UT-figures (11740 registered students 2019, % of population)</b>
Male	456 (46.2%)	64% (based on figure 2018)
Female	525 (53.1%)	36% (based on figure 2018)
Other	7 (0.7%)	
<b>Country of study (N=988)</b>		
Netherlands	981 (99.3%)	
Non-Netherlands	7 (0.7%)	
<b>Country of origin (N=989)</b>		
Netherlands	664 (67.1%)	69%
Non-Netherlands	325 (32.9%)	31%
<b>Latest completed study degree (N=990)</b>		
Bachelor's	492 (49.7%)	MSc + post-initial – pre-master = 40%
Master's	53 (5.4%)	
Other	18 (1.8%)	
Secondary school	427 (43.1%)	BSc + pre-master = 60%
<b>Public/private institution (N=990)</b>		
Private	44 (4.4%)	
Public	879 (88.8%)	
I am not sure	67 (6.8%)	
<b>Kind of institution (N=988)</b>		
University	893 (90.4%)	
University of applied sciences	93 (9.4%)	
Other	2 (0.2%)	
<b>Field of study (N=991)</b>		
ATLAS	5 (0,5 %)	141 (3.5%)
BMS	254 (25,6%)	3674 (6.9%)
EEMSC	250 (25,2 %)	2569 (9.7%)
ET	182 (18,3 %)	2489 (7.3%)
ITC	22 (2,2 %)	266 (8.3%)
S&T	218 (22,0%)	2601 (8.4%)
Other	61 (6,1 %)	Multiple faculties (14) or no clear faculty (47)*
<b>Study year (N=986)</b>		
First year	287 (29.1%)	56.2%
Second year	257 (26.1%)	
Third year	159 (16.1%)	

Pre-Master	13 (1.3%)	3.5%
Master	228 (23.1%)	39.9%
Other	42 (4.3%)	0.0%

\* Respondents indicating multiple faculties (14) or fields of study which cannot be related to a faculty (47) indisputably like "Engineering" or "Technology"

## 2 FINDINGS

In this chapter we will present the results of the different parts of the survey.

### 2.1 FINDINGS ON WORK AND LIVING CONDITIONS

**Table 2 Work**

<b>Work (N=991)</b>	
Yes, full-time	25 (2.5%)
Yes, part-time	343 (34.6%)
No	623 (62.9%)

The number of students with a part-time job is considerably lower than in the last study of Nibud (see <https://www.nibud.nl/wp-content/uploads/Nibud-Studentenonderzoek-2017.pdf>). In this study 64% of respondents indicated that they have a paid job. According to this study the average number of hours is 13 hours. In this study only Dutch students were taken into account.

The study of Kelders et.al. (2019) indicates that students work an average of around 5 hours per week. The percentage of students who work is not known from this study. Differences among Dutch and international students and faculties were small.

Research by CBS (<https://www.cbs.nl/nl-nl/reeksen/werkloosheid>) makes clear that young people (15-25) and especially those living with their parents, have suffered the most job losses in the past months. Specific figures about loss of jobs among students are not available (yet). The fact that young people have flex-jobs in sectors suffering most is given as an explanation.

Compared to nationwide figures, the number of students without a paid job at the University of Twente is considerably lower than expected. The fact that the survey was administered during summer holiday may be the main explanation.

**Table 3 Living conditions**

<b>Living conditions (N=991)</b>	
Dorm	116 (11.7%)
Living at home	224 (22.6%)
Renting alone	166 (16.8%)
Renting with others	438 (44.2%)
Other	47 (4.7%)

Most respondents in category “Other” do not live alone but rent with others. This response is in line with Landelijke Monitor Studentenhuisvesting 2019 (see <https://www.kences.nl/wp-content/uploads/2020/06/20191003-Landelijke-Monitor-Studentenhuisvesting-2019.pdf>, bijlage D). It is interesting to observe that over 10% of the respondents considered their housing situation to be a “dorm” (= shared facilities and shared bedrooms). If indeed students do share bedrooms without being in an intimate relationship it may be a point of concern as long as Covid-19 lasts. Most likely the respondents just have given their own interpretation as no definitions of the different types of living conditions were given. No further analysis was made on the relationship between “Renting alone” and Loneliness.

## 2.2 FINDINGS ON SOMATIC COMPLAINTS

According to the PHQ-15 instruction manual, scores of 5, 10, and 15 represent low, medium and high somatic severity (Wiegers, 2020). According to Hinz et.al. (2017) a normative value for PHQ-15 is 4.6 ( $\pm 3.6$ ) for men and 6.3 ( $\pm 4.6$ ) for women.

**Table 4 PHQ-15 score**

	PHQ-15 mean	PHQ-15 standard deviation
NL (556)	6.76	4.56
Non-NL (261)	8.24	5.57
<b>Total (817)</b>	<b>7.23</b>	<b>4.95</b>

The PHQ-15 score for non-NL respondents is significantly higher than for NL respondents. Both for NL and non-NL students, the value is considerably higher than the normative value but comparable to the value for NL students in the study of Wiegers (2020).

In Appendix 2 and Appendix 3 detailed tables can be found of prevalence of symptoms and change during Covid-19. The following symptoms were most common. These were also the symptoms with the largest increase during Covid-19:

- Headaches (13.2% of the respondents were bothered a lot and 49.9% were bothered a little, increase among 35.5% of respondents)
- Trouble sleeping (24.6% of the respondents were bothered a lot and 40.2% a little, increase among 47.5% of respondents)
- Feeling tired or having low energy (40.8% were bothered a lot and 41.0% a little, increase among 58% of respondents)

Low energy is also reported in the study of Lohuis et.al. (2020).

The following symptoms were least common:

- Fainting spells (1.1% of the respondents were bothered a lot and 8.0% a little)
- Pain or problems during sexual intercourse (2.1 % of the respondents were bothered a lot and 9.5% a little)
- Chest pain (2.6 % of the respondents were bothered a lot and 17.5% a little)

Fainting spells and pain or problems during sexual intercourse are also among the symptoms with the smallest increase percentage.

Results are similar in the study of Wiegers (2020) and Syurina et.al. (2020), although symptoms seem a little less severe in their studies which may be caused by different timeframe of their study (May instead of July).

### **NL compared to non-NL**

There were only small differences between the nature of symptoms scoring high and low between NL and non-NL respondents: menstrual cramps occurred a lot among 20% of the non-NL respondents and 17.1% of the non-NL respondents indicated suffering a lot from backpain. This was higher than 13.2% of respondents reporting headaches.

Overall, among non-NL respondents, severity of all symptoms was significantly higher for nine out of 15 symptoms and higher for all symptoms. Change in symptoms (both increase and/or decrease) compared to change for all respondents was significant for non-NL students in 12 out of 15

symptoms. For NL respondents, change in severity of symptoms was not significant from change for all respondents.

## 2.3 FINDINGS ON PSYCHOLOGICAL WELLBEING AND CONCERNS

The outcomes of the sub-analysis regarding the items on psychological wellbeing can be found in Table 5 (following page). The average over all respondents and items (3.10) is in line with Wiegers (2020) (3.11) suggesting that there were no overall changes in psychological wellbeing (as the normative score for this survey is 3.00). In the study of Wiegers (2020) it is pointed out that NL respondents score higher on negative items and Ukraine students higher on positive statements.

In our study, overall NL respondents scored higher on positive statements such as “I have felt I have someone to turn to when things go wrong”, “I have felt OK about myself”, “I have felt able to cope when things go wrong”, “I have been happy with the things I have done”, “I have felt optimistic about my future”. In contrast, respondents of other nationalities scored higher on negative statements such as “I have felt tense, anxious or nervous”, “I have had difficulty getting to sleep or staying asleep”, “I have felt criticised by other people”, “I have felt unhappy” and “I have been irritable when with other people”.

For some of the symptoms, both in the study of Wiegers (2020) as well as in our study, differences were not significant: “I have been troubled by aches, pains or other physical symptoms” (5), “I have felt warmth or affection for someone” (8) and “I have been able to do most things I needed to do” (9).

Comparing the results on physical wellbeing and comparing the results of Wiegers (2020) to our study it is hard to draw conclusions. Overall, results on negative items are in line with the result of the ongoing study of RIVM on wellbeing (see <https://www.rivm.nl/gedragsonderzoek/maatregelen-welbevinden/welbevinden-en-leefstijl>), the study of Lohuis et.al. (2020) and the study of Syurina (et.al. (2020) .

In Table 6 the results on loneliness are shown. Although 47% of the respondents indicate having felt somewhat (39%) or extremely (7.5%) lonely, it should be pointed out that this is not significantly different than before Covid-19. However, non-NL respondents are significantly more lonely than NL respondents. In the study of Lohuis et.al. (2020), which ran for half of June, the number of students reporting loneliness is higher (63%) in line with the RIVM-findings which show a decrease in loneliness from about 60% at the start of June to 45% in July which was the study period of this survey.

**Table 6 Loneliness**

Loneliness	N	Extremely lonely		Somewhat lonely		Neutral		Not really lonely		Not lonely at all		Mean (SD)
		N	%	N	%	N	%	N	%	N	%	
Total	763	57	7.5	299	39.2	118	15.5	192	25.2	97	12.7	2.96 (±1.21)
NL	528	23	4.4	207	39.2	83	15.7	143	27.1	72	13.6	3.06 (±1.18)
Non-NL	235	34	14.5	92	39.1	35	14.9	49	20.9	25	10.6	2.74 (±1.24)

**Table 5 Prevalence psychological symptoms per item NL-non-NL**

			Total	Not at all		Only occasionally		Sometimes		Often		Most or all of the time		$\chi^2$ (p)
Qn	Items		N	N	%	N	%	N	%	N	%	N	%	
(1)	I have felt tense, anxious or nervous	Total	786	88	11.2	175	22.3	212	27.0	246	31.3	65	8.3	38.21 (.000)
		NL	538	74	13.8	124	23.0	157	29.2	156	29.0	27	5.0	
		Non-NL	248	14	5.6	51	20.6	55	22.2	90	36.3	38	15.3	
(2)	I have felt I have someone to turn to when things go wrong	Total	784	56	7.1	95	12.1	141	18.0	227	29.0	265	33.8	25.49 (.000)
		NL	539	32	5.9	50	9.3	90	16.7	164	30.4	203	37.7	
		Non-NL	245	24	9.8	45	18.4	51	20.8	63	25.7	62	25.8	
(3)	I have felt OK about myself	Total	784	31	4.0	108	13.8	197	25.1	294	37.5	154	19.6	29.82 (.000)
		NL	537	13	2.4	60	11.2	128	23.8	226	42.1	110	20.5	
		Non-NL	247	18	7.3	48	19.8	69	27.9	68	27.5	44	17.8	
(4)	I have felt able to cope when things go wrong	Total	783	33	4.2	109	13.9	205	26.2	303	38.7	133	17.0	15.92 (.003)
		NL	537	17	3.2	66	12.3	132	24.6	228	42.5	94	17.5	
		Non-NL	246	16	6.5	43	17.5	75	29.7	75	30.5	39	15.9	
(5)	I have been troubled by aches, pains or other physical symptoms	Total	786	218	27.7	235	29.9	183	23.3	118	15.0	32	4.1	2.73 (.605)
		NL	539	152	28.2	167	31.0	124	23.0	77	14.3	19	3.5	
		Non-NL	247	66	26.7	68	27.5	59	23.9	41	16.6	13	5.3	
(6)	I have been happy with the things I have done	Total	786	49	6.2	132	16.8	251	31.9	275	35.0	79	10.1	22.07 (.000)
		NL	539	28	5.2	81	15.0	159	29.5	216	40.1	55	10.2	
		Non-NL	246	21	8.5	51	20.6	92	37.2	59	23.9	24	9.7	
(7)	I have had difficulty getting to sleep or staying asleep	Total	786	137	17.4	169	21.5	181	23.0	203	25.8	96	12.2	12.51 (.014)
		NL	539	93	17.3	126	23.4	133	24.7	133	24.7	54	10.0	

			Total	Not at all		Only occasionally		Sometimes		Often		Most or all of the time		$\chi^2$ (p)
Qn	Items		N	N	%	N	%	N	%	N	%	N	%	
		Non-NL	247	44	17.8	43	17.4	48	19.4	70	28.3	42	17.0	
(8)	I have felt warmth or affection for someone	Total	784	77	9.8	118	15.1	115	14.7	254	32.4	220	28.1	6.14 (.189)
		NL	539	47	8.7	77	14.3	76	14.1	176	32.7	163	30.2	
		Non-NL	245	30	12.2	41	16.7	39	15.9	78	31.8	57	23.3	
(9)	I have been able to do most things I needed to do	Total	785	53	6.8	120	15.3	202	25.7	302	38.5	108	13.8	9.15 (.057)
		NL	538	35	6.5	72	13.4	134	24.9	224	41.6	73	13.6	
		Non-NL	247	18	7.3	48	19.4	68	27.5	78	31.6	35	14.2	
(10)	I have felt criticised by other people	Total	785	221	28.2	259	33.0	208	26.5	75	9.6	22	2.8	24.33 (.000)
		NL	538	141	26.2	199	37.0	148	27.5	38	7.1	12	2.2	
		Non-NL	247	80	32.4	60	24.3	60	24.3	37	15.0	10	4.0	
(11)	I have felt unhappy	Total	784	61	7.8	247	31.5	245	31.3	178	22.7	53	6.8	26.32 (.000)
		NL	537	49	9.1	186	34.6	170	31.7	107	19.9	25	4.7	
		Non-NL	247	12	4.9	61	24.7	75	30.4	71	28.7	28	11.3	
(12)	I have been irritable when with other people	Total	785	120	15.3	239	30.4	251	32.0	136	17.3	39	5.0	13.56 (.009)
		NL	539	83	15.4	174	32.3	174	32.3	91	16.9	17	3.2	
		Non-NL	246	37	15.0	65	26.4	77	31.3	45	18.3	22	8.9	
(13)	I have felt optimistic about my future	Total	786	66	8.4	152	19.3	246	31.3	233	29.6	89	11.3	22.22 (.000)
		NL	539	35	6.5	90	16.7	170	31.5	180	33.4	64	11.9	
		Non-NL	247	31	12.6	62	25.1	76	30.8	53	21.5	25	10.1	
(14)	I have achieved the things I wanted to	Total	784	74	9.4	143	18.2	248	31.6	235	30.0	84	10.7	3.83 (.430)
		NL	538	47	8.7	95	17.7	166	30.9	172	32.0	58	10.8	
		Non-NL	246	27	11.0	48	19.5	82	33.3	63	25.6	26	10.6	

Table 7 shows the results on the different concerns distinguished in this study. Participants were asked to estimate the degree of worries that they experienced regarding the escalation of the Covid-19 pandemic in their own country. Question 26 consisted of nine sub-questions, each asking about a different issue on a 5-point Likert-scale ranging from 'Almost never' to 'All the time'. More specifically, the issues involved financial concerns, academic demands, accommodation, health worries, job prospects, world affairs, personal relationships, religious matters and environmental matters.

Regarding financial concerns, 52.8% of the participants indicated that they worry almost never or only seldom. In terms of academic demands, most participants indicated that they often worry about academic demands (35.7%), followed by sometimes (24.9%) and all the time (16.8%). Furthermore, almost half of the participants indicated that they almost never worry about their accommodation (49.1%). Regarding health worries, most participants worry sometimes (30.3%) to seldom (27.7%) about their health. In terms of job prospects, half of the participants indicated that they worry almost never or only seldom about job prospects. Most participants (64.1%) indicated that they sometimes or often worry about world affairs. Regarding personal relationships it was found that 57% of the participants worry often or sometimes about their personal relationships. A majority of the respondents (83.6%) indicated that they do not worry about religious matters. 30.3% of the respondents worry sometimes about environmental matters.

One again the difference between NL and non-NL respondents stands out. Non-NL respondents worry about all aspects being questioned significantly more than NL respondents. Non-NL respondents worry about what may be considered pre-conditions of wellbeing: finances, accommodation, health and job prospects which seem of little concern for most NL respondents. These results are in line with the study of Wiegers (2020) in which results of Ukraine respondents reflect the same concerns as non-NL respondents in our study (except for Ukraine students not being concerned too much with academic demands) whereas the results of the NL respondents in both studies are highly comparable.

The Covid-19 study of I-graduate (2020) in which the UT participated in June did have a different question and categories but in this study also shows a difference in the concerns of NL respondents, EU-respondents and non-EU-respondents. While the main concern of NL respondents, both BSc and MSc, was social isolation (over 40%), the main concerns of non-NL students were different and differed among BSc- and MSc-respondents. For instance, only 4% of non-EU MSc-respondents indicated that social isolation was their main concern. For them, their future career and funding of their studies (both 30%) were main concerns.



**Table 7 Concerns**

			Total	Almost never		Seldom		Sometimes		Often		All the time		$\chi^2$ (p)
Qn	Items		N(*)	N	%	N	%	N	%	N	%	N	%	
(1)	Financial concerns	Total	715	209	29.2	169	23.6	156	21.8	131	18.3	50	7.0	66.32 (<.001)
		NL	490	165	33.7	122	24.9	113	23.1	78	16.0	11	2.2	
		Non-NL	224	44	19.6	47	21.0	42	18.8	53	23.7	17	17.0	
(2)	Academic demands	Total	714	50	7.0	111	15.5	178	24.9	255	35.7	120	16.8	38.07 (<.001)
		NL	489	38	7.8	87	17.8	130	26.6	180	36.8	54	11.0	
		Non-NL	223	12	5.4	24	10.7	48	21.4	75	33.5	65	29.0	
(3)	Accommodation	Total	713	350	49.1	173	24.3	104	14.6	61	8.6	25	3.5	49.32 (<.001)
		NL	489	276	56.4	114	23.3	63	12.9	26	5.3	10	2.0	
		Non-NL	223	74	33.2	58	26.0	41	18.4	35	15.7	15	6.7	
(4)	Health worries	Total	714	133	18.6	198	27.7	216	30.3	131	18.3	36	5.0	66.58 (<.001)
		NL	489	103	21.1	159	32.5	148	30.3	71	14.5	8	1.6	
		Non-NL	224	29	12.9	39	17.4	68	30.4	60	26.8	28	12.5	
(5)	Job prospects	Total	712	207	29.1	150	21.1	161	22.6	116	16.3	78	11.0	94.96 (<.001)
		NL	488	169	34.6	106	21.7	126	25.8	67	13.7	20	4.1	
		Non-NL	223	38	17.0	44	19.7	35	15.7	49	22.0	57	25.6	
(6)	World affairs	Total	713	77	10.8	103	14.4	240	33.7	217	30.4	76	10.7	30.82 (<.001)
		NL	489	57	11.7	79	16.2	181	37.0	137	28.0	35	7.2	
		Non-NL	223	20	9.0	24	10.8	58	26.0	80	35.9	41	18.4	
(7)	Personal relationships	Total	714	78	10.9	146	20.4	212	29.7	209	29.3	69	9.7	16.59 (.002)
		NL	489	60	12.3	108	22.1	143	29.2	144	29.4	34	7.0	
		Non-NL	224	18	8.0	38	17.0	69	30.8	64	28.6	35	15.6	

			Total	Almost never		Seldom		Sometimes		Often		All the time		$\chi^2$ (p)
Qn	Items		N(*)	N	%	N	%	N	%	N	%	N	%	
(8)	Religious matters	Total	714	597	83.6	71	9.9	27	3.8	13	1.8	6	0.8	9.98 (.041)
		NL	489	417	85.3	46	9.4	19	3.9	5	1.0	2	0.4	
		Non-NL	224	179	79.9	25	11.2	8	3.6	8	3.5	4	1.8	
(9)	Environmental matters	Total	712	146	20.5	146	20.5	216	30.3	160	22.5	44	6.2	24.55 (<.001)
		NL	487	106	21.8	114	23.4	147	30.2	102	20.9	18	3.7	
		Non-NL	224	40	17.9	32	14.3	68	30.4	58	25.9	26	11.6	

(\*) there is a small discrepancy between the totals and the sum of NL and non-NL, the cause of this discrepancy is not clear (yet)

**Table 9 Changes in social interaction**

			Total	Decrease		No change		Increase		$\chi^2$ (p)
Qn	Item		N	N	%	N	%	N	%	
(1)	Social media use	Total	749	33	4.4	245	32.7	471	62.9	10.44 (<.005)
		NL	517	23	4.4	188	36.4	306	59.2	
		Non-NL	232	10	4.3	57	24.6	165	71.1	
(2)	Online social interaction	Total	750	54	7.2	171	22.8	525	70.0	1.23 (.540)
		NL	519	34	6.6	117	22.5	368	70.9	
		Non-NL	231	20	8.7	54	23.4	157	68.0	
(3)	Offline social interaction	Total	752	586	77.9	100	13.3	66	8.8	8.35 (.015)
		NL	522	419	80.3	67	12.8	36	6.9	
		Non-NL	230	167	72.6	33	14.3	30	13.0	
(4)	Engagement in volunteering activities	Total	688	186	27.0	462	67.2	40	5.8	4.39 (.111)
		NL	480	125	26.0	332	69.2	23	4.8	
		Non-NL	208	61	29.3	130	62.5	17	8.2	

## 2.4 FINDINGS ON SOCIAL WELLBEING

The study shows a steep increase in use of social media and online social interaction and on the other hand a decrease of offline social interaction and volunteer work as can be seen in Table 8. Overall results are in line with the results reported by Wiegers (2020).

**Table 8 Social interaction**

Qn	Item	N	0 hrs		1-9 hrs		10-19 hrs		20-29 hrs		> 29 hrs		Other	
			N	%	N	%	N	%	N	%	N	%	N	%
(1)	Social media use	727	31	4.3	252	34.7	217	29.8	151	20.8	75	10.3	1	0.1
(2)	Online social interaction	723	20	2.8	435	60.2	151	20.9	69	9.5	47	6.5	1	0.1
(3)	Offline social interaction	720	27	3.8	373	51.8	146	20.3	105	14.6	66	9.2	3	0.4
			No				Yes				Other			
(4)	Engagement in volunteering activities	725	589		81.2%		134		18.5%		2		0.3%	

The study shows a steep increase in use of social media and online social interaction and on the other hand a decrease of offline social interaction and volunteer work. Overall results are in line with the results reported by Wiegers (2020). However, the percentage of non-NL respondents which showed an increase in offline social interaction was significantly higher than the total number. The same applies to social media use. For NL respondents, offline social interaction decreased more than for all respondents combined. An explanation for the difference in decrease of off-line interaction between NL- and non-NL respondents may be found in the following:

- The study period covered (part of) summer holidays, so many non-NL respondents may have travelled to their home-country if they did not do so in the months before. The study of I-graduate showed that especially BSc-students travelled home (over 50% of EU students and 35% of non-EU students) after suspension of on-campus activities.
- Students (had to) spend more time with their housemates which may have "forced" non-NL respondents to do so if they did not do so before.

Almost 60% of the respondents were somewhat or extremely satisfied with their social relationships in the past week as shown in Table 10, which is comparable to the percentage found by Wiegers (2020). NL respondents were significantly more satisfied than non-NL respondents.

**Table 10 Satisfaction with social relationships**

	N	Extremely satisfied		Somewhat satisfied		Neither satisfied nor dissatisfied		Somewhat dissatisfied		Extremely dissatisfied		$\chi^2$ (p)
		N	%	N	%	N	%	N	%	N	%	
Total	762	110	14.4	337	44.2	101	13.3	173	22.7	41	5.4	10.41 (.034)
NL	528	82	15.5	242	45.8	64	12.1	119	22.5	21	4.0	
Non-NL	234	28	12.0	95	40.6	37	15.8	54	23.1	20	8.5	

## 2.5 FINDINGS ON HABITS

In Table 11 the findings on lifestyle are summarised. No reference data are available for these items.

Significant lifestyle changes (see Table 12) which are in line with the RIVM wellbeing research can be observed :

- Less consumption of alcohol
- Less exercise

- More sleep, walking outdoors, caffeine and relaxation/meditation

Overall NL respondents showed fewer changes in lifestyle than non-NL respondents who had changes both for the better and for the worse.

**Table 11 Lifestyle**

Qn	Item							
		<b>N</b>	<b>0</b>	<b>1-9</b>	<b>10-24</b>	<b>25-50</b>	<b>&gt;50</b>	<b>Other</b>
(1)	Caffeine consumption (incl. coffee, black and green tea) - number of cups per week	772	19.0%	37.7%	33.4%	8.5%	0.5%	0.8%
		<b>N</b>	<b>0</b>	<b>1-9</b>	<b>10-20</b>	<b>21-40</b>	<b>&gt;41</b>	<b>Other</b>
(2)	Alcohol consumption – glasses per week	773	27.8%	56.4%	12.3%	2.7%	0.4%	0.4%
		<b>N</b>	<b>0</b>	<b>1-9</b>	<b>10-15</b>	<b>Other</b>		
(3)	Exercise (at least 30 min of elevated heartbeat) - times per week	770	16.1%	82.3%	0.5%	1%		
		<b>N</b>	<b>0</b>	<b>1-5</b>	<b>6-9</b>	<b>&gt;9</b>	<b>Other</b>	
(4)	Consumption of junk food – meals per week	768	27.9%	69.1%	1.2%	1.4%	0.4%	
		<b>N</b>	<b>0</b>	<b>1-5</b>	<b>6-9</b>	<b>&gt;9</b>	<b>Other</b>	
(5)	Ordering food - meals per week	764	56.3%	42.9%	0.1%	0.4%	0.3%	
		<b>N</b>	<b>0</b>	<b>1-9</b>	<b>10-24</b>	<b>25-35</b>	<b>&gt;35</b>	<b>Other</b>
(6)	Soft drinks (Cola, Fanta, etc) – glasses per week	762	45.4%	48.3%	5.4%	0.8%	0.1%	0%
		<b>N</b>	<b>0</b>	<b>1-5</b>	<b>6-9</b>	<b>10-15</b>	<b>&gt;15</b>	<b>Other</b>
(7)	Smoking - cigarettes per day	174	64.9%	17.2%	5.2%	7.5%	4.0%	1.1%
		<b>N</b>	<b>0</b>	<b>1-5</b>	<b>6-7</b>	<b>8-10</b>	<b>&gt;10</b>	
(8)	Sleep – hours per night	765	0.1%	5.0%	39.3%	54.1%	1.4%	
		<b>N</b>	<b>0</b>	<b>1-4</b>	<b>5-9</b>	<b>10-14</b>	<b>&gt;14</b>	<b>Other</b>
(9)	Walking outside – hours per week	764	7.5%	65.6%	19.6%	4.2%	2.7%	0.4%
		<b>N</b>	<b>0</b>	<b>1-9</b>	<b>10-19</b>	<b>20-29</b>	<b>&gt; 30</b>	<b>Other</b>
(10)	Relaxation/meditation activities - hours per week	745	36.2%	44.3%	7.0%	5.0%	3.1%	0.3%

**Table 12 Changes in lifestyle**

Qn	Item		Total	Decrease		No change		Increase		$\chi^2$ (p)
			N	N	%	N	%	N	%	
(1)	Caffeine consumption (incl. coffee, black and green tea)	Total	793	115	14.5%	473	59.6%	205	25.9	3.58 (.167)
		NL	547	88	16.1%	320	58.5%	139	25.4%	
		Non-NL	246	27	11%	153	62.2%	66	26.8%	
(2)	Alcohol consumption	Total	787	289	36.7%	357	45.4%	141	17.9%	32.64 (.000)
		NL	547	234	42.8%	234	42.8%	79	14.4%	
		Non-NL	240	55	22.9%	123	51.3%	62	25.8%	
(3)	Exercise (at least 30 min of elevated heartbeat)	Total	795	392	49.3%	183	23.0%	220	27.7%	.94 (.626)
		NL	548	274	50.0%	128	23.4%	146	26.6%	
		Non-NL	247	118	47.8%	55	22.3%	74	30.0%	
(4)	Consumption of junk food	Total	794	154	19.4%	466	58.7%	174	21.9%	37.54 (.000)
		NL	547	111	20.3%	349	63.8%	87	15.9%	
		Non-NL	247	43	17.4%	117	47.4%	87	35.2%	
(5)	Ordering food	Total	790	119	15.1%	504	63.8%	167	21.1%	12.26 (.002)
		NL	546	75	13.7%	370	67.8%	101	18.5%	
		Non-NL	244	44	18.0%	134	54.9%	66	27.0%	
(6)	Soft drinks (Cola, Fanta, etc)	Total	789	79	10.0%	584	74.0%	126	16.0%	17.97 (.000)
		NL	544	54	9.9%	423	77.8%	67	12.3%	
		Non-NL	245	25	10.2%	161	65.7%	59	24.1%	
(7)	Smoking	Total	236	26	11.0%	166	70.3%	44	18.6%	10.37 (.006)
		NL	143	14	9.8%	111	77.6%	18	12.6%	
		Non-NL	93	12	12.9%	55	58.1%	26	28.0%	

			Total	Decrease		No change		Increase		$\chi^2$ (p)
Qn	Item		N	N	%	N	%	N	%	
(8)	Sleep	Total	794	218	27.5%	305	38.4%	271	34.1%	17.91 (.000)
		NL	547	131	23.9%	235	43.0%	181	33.1%	
		Non-NL	247	87	35.2%	70	28.3%	90	36.4%	
(9)	Walking outside	Total	788	301	38.2%	171	21.7%	316	40.1%	29.20 (.000)
		NL	543	175	32.2%	121	22.3%	247	45.5%	
		Non-NL	245	126	51.4%	50	20.4%	69	28.2%	
(10)	Relaxation/meditation activities	Total	778	140	18.0%	423	54.4%	215	27.6%	8.23 (.016)
		NL	537	87	16.2%	310	57.7%	140	26.1%	
		Non-NL	241	53	22.0%	113	46.9%	75	31.1%	

The majority of both NL- and non-NL respondents were satisfied with their diet and lifestyle. Non-NL respondents showed less satisfaction, however.

**Table 13 Satisfaction with diet and lifestyle**

Item	N	Totally unhappy (0-1)		Somewhat unhappy (2)		Neither happy nor unhappy (3)		Somewhat happy (4)		Totally happy (5)		$\chi^2$ (p)
		N	%	N	%	N	%	N	%	N	%	
<b>Diet</b>												
Total	810	43	5.3%	116	14.3%	221	27.3%	323	39.9%	107	13.2%	68.74 (.000)
NL	553	13	2.4%	64	11.6%	135	24.4%	257	46.5%	84	15.2%	
Non-NL	257	30	11.7%	52	20.2%	86	33.5%	66	25.7%	23	8.9%	
<b>Lifestyle</b>												
Total	810	60	7.4%	195	24.1%	276	34.1%	233	28.8%	46	5.7%	41.44 (.000)
NL	553	27	4.9%	114	20.6%	192	34.7%	188	34.0%	32	5.8%	
Non-NL	257	33	12.9%	81	31.5%	84	32.7%	45	17.5%	14	5.4%	

## 2.6 FINDINGS ON COVID-19 MEASURES

### 2.6.1 Government measures

Regarding Covid-19 measures, respondents were most observant of handwashing and staying at home as much as possible (see Table 14 following page). When compared to nationwide findings, adhering to measures seemed to be harder for UT-respondents. Results are in line with findings of RIVM and Lohuis et.al. (2020).

Closer analysis shows that non-NL respondents adhered to measures significantly more frequently than NL respondents for all measures mentioned. This may be a consequence of non-NL respondents being significantly more anxious about getting Covid-19 themselves than NL respondents (see Table 15).

**Table 15 Concern about getting Covid-19**

		Total	Not at all worried (0)		(1)		(2)		(3)		Highly worried (4-5)		$\chi^2$ (p)
		N	N	%	N	%	N	%	N	%	N	%	
<b>Items</b>													
Worried about getting Covid-19	Total	687	85	12.4%	227	33.0%	163	23.7%	132	19.2%	80	10.7%	31.59 (.000)
	NL	471	67	14.2	173	36.7%	107	22.7%	87	18.5%	37	7.8%	
	Non-NL	216	18	8.3%	54	25.0%	56	25.9%	45	20.8%	43	19.9%	



**Table 14 Adhering to measures**

			Total	Always		As much as possible		Sometimes		Seldom		Never		$\chi^2$ (p)
Qn	Items		N	N	%	N	%	N	%	N	%	N	%	
(1)	Staying at home as much as possible	Total	712	131	18.4%	371	52.1%	156	21.9%	43	6.0%	11	1.5%	31.28 (.000)
		NL	490	66	13.5%	258	52.7%	122	24.9%	35	7.1%	9	1.8%	
		Non-NL	222	65	29.3%	113	50.9%	34	15.3%	8	3.6%	2	0.9%	
(2)	Maintaining distance when meeting others	Total	712	92	12.9%	394	55.3%	166	23.3%	51	7.2%	9	1.3%	24.59 (.000)
		NL	490	43	8.8%	283	57.8%	122	24.9%	35	7.1%	7	1.4%	
		Non-NL	222	49	22.1%	111	50.0%	44	19.8%	16	7.2%	2	0.9%	
(3)	Use of mask and/or gloves in public places	Total	712	131	18.4%	129	18.1%	176	24.7%	170	23.9%	106	14.9%	101.77 (.000)
		NL	489	53	10.8%	70	14.3%	129	26.4%	150	30.7%	87	17.8%	
		Non-NL	223	78	35.0%	59	26.5%	47	21.1%	20	9.0%	19	8.5%	
(4)	Avoid meetings with friends and family	Total	713	43	6.0%	189	26.5%	267	37.4%	163	22.9%	51	7.2%	50.36 (.000)
		NL	490	15	3.1%	109	22.2%	213	43.5%	114	23.3%	39	8.0%	
		Non-NL	223	28	12.6%	80	35.9%	54	24.2%	49	22.0%	12	5.4%	
(5)	Wash hands frequently	Total	713	271	38.0%	285	40.0%	114	16.0%	40	5.6%	3	0.4%	40.41 (.000)
		NL	490	150	30.6%	211	43.1%	95	19.4%	31	6.3%	3	0.6%	
		Non-NL	223	121	54.3%	74	33.2%	19	8.5%	9	4.0%	0	0.0%	
(6)	Avoid touching eyes, nose, and mouth	Total	712	62	8.7%	252	35.4%	169	23.7%	168	23.6%	61	8.6%	61.84 (.000)
		NL	489	23	4.7%	152	31.1%	129	26.4%	129	26.4%	56	11.5%	
		Non-NL	223	39	17.5%	100	44.8%	40	17.9%	39	17.5%	5	2.2%	

In Table 16 it is shown that 67 of the 666 respondents who answered considered themselves to belong to a risk/vulnerable group for Covid-19 (10.0%). Categories were made up based on the answers provided by the respondents. The number of non-NL respondents is higher than can be expected based on response.

**Table 16 Belonging to risk/vulnerable group**

Category		Total (67)		NL (38) (6% of respondents)		Non-NL (29)(9% of respondents)	
Illness of respondent-total		40 (60%)		25		15	
	Lung		22		13		9
	Immune		6		4		2
	Other		12		8		4
Lifestyle (incl. overweight)		6 (9%)		3		3	
Vulnerable environment		2 (3%)		1		1	
Multiple		6 (9%)		3		3	
Unclear		3 (4%)		2		1	
Other		10 (15%)		4		6	

In the category “Other” we find answers like:

“Because young people can also become very sick of Covid”

“I have visited the campus hotel in the past weeks and corona cases have been there”

## 2.6.2 Analysis of measures of University of Twente

Many (532) of the respondents entered up to three measures that were taken by UT that helped. Measures were categorised. When multiple entries of one respondent fitted into one category it was counted once. This was most often the case for online education when respondents mentioned both online classes and online exams.

Measures were:

- Online education: online classes, online tutorials, online exams, online group work, availability of online learning environment (incl. discord and zoom)
- (Extra) Support with thesis/internship: supervisors reaching out, new assignments
- Regulations: switching test formats, flexibility deadlines, smooth BSc-MSc transition, tuition waiver, no binding recommendation, extra financial support
- Student guidance: study advisers, student psychologists, mentors being available/reaching out
- Communication: regular updates via email, corona website
- Other:
  - Wellbeing and study tips, Good Habitz, online workouts
  - Teaching staff asking about wellbeing and providing Q&A
  - Enforcing Covid-19 measures
  - Quick response to emails
  - Gestures: student assistants partially being paid while not being able to work, cards, presents
  - Online social events
  - Lab equipment being sent to home address

**Table 17 Helpful measures of the University of Twente**

Category	Measure 1	Measure 2	Measure 3	Total	% of non-blanks
Blank	7	249	364	620	
Online education	275	57	13	345	35.7%
Closure of facilities	51	9	7	67	6.9%
Re-opening of facilities	24	15	12	51	5.3%
(Extra) Support with thesis/internship	18	14	12	44	4.6%
Regulations	32	40	18	90	9.3%
Student guidance	24	29	27	80	8.3%
Communication	37	56	38	131	13.6%
Other	29	60	52	121	12.5%
Nothing	34	3	0	37	3.8%

### 2.6.3 Analysis of possible measures of the University of Twente

Students were asked about the actions they hoped others would have done to help them during the pandemic. They could write down (open answer) three actions/measures that would have helped them and who should have executed them.

736 out of 1188 respondents answered this question (provided at least one action/measure).

- All measures were analysed together. We made no distinction between measure 1, 2 and 3.
- The following answers were not included in the analysis
  - o Answers that were not complete (e.g. if only an executor was mentioned, without any further activity/measure or explanation) N= 4
  - o Answers that could not be understood content wise N= 4
  - o Answers such as 'no', 'I don't know', 'none'; 'no further comments', 'I'm satisfied' N=31
- The data was coded inductively by two coders. We first coded the data based on the mentioned executors. Sometimes, more than one executor was mentioned per activity/measure. These answers were then coded in all relevant categories. After that, data was further categorised in sub-themes regarding the different activities that could have helped the students during the pandemic. Some activities were given without mentioning a clear executor. When it became clear from the description of the activity/measure who the executor was, then these activities were coded in the fitting category. Otherwise they were coded as 'Executor not specified'. These quotes were then further subcategorised based on the mentioned activities. The final coding scheme was developed iteratively, until consensus between both coders was reached.

Table 18 provides an overview of the different executors and activities. In general, 11 different executors were mentioned by the students, namely 'University', 'Government', 'Society', 'Friends', 'Not specified', 'Family', 'Room/house mates', 'Own person', 'Work', 'Landlord', 'Student' and 'Law enforcement' (displayed from most- to least-often mentioned).

**Table 18 Overview of executors and helpful activities mentioned by students (N=736)**

Executor	N <sup>1</sup>	Measure/activity	Definition	N <sup>2</sup>	Example quotes
<b>University</b>	290				
		Offering support for students' educational needs	Measures/activities related to assisting students with study-related topics (e.g., offering more (personal) contact with teachers, more guidance with their graduation/internship projects, making sure that students have working places at home)	49	<ul style="list-style-type: none"> <li>• 'The University could have arranged more support for its students that are graduating, so perhaps more guidance, more understanding and maybe workgroups to help you through your thesis'</li> <li>• 'Promote group projects to increase social interaction, university'</li> </ul>
		Lowering academic expectations/workload	Measures/activities related to being more lenient towards e.g., deadlines, grading, workload, assignments in times of corona	45	<ul style="list-style-type: none"> <li>• 'Take into account the extra workload of having to do everything online, by the university'</li> <li>• 'It would have helped me if the university gave me a little more time to do things, or tried to reduce the pressure of so many deadlines'</li> </ul>
		Opening / offering on-campus study facilities	Measures/activities related to working on-campus instead of from home	38	<ul style="list-style-type: none"> <li>• 'Giving access to study places for studying together by the University'</li> <li>• 'It would have helped if the library would have opened earlier'</li> </ul>
		Offering more information, being more transparent about information flow and decisions	Measures/activities related to information needs (e.g. need for more information in general or about specific topics such as study delay, education in next semester, examination in times of corona, on-campus (study) activities)	33	<ul style="list-style-type: none"> <li>• 'More information what the university is doing and how it influences me; even if things are uncertain and might not concern me, it's better to [have] an unnecessary message than none'</li> <li>• 'Updated information on how to get to the next phase in your studies. In my case getting a job, but could also be an internship. Currently it is up to myself. - the University via workshops'</li> </ul>
		Offering support for students' (mental) health	Measures/activities related to acknowledging possible effects of the crisis on students' (mental) health and providing more guidance in how to cope with these effects appropriately	29	<ul style="list-style-type: none"> <li>• 'Offer more easily accessible help for mental health of students, university'</li> <li>• 'Asking about the mental state of the students during the COVID-19 pandemic, by the university'</li> </ul>

Executer	N <sup>1</sup>	Measure/activity	Definition	N <sup>2</sup>	Example quotes
University	290				
		Improving (online) education	Measures/activities related to satisfying students' need for high quality (online) education	27	<ul style="list-style-type: none"> <li>• 'University, providing better quality online lectures, half of it was good the other half was very much lacking in my opinion'</li> <li>• 'My university should have taken more action when students complained about the quality of education'</li> </ul>
		Improving financial support	Measures/activities related to accommodating students in their financial situation (e.g. offering reduced tuition fee)	24	<ul style="list-style-type: none"> <li>• 'Provide a reduction in University tuition for the corona times - by University administration'</li> <li>• 'Help (financial support) with getting a healthy workspace at home with the right equipment (for example a good chair) by the educational institution'</li> </ul>
		Offering (study) activities and events	Measures/activities related to facilitating social contact among students (online or offline)	17	<ul style="list-style-type: none"> <li>• 'Facilitate the continuation of activities organised by (student) culture associations - my educational institution'</li> <li>• 'Organise online events/meetings by the university'</li> </ul>
		Being more understanding and empathetic	Measures/activities related to acknowledging that the corona crisis also has a large impact on students	10	<ul style="list-style-type: none"> <li>• 'The university should have had more compassion for the social isolation of students and try to counteract this (both national and international)'</li> <li>• 'Acknowledge that adapting to the new situation brought about by the pandemic presents (new) challenges that students need to deal with (also beyond changed lecture formats) - my study/educational institution'</li> </ul>
		Other	Measures/activities related to different smaller topics that the university could have executed (e.g. university offering free corona testing, considering travel times of students)	18	<ul style="list-style-type: none"> <li>• 'The university should have raised more awareness amongst student[s]. The government has forbidden to gather but still a lot of students were doing it in student houses'</li> <li>• 'Provide free testing at the University - by University and local municipal authorities'</li> </ul>

Executer	N <sup>1</sup>	Measure/activity	Definition	N <sup>2</sup>	Example quotes
<b>Government</b>	178				
		(More & stricter) corona prevention measures	Measures/activities related to (faster) implementation of a variety of measures to prevent a further spread of corona (e.g. making wearing facial masks in public spaces mandatory, stricter guidelines in supermarkets)	61	<ul style="list-style-type: none"> <li>• 'The government should have enacted measures more quickly to prevent the spread of the virus'</li> <li>• 'Rules instead of "guidelines" (government should have executed)'</li> </ul>
		Offering financial/student support	Measures/activities related to acknowledging that students are also in a difficult situation due to corona and offering (financial) support accordingly	38	<ul style="list-style-type: none"> <li>• 'Government should have offered financial aid to students in acute need'</li> <li>• 'Someone from the government showing concern about students'</li> </ul>
		Being more transparent of information, information flow and decisions	Measures/activities related to providing information in general, but also clearer information about e.g. why specific measurements were taken, what the exact rules and exceptions are	31	<ul style="list-style-type: none"> <li>• 'The government could have been clearer about student houses (if they belong to households or not)'</li> <li>• 'Explaining in more detail why measures need to be taken and what will be done in the future-government'</li> </ul>
		Offering more allowances	Measures/activities regarding going back to normal life earlier (e.g. opening universities or other facilities earlier)	30	<ul style="list-style-type: none"> <li>• 'Allowing outdoor meetups earlier would have been nice, the isolation and being scared of being fined when relaxing or socialising were not pleasant at all'</li> <li>• 'Allowing controlled public gatherings earlier, by the government'</li> </ul>
		Offering mental/psychological support	Measures/activities related to the effects the crisis can have on our mental wellbeing	10	<ul style="list-style-type: none"> <li>• 'Government, give more emphasis on the mental burdens of a lockdown'</li> <li>• 'There should have been more action on psychological effects of the crisis by the government or university'</li> </ul>
		Other	Measures/activities related to different smaller topics that the government could have executed (e.g. having a strong leader, offering sufficient testing facilities)	8	<ul style="list-style-type: none"> <li>• 'More flexible rules on Stufi – DUO'</li> <li>• 'Not suggesting group immunity - the Prime Minister'</li> </ul>

Executer	N <sup>1</sup>	Measure/activity	Definition	N <sup>2</sup>	Example quotes
<b>Society/General public</b>	84				
		Adhering to corona rules / guidelines	Measures/activities related to people complying to the corona rules and guidelines (e.g. maintaining 1.5m distance at all times, avoiding social gatherings)	74	<ul style="list-style-type: none"> <li>• ‘Everyone keeping a good social distance’</li> <li>• ‘Mind the corona regulations, society’</li> </ul>
		Other	Measures/activities related to different smaller topics that society could have executed (e.g. people not underestimating the seriousness of the virus)	10	<ul style="list-style-type: none"> <li>• ‘People need to check their facts before saying them’</li> <li>• ‘Staying in contact as much as possible, while following the guidelines. Executed by anyone in my social circle’</li> </ul>
<b>Friends</b>	56				
		Having more physical / online contact	Measures/activities related to getting/staying in contact with friends via online services or personal contact	40	<ul style="list-style-type: none"> <li>• ‘Being contacted more by friends or family members - via phone or video call or texts’</li> <li>• ‘More and easier contact with others to help against isolation and solitude, concerning both friends and family’</li> </ul>
		Taking care of each other and yourself	Measures/activities related to looking out for each other (e.g. checking on each other’s (mental) health)	16	<ul style="list-style-type: none"> <li>• ‘I would have liked some people (mostly friends) to be more involved and try to reach out more often. I feel like a lot of people isolated themselves which made me feel isolated and even lonelier.’</li> <li>• ‘Some friends could have checked more often if I was still okay’</li> </ul>
<b>Executer not specified</b>	43				
		Better communication / more personal contact	Measures/activities related to getting/staying in contact	14	<ul style="list-style-type: none"> <li>• ‘Get in contact with me’</li> <li>• ‘Inform more clearly’</li> </ul>
		Focusing on (mental) wellbeing	Measures/activities related to how someone is doing (e.g. mental health institutions continuing their work during the crisis, more support from therapists)	5	<ul style="list-style-type: none"> <li>• ‘Mental institutions should have continued their work online instead of making waiting lists longer’</li> <li>• ‘Focus more on wellbeing those in need of mental help’</li> </ul>

Executer	N <sup>1</sup>	Measure/activity	Definition	N <sup>2</sup>	Example quotes
<b>Executer not specified</b>	43				
		Offering support	Measures/activities related to providing assistance when it comes to e.g. setting goals, motivating to continue study/work	4	<ul style="list-style-type: none"> <li>• ‘Support with setting goals’</li> <li>• ‘People offering a place to stay and relax away from home a bit’</li> </ul>
		Adhering to corona guidelines	Measures/activities related to people complying to corona guideline and rules	3	<ul style="list-style-type: none"> <li>• ‘Following the guidelines of the government’</li> <li>• ‘Do what was asked from the government, I feel bad every time I go outside because people do not know how to behave. However i al low risk to I try to ignore it. Still it makes me stressed, annoyed.’</li> </ul>
		Being more understanding	Measures/activities related to acknowledging that the corona crisis can be hard on people	2	<ul style="list-style-type: none"> <li>• ‘More understanding for how hard it is on some people’</li> <li>• ‘Be more understanding’</li> </ul>
		Considering financial situation	Measures/activities related to financial effects of the crisis on a person	2	<ul style="list-style-type: none"> <li>• ‘Taking into account our financial problems’</li> <li>• ‘Financial compensation’</li> </ul>
		Other	Measures/activities related to different smaller topics that a not specified executer could have done (e.g. shut down public transport, better control of media sensationalism)	13	<ul style="list-style-type: none"> <li>• ‘Not make the pandemic a belief system’</li> <li>• ‘I wish people didn’t use the phrase stop exaggerating as often’</li> </ul>
<b>Family</b>	28				
		Having more physical / online contact	Measures/activities related to getting/staying in contact with family via online services or personal contact	14	<ul style="list-style-type: none"> <li>• ‘It would have helped me to see my family more, even if we had to keep a distance’</li> <li>• ‘Family online get togethers’</li> </ul>
		Taking care of each other	Measures/activities related to looking out for each other (e.g. checking on each other’s (mental) health)	9	<ul style="list-style-type: none"> <li>• ‘Asking about how I am really doing, by friends and family’</li> <li>• ‘Parents: call more often and ask how I am doing, not only the other way around’</li> </ul>



Executer	N <sup>1</sup>	Measure/activity	Definition	N <sup>2</sup>	Example quotes
<b>Family</b>	28				
		Other	Measures/activities related to different smaller topics that the family could have done (taking corona measures more seriously or working at work when possible)	5	<ul style="list-style-type: none"> <li>• 'Taking corona more seriously – families'</li> <li>• 'Reducing frequency of negative news – parents'</li> </ul>
<b>Room / housemates</b>	13				
		Spending (more) time together	Measures/activities related to being together more often	6	<ul style="list-style-type: none"> <li>• 'Be home more often, roommates'</li> <li>• 'Join me for breaks, my roommates'</li> </ul>
		Agreeing on house rules / expectations	Measures/activities related to clear house rules	5	<ul style="list-style-type: none"> <li>• 'Having less strict housemates/living alone. I felt prisoner in my own house'</li> <li>• 'Student house, don't make an absolute lockdown and add even more rules than the govt demands'</li> </ul>
		Taking care of each other	Measures/activities related to looking out for each other	2	<ul style="list-style-type: none"> <li>• 'Take care of each other - Room mates'</li> <li>• 'Housemates - Reach out to me when I started drinking too much'</li> </ul>
<b>Own person</b>	11				
		Taking care of oneself	Measures/activities related to staying healthy	7	<ul style="list-style-type: none"> <li>• 'Myself- seeking therapy for anxiety'</li> <li>• 'Less social media - I did'</li> </ul>
		Others	Measures/activities related to different smaller topics that the student could have done (e.g. keeping in touch with family and friends)	4	<ul style="list-style-type: none"> <li>• 'Calling more often with long distance friends, also myself'</li> <li>• 'I wish I was able to be more grateful about the things I have and stop being sad all the time'</li> </ul>
<b>Work</b>	7				
		Offering / facilitating home office possibilities	Measures/activities related to providing an appropriate home office working space	3	<ul style="list-style-type: none"> <li>• 'Continue with home office, allow people to work from home more often if they can, if they have children try to accommodate them in day care as safe as possible while abiding Covid-19 rules'</li> </ul>
		Offering financial sustainability / security	Measures/activities related to financial situation	2	<ul style="list-style-type: none"> <li>• 'To not have been fired by my bosses for budget cuts as a result of the crisis'</li> </ul>

Executer	N <sup>1</sup>	Measure/activity	Definition	N <sup>2</sup>	Example quotes
<b>Work</b>	7				
		Other	Measures/activities related to different smaller topics that work could have done	2	<ul style="list-style-type: none"> <li>• 'Taking social distance seriously at my workplace'</li> </ul>
<b>Landlord</b>	6				
		Offering financial compensation	Measures/activities related to reducing rent or being more lenient regarding payment deadlines and other contract processes	6	<ul style="list-style-type: none"> <li>• 'My landlord should have offered a rental discount or an extension on the payment'</li> </ul>
<b>Student</b>	5				
		Working/meeting with other students	Measures/activities related to more contact with other students	5	<ul style="list-style-type: none"> <li>• 'More social contact with other students (apart from project meetings)'</li> <li>• 'I wish more of my fellow students had taken to meeting online a bit more often. It often felt as if I was all alone in my work'</li> </ul>
<b>Law enforcement</b>	5				
		Stronger police action	Measures/activities related to people not adhering to corona measures	5	<ul style="list-style-type: none"> <li>• 'Be more harsh when more than 10 people meet (police)'</li> <li>• 'Putting harder consequences on people not following guidelines by Law enforcement'</li> </ul>

<sup>1</sup>Total number of quotes related to the executer

<sup>2</sup>Total number of quotes related to the measure/activity

### 3 DISCUSSION AND CONCLUSIONS

Changes in somatic symptoms, psychological wellbeing and lifestyle and social habits of UT-respondents in this survey are in line with other surveys (Syurina et.al., 2020; Wiegers, 2020); I-graduate, 2020), Lohuis et.al., 2020; RIVM, 2020).

The fact that international respondents worried more and showed significantly more symptoms and were less well are also in line with previous research (Kelders et.al., 2019) but is not very apparent in other studies (yet). However, details of the I-graduate study which are not yet published reveal differences between NL and non-NL respondents.

The fact that differences for NL and non-NL respondents are significant for (almost) all items stands out. This survey points to what may be an important cause of this difference: twice as many international respondents as NL respondents worried all the time or often about what may be considered pre-conditions of (psychological) wellbeing: finances, accommodation, health and job prospects which can only be influenced by an educational institute to a limited extent.

The changes in both lifestyle and social relationships may be an indication for the (individual) response to the (perceived) lack of wellbeing. NL respondents showed fewer changes or changes that may be considered healthy, whereas non-NL respondents (had to) make more changes either for the better or for the worse. Many non-NL respondents seemed to be in a web of negative symptoms and thoughts. It is unclear, however, whether changes in lifestyle and social habits are a result of symptoms and thoughts or are causing the symptoms. What can be concluded, however, is that lifestyle habits of NL respondents changed less and that they are more satisfied with their habits.

In the study of Kelders et.al. (2019) it was stressed that attention to mental health should be incorporated in education. This study points to the importance of the educational setting as one of the pre-conditions of (mental) wellbeing as respondents indicated that education-related measures helped them and would have helped them. It can be expected that the educational needs of students will be different in a hybrid model. It may very well be the case that NL students significantly favour measures on-campus over online alternatives whereas non-NL students are more pre-occupied with measures that guarantee feasibility, even at, or preferably at, the cost of on-campus presence. Perceived risks/anxiety may increase this difference.

In the study of Kelders et.al. (2019), next to international students, female students, LGBTQ+-students and students with a functional impairment were identified as at-risk groups. In this study it was only possible to compare the situation of NL and non-NL students. In Spring 2021 the RIVM/Trimbos-monitor will be launched, which will make analysis possible for all at-risk groups.

## 4 RECOMMENDATIONS

Next to the findings in this survey, experiences of the CCOW-3 working group, the SWIP-project team and the student guidance staff in the past months were used to formulate recommendations:

1. Focus on the educational needs of students both in online and on-campus situations even though these needs may not be fully Covid-19 related and will vary among the population (more online  $\leftrightarrow$  less online, see also Pei et.al., 2020). Use the existing PDCA-structure to do so.
2. Not only focus on the workload of the staff, but also on the work pressure of the students: online education seems to be more strenuous for students as well, even if it is not reflected in number of hours spent (see Lohuis et.al., 2020). Ask the working group which gave advice on final attainment levels at the start of the crisis to issue an update taking into account the lasting situation of hybrid education.
3. Provision of Covid-19 information and management of expectations remains a main point of attention both at university, programme and course level. Maintain central communication via email as it is one of the most valued measures of the past months.
4. Try to avoid closing down safe places for self-study and places to meet for self-study with fellow student(s) or friend(s) to allow increase in focus/concentration/energy and avoid social isolation.
5. Try to avoid closing down safe (sport) facilities to allow students to maintain a healthy lifestyle. Offer a programme to support a healthy lifestyle for instance by restarting the Healthy Campus project (if not done so).
6. Acknowledge the worries about pre-conditions of wellbeing of (upcoming) international students (finances, accommodation, health(-care)) and seek for further improvement of provision of information and/or management of expectations and/or services. Re-invest in SKC (studiekeuzecheck) especially for non-NL students after formulating a vision on student wellbeing (see 8).
7. Make sure sufficient student guidance capacity is available to allow for both pro-active and re-active actions and implementation of (financial/Covid-19 related) regulations.
8. Continue the SWIP-project with extra attention for formulation of a vision on student wellbeing, involvement of (international) students, effective communication about support/instruments available and possibly, in line with recommendations of Pei et.al., 2020), (increase of) self-efficacy of students in a hybrid education environment. Allow for a clear division of labour with project(s)/initiatives which focus on (hybrid) education, diversity & inclusion and recruitment & SKC.

Research on wellbeing of students in general and UT-students in particular is abundant. Next to the studies referred to in this report there are other studies published (i.e. the study of Pei et.al., 2020 on the impact of Covid-19 on education at the UT) and to be published (i.e. the Kick-In evaluation and study linked to the Bridge the Gap project). In Spring 2021 the UT will participate in the RIVM/Trimbos wellbeing monitor which can be considered as the successor of the UT-wellbeing survey of 2019 (Kelders et.al., 2019).

It may be tempting to recommend further analysis/research but this should be coordinated and executed by a wellbeing think tank of some sort. If such a think tank is in place, transfer of knowledge to the workplace should be a focus point. Within the student support staff, not only at the UT, but also nationwide the call is for increasing less generic, diagnostic studies and more time to implement promising measures and thorough evaluation of measures taken.

## 5 REFERENCES

- Centraal Bureau voor de Statistiek (CBS). (2020, October 21). *Werkeloosheid*. <https://www.cbs.nl/nl-nl/reeksen/werkeloosheid>
- Hinz, A., Ernst, J., Glaesmer, H., Brähler, E., Rauscher, F.G., Petrowski, K., & Kocalevent, R. (2017). Frequency of somatic symptoms in the general population: Normative values for the Patient Health Questionnaire-15 (PHQ-15). *Journal of Psychosomatic Research*, 96(May 2017), 27-31.
- Hooft van Huijsduijnen, L., Hulle, R. van, Marchal, B., Lelij, M. van der, & Zwanenveld, J. (2019). Landelijke monitor studentenhuysvesting 2019. <https://www.kences.nl/wp-content/uploads/2020/06/20191003-Landelijke-Monitor-Studentenhuysvesting-2019.pdf>
- I-graduate. (2020, June). COVID-19 student survey.
- Kelders, S.M., Oberschmidt, K., & Bohlmeijer, E.T. (2019). Student wellbeing: a cross-sectional survey of mental health of UT-students, August 2019. [https://ris.utwente.nl/ws/portalfiles/portal/172853563/Student\\_wellbeing\\_report\\_28052019\\_DEF.pdf](https://ris.utwente.nl/ws/portalfiles/portal/172853563/Student_wellbeing_report_28052019_DEF.pdf)
- Lohuis, J., Couvreur, N., & Veer, N. van der. (2020). Welbevinden van medewerkers en studenten van de Universiteit Twente, July 2020. [Newcom Research & Consultancy in opdracht van Utoday] <https://www.docdroid.net/jBQYMY/newcom-rapportage-naar-welbevinden-universiteit-twente-7-7-2020-pdf#page=47>
- Pei, L., Van der Vegt, R., Hengel, H. van den, & Bethlem, B. (2020). Impact of Covid-19 in Education at UT-Opportunities and Challenges, Online learning and teaching experience survey report, July 2020.
- Rijksinstituut voor Volksgezondheid en Milieu (RIVM). (2020, October 21). Resultaten onderzoek gedragsregels en welbevinden. <https://www.rivm.nl/gedragsonderzoek/maatregelen-welbevinden>
- Syurina, E.V., Algner, M., Pesonen, H.V., Vus, V., Zweekhorst, M.B.M., Chorna, L., & Lorenz, T. (2020). Mental health effects of COVID-19: Well-being of university students in Finland, Germany, Italy, the Netherlands and Ukraine, Manuscript submitted for publication in *Journal of European Psychiatry*.
- Werf, M. van der, Schonewille, G., & Stoof, R. (2017). Studentenonderzoek 2017, Achtergrondstudie bij de Handreiking Student & Financiën, 2017. <https://www.nibud.nl/wp-content/uploads/Nibud-Studentenonderzoek-2017.pdf>
- Wiegers, C. (2020). The effect of COVID-19 on European students' wellbeing, A comparative study between Ukraine and the Netherlands, July 2020. [Internship report Athena Institute VU Amsterdam].

## 6 APPENDICES

### APPENDIX A SURVEY

This section contains a series of screen shots and compilations of screens of the survey as presented to the participants, including the introduction page. Each new section of the survey is indicated with a Vrije Universiteit Amsterdam banner and introductory text.



Dear student, we are very thankful for your help and willingness to fill in our survey.

Currently, a lot of research is done about the well-being of various vulnerable groups: i.e. elderly, children. However, up till now, no one initiated a study about the well-being of university students. We believe that the needs and worries of the university students need to be heard and investigated.

To do so we started a large international study, which is currently taking place in the Netherlands, Germany, Italy, Finland, Ukraine, Laos and Vietnam.

This survey consists of 5 sections: general background, physical well-being, mental well-being, social well-being and COVID-19 opinions.

Due to the fact that we want to collect a wide spectrum of information this survey is somewhat lengthy and will take approx. 20-25 minutes to complete.

On behalf of our international research team, we thank you for your help!

Your participation in this questionnaire is voluntary. You may choose not to participate. If you decide to participate in this questionnaire, you can choose to withdraw at any time. We ensure that the questionnaire is completely anonymous; none of your answers can be traced back to you and no records will be kept that can personally identify you.

By completing the questionnaire, you consent to participate in it.



In this part of the survey we will ask you to provide some basic background information so that we can understand better what kind of students have filled in our survey.

What is your country of study?

What is your country of origin?

What is your age (in full years)?

What is your gender?

- ☐ Male  
☐ Female  
☐ Other

What is your latest completed study degree?

- ☐ Secondary school  
☐ Bachelor's  
☐ Master's  
☐ Other, namely

Do you study in a public or private institution?

- ☐ Public  
☐ Private  
☐ I am not sure

What kind of institution do you study at?

- ☐ University  
☐ University of applied sciences  
☐ Other, namely

What is your field of study?

Which year of the study are you currently in?

Do you currently work?

- ☐ No  
☐ Yes, full-time  
☐ Yes, part-time

What are your current living conditions?

- ☐ Dorm  
☐ Renting alone  
☐ Renting with others  
☐ Living at home  
☐ Other, namely

In the following section we will have 3 sets of questions about your physical health at the moment. We will ask you about how you have been feeling in the last 7 days and how it changed since the COVID-19 pandemic in your country. Then we would ask a few questions about your lifestyle and how that one was affected by COVID-19.

During the past 7 days, how much have you been bothered by any of the following problems?

	Not bothered at all	Bothered a little	Bothered a lot
Stomach pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Back pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain in your arms, legs, joints	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Menstrual cramps (WOMEN ONLY)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Headaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chest pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dizziness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fainting spells	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling your heart pound or race	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shortness of breath	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain or problems during sexual intercourse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constipation, loose bowels, or diarrhea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nausea, gas or indigestion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling tired or having low energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble sleeping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you feel a change in the severity of these problems since the COVID-19 pandemic in your country of residence?

	Decreased	Did not change	Increased
Stomach pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Back pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain in your arms, legs, joints	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Menstrual cramps (women only)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Headaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chest pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dizziness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fainting spells	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling your heart pound or race	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shortness of breath	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pain or problems during sexual intercourse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constipation, loose bowels, or diarrhea	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nausea, gas or indigestion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling tired or having low energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble sleeping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What are your current habits regarding the following and how did they change since COVID-19 pandemic in your country?

	Click to write Column 1	Did the situation change due to pandemic of COVID-19 in your country		
	Weekly average for the last 2-3 weeks	Decreased	Did not change	Increased
Caffeine consumption (incl. coffee, black and green tea) - number of cups per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alcohol consumption – glasses per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Exercise (at least 30 min of elevated heart beat) - times per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumption of junk food – meals per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ordering food - meals per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Soft drinks (Cola, Fanta, etc) – glasses per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smoking (if you do not smoke, please skip this question) - cigarettes per day	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleep – hours per night	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Walking outside – hours per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relaxation/meditation activities - hours per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

At this moment how happy are you with the following (0 - totally unhappy; 5 - totally happy):

Your diet
☐
☐
☐
☐
☐

Your lifestyle in general
☐
☐
☐
☐
☐

Did your satisfaction with your diet and your lifestyle change after the COVID-19 pandemic in your country?

	Decreased	Did not change	Increased
Satisfaction with your diet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Satisfaction with your lifestyle in general	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



In this part of the survey we will ask you a few questions about your psychological well-being in the last 7 days.

Click to write the question text

	Not at all	Only occasionally	Sometimes	Often	Most or all the time
I have felt tense, anxious or nervous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt I have someone to turn to when things go wrong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt OK about myself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt able to cope when things go wrong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have been troubled by aches, pains or other physical symptoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have been happy with the things I have done	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have had difficulty getting to sleep or staying asleep	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt warmth or affection for someone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have been able to do most things I needed to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt criticised by other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt unhappy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have been irritable when with other people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt optimistic about my future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have achieved the things I wanted to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In this part of the survey we will ask about your social life and social interactions currently and before the COVID-19 pandemic in your country.

What are your current habits regarding the following and how did they change since COVID-19 pandemic in your country?

	Click to write Column 1	Did the situation change due to pandemic of COVID-19 in your country		
	Weekly average for the last 2-3 weeks	Decreased	Did not change	Increased
Social media use - hours per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online social interaction - hours per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Off-line social interaction - hours per week	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Engagement in volunteering activities (yes/no)	<input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How satisfied are you with your social relationships (past week)?

- ☐ Extremely satisfied  
☐ Somewhat satisfied  
☐ Neither satisfied nor dissatisfied  
☐ Somewhat dissatisfied  
☐ Extremely dissatisfied

How lonely do you feel in the past week?

- ☐ Extremely lonely  
☐ Somewhat lonely  
☐ Neutral  
☐ Not really lonely  
☐ Not lonely at all

In the last part of the survey we would like to know about your opinions about your country and university response to the COVID-19 pandemic

Can you name at least 3 measures initiated by your government in response to COVID-19?

- ☐ Measure 1
- ☐ Measure 2
- ☐ Measure 3

How much do you try to comply with the following measures?

	Always	As much as possible	Sometimes	Seldom	Never
Staying at home as much as possible	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintaining distance when meeting others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of mask and/or gloves in public places	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Avoid meeting with friends and family	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wash hands frequently	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Avoid touching eyes, nose and mouth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you estimate yourself to be in a risk/vulnerable groups for COVID-19?

- ☐ No
- ☐ Yes, why?

How worried are you about getting COVID-19? (0 - not at all, 5 - highly worried)

0                      1                      2                      3                      4                      5

Worry about getting COVID-19

How would you estimate the degree of worries you experienced since escalation of the COVID-19 pandemic in your country about the following issues:

	Almost never	Seldom	Sometimes	Often	All the time
Financial Concerns,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Academic Demands,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Accommodation,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Health Worries,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job Prospects,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
World Affairs,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Personal Relationships,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Religious Matters,	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental Matters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

We would like to know your ideas about the actions of various actors that helped you personally during the crisis. Please write **three actions/measures** that helped and **who executed them**?

---

- ☐ Measure 1
- ☐ Measure 2
- ☐ Measure 3

Can you name three measures/actions undertaken by your **educational institution** that helped you the most since onset of COVID-19 pandemic in your country?

---

- ☐ Measure 1
- ☐ Measure 2
- ☐ Measure 3

Our last question is about the actions you hoped others would have done to help you during the pandemic. Please write **three actions/measures** that **would have helped you** and **who should have executed** them?

---

- ☐ Measure 1
- ☐ Measure 2
- ☐ Measure 3



## APPENDIX B PREVALENCE SOMATIC SYMPTOMS PER ITEM NL-NON-NL

Highlights in red:

- Item-level: respondents “bothered a lot” or “increase” in among highest 3
- On level NL-non-NL or faculty: percentage “bothered a lot” or “increase” higher than lowest in top 3

Highlights in green:

- Item-level: respondents “bothered a lot” or “increase” in among lowest 3
- On level NL-non-NL or faculty: percentage “bothered a lot” or “increase” lower than lowest in top 3

			Total	Not bothered at all		Bothered a little		Bothered a lot		Mean (SD)(1-3)
Qn	Prevalence		N	N	%	N	%	N	%	
	<b>PHQ-15 items</b>									
(1)	Stomach pain	Total	813	543	66.8	224	27.6	46	5.7	1.39 (±0.59)
		NL	555	375	67.6	155	27.9	25	4.5	
		Non-NL	258	168	65.1	69	26.7	21	8.1	
(2)	Back pain	Total	811	390	48.1	316	39.0	105	12.9	1.65 (±0.70)
		NL	554	281	50.7	212	38.3	61	11.0	
		Non-NL	257	109	42.4	104	40.5	44	17.1	
(3)	Pain in your arms, legs, joints	Total	814	507	62.3	251	30.8	56	6.9	1.45 (±0.62)
		NL	555	350	63.1	168	30.3	37	6.7	
		Non-NL	259	157	60.6	83	32.0	19	7.3	
(4)	Menstrual cramps (women only)	Total	673	451	67.0	136	20.2	86	12.8	1.46 (±0.71)
		NL	463	321	69.3	98	21.2	44	9.5	
		Non-NL	210	130	61.9	38	18.1	42	20.0	
(5)	Headaches	Total	813	300	36.9	406	49.9	107	13.2	1.77 (±0.67)
		NL	555	213	38.4	278	50.1	64	11.5	
		Non-NL	258	87	33.7	128	49.6	43	16.7	

			Total	Not bothered at all		Bothered a little		Bothered a lot		Mean (SD)(1-3)
Qn	Prevalence		N	N	%	N	%	N	%	
	PHQ-15 items									
(6)	Chest pain	Total	815	651	79.9	143	17.5	21	2.6	1.23 (±0.48)
		NL	556	450	80.9	93	16.7	13	2.3	
		Non-NL	259	201	77.6	50	19.3	8	3.1	
(7)	Dizziness	Total	814	547	67.2	224	27.5	43	5.3	1.38 (±0.58)
		NL	556	389	70.0	143	25.7	24	4.3	
		Non-NL	258	158	61.2	81	31.4	19	7.4	
(8)	Fainting spells	Total	814	740	90.9	65	8.0	9	1.1	1.10 (±0.34)
		NL	555	513	92.4	39	7.0	3	0.5	
		Non-NL	259	227	87.6	26	10.0	6	2.3	
(9)	Feeling your heart pound or race	Total	811	540	66.6	215	26.5	56	6.9	1.41 (±0.62)
		NL	555	385	69.4	144	25.9	26	4.7	
		Non-NL	256	155	60.5	71	27.7	30	11.7	
(10)	Shortness of breath	Total	814	630	77.4	148	18.2	36	4.4	1.27 (±0.53)
		NL	555	442	79.6	97	17.5	16	2.9	
		Non-NL	259	188	72.6	51	19.7	20	7.7	
(11)	Pain or problems during sexual intercourse	Total	803	710	88.4	76	9.5	17	2.1	1.14 (±0.40)
		NL	548	492	89.8	46	8.4	10	1.8	
		Non-NL	255	218	85.5	30	11.8	7	2.7	
(12)	Constipation, loose bowels, or diarrhoea	Total	812	514	63.3	236	29.1	62	7.6	1.44 (±0.63)
		NL	553	356	64.4	162	29.3	35	6.3	
		Non-NL	259	158	61.0	74	28.6	27	10.4	

			Total	Not bothered at all		Bothered a little		Bothered a lot		Mean (SD)(1-3)
Qn	Prevalence		N	N	%	N	%	N	%	
	<b>PHQ-15 items</b>									
(13)	Nausea, gas or indigestion	Total	813	531	65.3	224	27.6	58	7.1	1.42 (±0.62)
		NL	555	373	67.2	152	27.4	30	5.4	
		Non-NL	258	158	61.2	72	27.9	28	10.9	
(14)	Feeling tired or having low energy	Total	814	148	18.2	334	41.0	332	40.8	2.23 (±0.73)
		NL	554	100	18.1	244	44.0	210	37.9	
		Non-NL	260	48	18.5	90	34.6	122	46.9	
(15)	Trouble sleeping	Total	816	287	35.2	328	40.2	201	24.6	1.90 (±0.77)
		NL	556	196	35.3	241	43.3	119	21.4	
		Non-NL	260	91	35.0	87	33.5	82	31.5	

## APPENDIX C CHANGE IN PREVALENCE SINCE COVID-19 NL-NON-NL

Highlights in **red**:

- Item-level: respondents “bothered a lot” or “increase” in among highest 3
- On level NL-non-NL or faculty: percentage “bothered a lot” or “increase” higher than lowest in top 3

Highlights in **green**:

- Item-level: respondents “bothered a lot” or “increase” in among lowest 3
- On level NL-non-NL or faculty: percentage “bothered a lot” or “increase” lower than lowest in top 3

			Total	Decrease		No change		Increase	
	Change		N	N	%	N	%	N	%
Qn	PHQ-15 items								
(1)	Stomach pain	Total	810	22	2.7	663	81.9	125	15.4
		NL	556	12	2.2	470	84.5	74	13.3
		Non-NL	254	10	3.9	193	76.0	51	20.1
(2)	Back pain	Total	811	25	3.1	547	67.4	239	29.5
		NL	555	11	2.0	383	69.0	161	29.0
		Non-NL	256	14	5.5	164	64.1	78	30.5
(3)	Pain in your arms, legs, joints	Total	812	20	2.5	647	79.7	145	17.9
		NL	556	9	1.6	453	81.5	94	16.9
		Non-NL	256	11	4.3	194	75.8	51	19.9
(4)	Menstrual cramps (women only)	Total	704	21	3.0	631	89.6	52	7.4
		NL	484	10	2.1	442	91.3	32	6.6
		Non-NL	220	11	5.0	189	85.9	20	9.1
(5)	Headaches	Total	812	23	2.8	501	61.7	268	35.5
		NL	556	11	2.0	356	64.0	189	34.0
		Non-NL	256	12	4.7	145	56.6	99	38.7
(6)	Chest pain	Total	810	21	2.6	695	85.8	94	11.6
		NL	555	8	1.4	488	87.9	59	10.6
		Non-NL	256	13	5.1	207	81.2	35	13.7
(7)	Dizziness	Total	809	19	2.3	660	81.6	130	16.1
		NL	555	6	1.1	473	85.2	76	13.7
		Non-NL	254	13	5.1	187	73.6	54	21.3
(8)	Fainting spells	Total	809	17	2.1	753	93.1	39	4.8
		NL	555	5	0.9	529	95.3	21	3.8
		Non-NL	254	12	4.7	224	88.2	18	7.1

			Total	Decrease		No change		Increase	
	Change		N	N	%	N	%	N	%
Qn	PHQ-15 items								
(9)	Feeling your heart pound or race	Total	810	24	3.0	629	77.7	157	19.4
		NL	556	12	2.2	451	81.1	93	16.7
		Non-NL	254	12	4.7	178	70.1	64	25.2
(10)	Shortness of breath	Total	809	22	2.7	671	82.9	116	14.3
		NL	554	10	1.8	477	86.1	67	12.1
		Non-NL	255	12	4.7	194	76.1	49	19.2
(11)	Pain or problems during sexual intercourse	Total	805	21	2.6	738	91.7	46	5.7
		NL	552	8	1.4	517	93.7	27	4.9
		Non-NL	253	13	5.1	221	87.4	19	7.5
(12)	Constipation, loose bowels, or diarrhoea	Total	811	25	3.1	655	80.8	131	16.2
		NL	556	12	2.2	457	82.2	87	15.6
		Non-NL	255	13	5.1	198	77.6	44	17.3
(13)	Nausea, gas or indigestion	Total	810	21	2.6	670	82.7	119	14.7
		NL	556	8	1.4	474	85.3	74	13.3
		Non-NL	254	13	5.1	196	77.2	45	17.7
(14)	Feeling tired or having low energy	Total	810	33	4.1	307	37.9	470	58.0
		NL	553	19	3.4	205	37.1	329	59.5
		Non-NL	257	14	5.4	102	39.7	141	54.9
(15)	Trouble sleeping	Total	812	35	4.3	392	48.3	385	47.4
		NL	555	21	3.8	270	48.6	264	47.6
		Non-NL	257	14	5.4	122	47.5	121	47.1