



Article

Students and Staff in Lockdown: Mental and Social Health in the Austrian Tertiary Education Sector

Elisabeth Noehammer

Department of Public Health, Health Services Research and HTA, UMIT TIROL—Private University for Health Sciences, Medical Informatics and Technology, 6060 Hall in Tirol, Austria; elisabeth.noehammer@umit-tirol.at

Abstract: The SARS-CoV-2 pandemic led to high demands on the educational sector. For tertiary education, investigations mostly focused on the effects of digital teaching. However, little is known regarding health effects. Moreover, the emphasis was mainly on students, not university staff members. An international online questionnaire consisting of quantitative and qualitative items (from the LockedDown project) was translated into German and used in Austria from June to November 2020. This study reports on social and psychological health plus the perceived benefits of the pandemic. A total of 1175 students and 716 staff members participated. While staff members reported higher stress levels at the beginning of the pandemic, they were more pronounced for students from Week 5 onwards ($\text{Chi}^2 < 0.001$). Quality of Life (QoL) decreased more in the student population, and depression/anxiety was higher and rose compared to staff. Moreover, students reported fewer benefits of the pandemic. Students perceived the burden of the pandemic later than staff members who needed to adapt their work processes immediately. Mental health interventions in a pandemic seem to be needed at different points in time depending on the target group.

Keywords: university; tertiary education; well-being; health; students; staff; pandemic



Citation: Noehammer, Elisabeth. 2023. Students and Staff in Lockdown: Mental and Social Health in the Austrian Tertiary Education Sector. *Social Sciences* 12: 4. <https://doi.org/10.3390/socsci12010004>

Academic Editors:
Denis Bernardeau-Moreau and
Nigel Parton

Received: 10 October 2022
Revised: 9 December 2022
Accepted: 14 December 2022
Published: 20 December 2022



Copyright: © 2022 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Austria had a population of 8,926,290 in 2020 (Statistics Austria 2021c). A total of 387,775 students were enrolled in 2020/21 (Statistics Austria 2021a) at 22 public Universities, 16 private Universities (BMBWF 2021b), 21 Universities of Applied Sciences (BMBWF 2021a), and 14 University colleges of teacher education (BMBWF n.d.). There is no complete dataset available for university staff. However, a total of 74,653 people were counted as teaching staff in the academic year 2019/20 (Statistics Austria 2021b). Thus, tertiary education is a highly relevant sector for a large part of the population.

The SARS-CoV-2 pandemic has resulted in unprecedented, varied (Prowse et al. 2021), and high demands on all stakeholders in the educational sector (Kohls et al. 2021; Leal Filho et al. 2021; Van Der Feltz-Cornelis et al. 2020; Dodd et al. 2021). For tertiary education, early investigations mostly focused on the effects of digital teaching (Watermeyer et al. 2021). Therefore, not enough is known regarding immediate general health effects, which seem to have intensified in the later phases of the pandemic (Łaszewska et al. 2021). As students are known to be at high risk for mental health issues even in regular times, largely negative impacts were expected and subsequently reported in several parts of the world (Dodd et al. 2021; Kohls et al. 2021). In the general population, younger Austrians suffered from higher stress levels during the pandemic (Pieh et al. 2020), making students a potentially double-burdened group (Prowse et al. 2021). As staff support can be highly relevant for student concern levels during the pandemic (Al-Maskari et al. 2022) but may be difficult depending on their working context (Wray and Kinman 2022), both groups should be investigated.

In the UK, staff were found to experience the pandemic and its consequences for the sector, plus their professional and private lives, as highly disruptive but not entirely negative, as it promoted digitalization (Watermeyer et al. 2021). However, telework frequency

is associated with higher stress levels (Heiden et al. 2021), indicating digitalization has a downside. Pronounced gender differences in the degree of perceived total professional and private workload effects of the pandemic were reported for females with children (Yildirim and Eslen-Ziya 2021). Many open questions on the pandemic's influence, e.g., on required curriculum changes (Boukhobza et al. 2021), staff, university types, disciplines, research fields, and values, opened up with the need for immediate and long-term studies (Watermeyer et al. 2021).

In this context, an international project called The LockedDown was conducted (Nowrouzi-Kia et al. 2022) aiming to investigate the early impact of the pandemic on the tertiary education sector on a global level. In this paper, the psycho-social impacts of the pandemic in Austria are reported, differentiating between results for students and staff. This is done to answer the research question on pandemic-induced perceived health differences between the groups. This is needed to provide a more comprehensive picture of how people in the tertiary education setting coped with the situation and to understand which interventions and support resources might be required to counteract the impacts.

The first cases of SARS-CoV-2 in Austria were documented at the end of February 2020 (with an earlier German case visiting the country in late January) (Kreidl et al. 2020). It soon became obvious that social contact ought to be drastically reduced, and also that universities should be closed by mid-March 2020 (Kroisleitner 2020; Pollak et al. 2020), when a national lockdown was commenced (Moshhammer et al. 2020; Pollak et al. 2020). After Easter 2020, the regulations were relaxed nation-wide (Simon et al. 2021a; Kreidl et al. 2020). In doing so, a trend in the countries in the region was followed (Desson et al. 2020). Nevertheless, university courses requiring physical presence were either replaced or provided ([partly much] later), observing strict regulations regarding hygiene, safety, and number of students (Nimmervoll 2020). In comparison to other European countries, mortality rates were comparably lower in the German speaking parts of Europe (DACH region), especially in the commencing stages of the pandemic (Desson et al. 2020). Detailed descriptions about the regulations and steps taken are available; for an overview, see (Nöhammer 2022; Desson et al. 2020; Kreidl et al. 2020). Here, the focus is on describing the impacts perceived by university staff and students.

2. Materials and Methods

A global, largely quantitative online questionnaire also comprising of open questions was used, covering queries on social life/relationships, health experiences, access to services, and perceived effects of the pandemic on mental health. The English version of the questionnaire was developed by researchers from the London School of Economics and was pre-tested. The study was approved by several boards. To allow for a global study, the questionnaire was translated to 16 further languages, with the translations validated by at least 2 native speakers (Nowrouzi-Kia et al. 2022). The author of this paper was the national contact person for Austria and involved in the language check for German.

The questionnaire was available in Austria from June to November 2020. Participants were invited via contacting the tertiary education institutions and informing relevant networks about the study and the online questionnaire. Those that opted to participate sent the link to their students and staff members. Participation was completely voluntary and anonymous.

Data was collected from June to November 2020, and the design was cross-sectional. The support of the Austrian tertiary educational institutions was high, leading to a total of 1,891 responses (after excluding 40 respondents stating not being affiliated with a university). In this paper, the focus is on descriptively outlining psycho-social impacts of the first phase of the pandemic. Regarding social health, the respondents were asked to rate whether their social life was negatively impacted, negatively impacted but coping possible, or fine. In addition, the effects on the relationship were surveyed (suffered/fell apart/not affected/positively impacted/no relationship). Domestic abuse and trouble with people the respondents were living with were scaled as yes/no answers. For psychological

health, stress levels, quality of life, and depression/anxiety were investigated. All three areas differentiate between three points in time: the first two weeks, Weeks 3 and 4 as well as Weeks 5 and after of the lockdown/pandemic. Potential benefits (e.g., having more time for family, new projects, etc.) of the pandemic were listed and respondents asked to reply whether they perceived these or not. Specific impacts of the pandemic, such as having lost a close person due to COVID-19 or a health issue occurring and not receiving adequate treatment, perceived financial problems, and job security issues were also inquired, as well as the opinion towards/experiences with online teaching.

All analyses were done using SPSS 26/27. Frequency analyses, Chi² Tests, and Fisher Exact Tests were employed to report sample characteristics and differentiate the responses between the groups (students/staff).

3. Results

3.1. Sample Description

In total, the sample consists of 1891 respondents. Below, the groups are described in more detail. As the question on affiliation was voluntary and response numbers varied between institutions, the study descriptively compares staff and students across all participating tertiary education institutions, reporting valid responses.

3.1.1. Students

Most of the respondents are students (N = 1175). The majority (89.5%) are below 30 years (9.3%: 30–49, 1.2%: 50+). The distribution regarding gender is rather balanced: 47.9% identify as female, 51.4% as male, 0.1% as other/diverse and 1.6% do not disclose. In total, 76.3% report undergraduate level (Bachelor studies). Most live in a large city (67.6%), 12.1% in a small city/town, and 20.3% in a suburb or the countryside. Regarding housing, 67% report living in a flat, 21.7% live in a house, and 11.3% in a rented room. Family income levels are low for 10.5%, middle for 66.6%, and high for 16.5%, with 6.4% preferring not to disclose. Before the pandemic, 41.8% were working; of these, 14.9% did so full time. Thus, the vast majority (79.2%) studied or worked full-time before the pandemic. A total of 88.5% state not having an underlying health issue, and 2.1% are special needs students needing support.

3.1.2. Staff

In total, 716 participants identify as staff. They are older than the students, with the majority (48%) being between 30 and 49 years of age (19.8%: <30, 32.1%: 50+). Again, gender is rather balanced with 50.7% females, 47.4% males, 0.3% reporting other/diverse and 0.6% not disclosing this information. Of the participants, 440 have an academic role (here, gender is skewed with 39.8% females, 57.7% males, 0.2% other/diverse and 2.3% without a response), and 260 are in administration (again, gender is skewed with 69.2% females, 30% males, 0.4% other/diverse, and 0.4% who did not reply). A total of 65.9% state they live in a large city, 11% in a small town, and 23.2% in a suburb or the countryside. In total, 69.3% live in a flat, 28.9% in a house, and 1.8% in a rented room. As for family income level, 6.4% report a low, 69.9% a middle, 16.3% a high income, and 7.4% preferred not to state. Most worked full time before the pandemic (66.5%), and 83.9% do not have an underlying health issue.

3.2. Social Impacts of the Pandemic

The number of staff rating their social life as great and could stay positive was 29.7%. A further 51.8% felt an influence but could cope, and 18.6% felt a negative impact. In contrast, 30.7% of students felt the impact to be negative, 52.7% could cope, and 16.6% reported a very good social life and staying positive. The difference between the groups is highly significant (Chi² < 0.001), just as for couple relationships and regarding issues with those who the respondents staying with during the lockdown/pandemic: Regarding couple relationships, most of the students (51.7%) opine their relationship was not affected,

while 42.6% reported not being in one. For 2.8%, the relationship fell apart, 10.1% state it suffered, and 19.7% felt a positive impact. In the case of staff, 27% state their relationship was not affected, 16.8% report none and in 1.8% if fell apart. For 14.3% of staff, a negative impact of the pandemic was felt on their relationship, whereas 13.3% felt a positive impact. As for problems at home, 8.2% of staff indicated they experienced those, but 15.5% of students. Domestic abuse was reported by 0.7% of staff vs. 1.4% of students, without there being a significant difference.

3.3. Psychological Health Related Impacts of the Pandemic

While the stress level for staff rose in the first two weeks of the lockdown/pandemic (53.5%; reduced for 19.6%; unchanged for 26.2%), this was significantly different for students ($\text{Chi}^2 < 0.001$). As shown in Table 1 below, 37.1% reported a rise, 30.4% stated a decrease and 31.3% no change. Weeks 3 and 4 were perceived rather similarly, but Weeks 5 and onwards show a highly significant difference again ($\text{Chi}^2 < 0.001$). Here, stress levels rose for 38.2% of the student respondents, but only for 24.3% of staff. When testing for gender differences (male vs. female only), stress levels were likelier to increase for females in Weeks 1–2 ($p = 0.001$) and Weeks 3–4 ($p = 0.001$). In the staff group, there are slight differences in Weeks 5+ ($p = 0.036$) with more females stating stress levels decreased. In case of job security issues, staff had a higher likelihood of reporting increased stress levels in Weeks 1–2 ($p = 0.000$), and Weeks 3–4 ($p = 0.007$).

In the first two weeks, stress levels for students increased in cases of bad experiences with online teaching ($p = 0.004$), financial difficulties ($p = 0.046$), fear of not being able to continue their education in the near-term ($p = 0.008$), and when there was no support from the university ($p = 0.005$). In Weeks 3–4, stress levels increased in cases of financial difficulties ($p = 0.000$) and when there was no university support ($p = 0.01$), but decreased in cases of a good opinion towards online teaching ($p = 0.000$). The same holds true for Weeks 5+: stress increased when the university did not offer support to continue work/education ($p = 0.03$) and in cases of financial difficulties ($p = 0.029$), but decreased when there was a positive opinion regarding online teaching ($p = 0.000$).

Table 1. Stress level.

Stress	Staff		Students		Result
	Lower	Higher	Lower	Higher	
Weeks 1–2	19.6%	53.5%	30.4%	37.1%	$\text{Chi}^2 < 0.001$
Weeks 3–4	28.2%	30.0%	24.7%	30.1%	n. sig.
Weeks 5+	26.9%	24.3%	21.6%	38.2%	$\text{Chi}^2 < 0.001$

Quality of Life was lower for students as well, as shown in Table 2. While there was an increase of about 22% of staff and an improvement over the weeks regarding perceived lower Quality of Life, this was less pronounced for students. Regarding gender differences (male/female), there are no significant differences in either group. For staff, Quality of Life decreased in Weeks 1–2, especially in cases they were anxious regarding job security ($p = 0.000$) and increased in cases of a positive perception of online teaching ($p = 0.000$). The same holds true for Weeks 3–4, with p levels for both aspects at 0.000 and Weeks 5+ (job security issues: $p = 0.033$; finding online teaching great: $p = 0.000$). Quality of Life for students decreased in Weeks 1–2 in cases of financial difficulty due to the pandemic ($p = 0.004$) and when there was no support from the university ($p = 0.015$) or fear of not being able to continue their studies in the near-term ($p = 0.004$), but increased in cases of a positive attitude towards online teaching ($p = 0.000$). The trends are similar in Weeks 3–4, with a positive impact of a good opinion on online teaching ($p = 0.000$), but a negative in cases of no support from the university ($p = 0.049$) and financial issues ($p = 0.001$). In Weeks 5+, the pattern continues, with financial difficulties ($p = 0.006$) having a negative impact and a good opinion towards online teaching having a positive one ($p = 0.000$).

Table 2. Quality of Life (QoL).

QoL	Staff		Students		Result
	Lower	Higher	Lower	Higher	
Weeks 1–2	44.3%	22.4%	43.8%	16.4%	Chi ² = 0.004
Weeks 3–4	35.7%	22.1%	40.9%	12.5%	Chi ² < 0.001
Weeks 5+	28.9%	21.1%	35.1%	15.0%	Chi ² < 0.001

Depression and anxiety were always higher for students (see Table 3). Moreover, they stayed above 30%, while levels decreased for staff. In both groups, gender differences (male/female) were observed at $p = 0.000$ for Weeks 1–2 and Weeks 3–4. In both cases, females reported depression and anxiety more often than their male counterparts in these phases of the pandemic. Not feeling depression or anxiety in Weeks 1–2 is likelier for those staff members not being anxious regarding job security and not experiencing financial difficulties due to the pandemic (both with $p = 0.000$). Regarding job security, this pattern continues in Weeks 3–4 and Weeks 5+ (with $p = 0.000$ and $p = 0.001$), respectively. For the student group, feeling depressive and anxious in Weeks 1–2 is negatively connected to financial difficulties due to the pandemic, negative experiences with online teaching, fearing not being able to continue with education in the near-term (all with $p = 0.000$), and not feeling supported by the university ($p = 0.001$). This pattern is also observed for the stated variables in the responses for Weeks 3–4, with changes in p levels for perceived support from the university ($p = 0.002$) and fear of not being able to continue studies in the near-term ($p = 0.042$). In Weeks 5+, p levels for all variables switch to 0.000, except for perceived university support ($p = 0.001$).

Table 3. Depression and Anxiety.

Depr./Anx.	Staff		Students		Result
	No	Yes	No	Yes	
Weeks 1–2	69.6%	29.1%	64.1%	34.1%	Chi ² = 0.056
Weeks 3–4	77.3%	21.1%	60.8%	37.0%	Chi ² < 0.001
Weeks 5+	81.0%	16.1%	65.7%	31.7%	Chi ² < 0.001

3.4. Benefits and Burdens of the Pandemic

When directly asked about the impact of the pandemic on the professional or educational experience, 35.5% reported a negative impact, 36% none, and 28.5% a positive one, with the latter being more likely for staff ($p = 0.000$), and females ($p = 0.002$).

Students perceived the pandemic as less beneficial (26.6%) than staff (32.6%). Based on a Chi² Test and Fisher Exact Tests (two-tailed), Table 4 states which benefits were reported. Both groups had more time for family and hobbies, and students have high percentages for independent further education, most likely due to online teaching. The latter is rated very different by students and staff ($p = 0.000$). While 17.2% of staff think it is great and want it to be continued, 24% of students do so. However, 5.1% of staff report not having a good experience, while 20.3% of students checked this response. Only a minority of students opted for not applicable (3.7%), while 22.5% of staff did so, most likely those in administrative positions and solely project related jobs. Online teaching was possible, but that it was better in person was the response chosen by 55.2% of staff, and 52% of the student participants.

Table 4. Benefits of the pandemic.

Benefits	Staff			Students		Result
	No	Yes	No	Yes		
General	51.0%	32.6%	61.1%	26.6%	Chi ² < 0.001	
Hobbies/Family	26.9%	73.1%	33.8%	66.2%	FET = 0.104	
Independent further education	70.0%	30.0%	57.9%	42.1%	FET = 0.006	
New Projects	76.7%	23.3%	80.3%	19.7%	FET = 0.332	
Other	67.3%	32.7%	76.3%	23.7%	FET = 0.029	

FET = Fisher Exact Test.

Regarding burdens, 34.1% report difficulties accessing (physical) products or services, while 68.5% report problems accessing personal/professional or domestic services. Access to medicines/health services was difficult for 18.8%, food or other necessary goods were an issue for 27.4%, and “other services” were problematic to access for 20.6%. There were gender differences (male/female) regarding medicines and health services at $p = 0.024$, with more females stating issues. Differences between staff and students were only significant for (physical) products or services, with the Fisher Exact Test at $p = 0.032$ (two-tailed) and a tendency for students to experience problems. Only 36 persons (gender: 50% male, 50% female), of these one third of staff and two thirds of students, reported problems accessing medical/health services and food. Financial difficulties due to the pandemic were experienced by 10.5%, with a higher likelihood for students ($p = 0.000$). While only three staff members lost their job due to the pandemic, this was the case for one hundred and six students. However, job security is an issue for 9.5% of staff. A total of 22.4% of students believe they will not be able to continue their education in the near-term, 43.2% are anxious about their education and exams, and 21.3% are anxious regarding finding a job soon (27% expect a delay there). In total, 113 report currently graduating and actively seeking a job, and 47 state they are receiving job offers. Altogether, 42.4% of staff and 50.7% of students are anxious about securing project funding.

In total, 21 participants (1.2%) reported having lost someone close due to COVID-19, and 48 respondents (2.7%) stated having lost someone close due to another health condition as a cause of lockdown. A total of 8.5% felt that someone in their family with a health emergency was not adequately dealt with. There are no significant differences between staff and students.

4. Discussion

The impact of the pandemic was largely negative, as reported in this study and others (Leal Filho et al. 2021; Kohls et al. 2021; Van Der Feltz-Cornelis et al. 2020). The potential effects on mental and social health regarding the general adult population is multifaceted, suggesting higher levels of depression, anxiety, and distress (Raihan 2020). However, concerns and needs differ regarding pandemic phase and life situation, also because the impacts hit at different points in time depending on group membership—here, tertiary education staff vs. students. This has also been highlighted in the literature (Leal Filho et al. 2021; Van Der Feltz-Cornelis et al. 2020). For both groups, reports on mental health during the pandemic were very pronounced (Carr et al. 2022), especially for female students (Ochnik et al. 2021; Prowse et al. 2021).

In a study during the first lockdown, 31% of a convenience sample of adult Austrians reported low mental wellbeing (Simon et al. 2021a). A study after four weeks of lockdown, using a representative sample of the Austrian population, stated depressive symptoms for 21% and anxiety symptoms for 19% (Pieh et al. 2020), which is comparable with the findings on staff reported here. Taken together and compared with the results here, these results indicate that the pandemic was more difficult to cope with for the student population. This is alarming, as before the pandemic, mental health declined with age (Pieh et al. 2020), meaning younger people were markedly healthier. Dealing with the limitations of the pandemic was also more problematic for students regarding access to goods and services,

though the numbers were rather moderate. Nevertheless, basic need satisfaction is relevant for well-being (Goldrick-Rab 2021).

Pre-existing mental health issues were feared to worsen in the course of the pandemic (Watermeyer et al. 2021) due to an intensification of their preconditions. Moreover, emotional and functional stress had a higher likelihood of coinciding (Leal Filho et al. 2021). The results here show that mental health degraded in the phase of the first lockdown, especially for students. Specific fears were rather intense in the very beginning of the pandemic but seem to have been managed rather well afterwards—for example, by switching to online learning to ensure students could continue their studies. Psycho-social support thus needs to differ regarding target groups and point in time.

As a tendency, students perceived the negative impacts of the pandemic later than staff. This might be due to the high requirements and extreme time pressure for the latter in the context of changing teaching and research to being possible online (only). In addition, the higher frequency of telework was related to increased stress levels for academics even before the pandemic (Heiden et al. 2021). Research on digital teaching underlines that this often came with a higher workload for students later on (for an overview see (Nöhammer 2022)), which may explain why stress levels rose for this group over time. A study in Germany shows that the majority of students (54%) felt a higher workload (Fialho et al. 2021). Nevertheless, the switch to online teaching ensured students could continue their studies, though partly with limitations.

In addition, the lockdowns resulted in specific problems like the loss of (student) jobs (ÖH Uni Wien 2020; Dodd et al. 2021), with financial problems leading to potentially higher burdens. In contrast, some students had to work more to cover for more vulnerable colleagues (Sabie et al. 2020). As Long and colleagues (Long et al. 2021) point out, there is a deep interconnection of social, economic and health issues to be observed in managing a pandemic, including existing and evoked inequalities. A German study highlights that university students' depression levels were associated with reported changes in income during the pandemic, but also with the area of study (Kohls et al. 2021).

Though individual coping abilities seem to have improved and stabilized over the course of the lockdown(s), psycho-social health data shows additional support is vital. This holds true for students as well as staff since the study and work contexts influence their respective well-being. Study conditions characterized by high or increasing levels of stress and reduced confidence to complete the semester were shown to correlate with depressive symptoms (Fialho et al. 2021). Stress and anxiety levels were also shown to be connected to fears of expected delays in student study progress, which was most pronounced for doctoral students (Leal Filho et al. 2021). Similar patterns were shown here, though it seems fears regarding not being able to continue with studies decreased during the first phase of the pandemic due to the immediate switch to online teaching.

4.1. Intervention Suggestions

The needed intervention options are likely to have overlaps because of similar issues (switch to online teaching, reduction in social contacts, etc.) and as the underlying security needs reflected in the aspects with influence on wellbeing are comparable (job insecurity/fear regarding continuation of studies) or identical (financial security). Good experiences with online learning, feeling financially secure, being supported by the university, and expecting to be able to continue with the studies were shown to be highly important for student mental health in this study. The first two, together with job security, are crucial for staff. Research thus suggests that staff and students should receive training in digital skills so that the use of and/or switching to high quality e-learning is possible in a smooth way, should future crises require this. However, infrastructural support is required in addition to ensuring access (Ali 2020; Sabie et al. 2020). Nevertheless, the current financial crisis endangers digitalization efforts and thus availability of required resources, posing a threat on institutional attractiveness (Watermeyer et al. 2021). As customizing regular courses for online teaching might come at the expense of research, the evaluation criteria of academics

may have to be adapted (Yildirim and Eslen-Ziya 2021) as well. Both staff and students might also require assistance when moving back to class in adapted settings that minimize health risks (Mosiagin et al. 2021).

Early reviews highlighted the necessity of organizational human resource management to react to pandemic-induced employee needs (Hamouche 2020). However, regarding social health, students are more vulnerable than staff. Though social bonds can be a protective factor, and both groups state having had more time with family in this study and internationally, mental health was negatively impacted due to the pandemic (Leal Filho et al. 2021). The restrictions during the pandemic (lockdowns, a high degree of or only online teaching) harmed life areas highly relevant for the health and development of young adults (Holzer et al. 2021; Kohls et al. 2021; Müller et al. 2021). Their resources may not be as developed as those of older adults, and their health-related abilities and awareness might not be fully formed. Moreover, they have less life experience and thus potentially lower coping abilities, in addition to their sense of coherence (Mittelmark and Bauer 2022) being challenged due to a pandemic situation and subsequent adjustment requirements. In addition, they may not yet be that well socially integrated, especially those who just started studying—maybe in a new city—and foreign students (Dodd et al. 2021). Low threshold digital interventions (Kohls et al. 2021) and solutions for online interactions together with building strong and cohesive local communities might be an option (Long et al. 2021; Leal Filho et al. 2021). Perceived social connectedness improves distress and fatigue in the general population (Nitschke et al. 2021). University campuses might offer ideal settings for doing so as there are many topics and themes that can be used to connect students and staff inside and outside class. (Mental) Health promotion as well as financial support can also contribute to avoid an aggravation of already existing inequalities (Dodd et al. 2021). In the design of online resources, attention has to be paid to (digital) health literacy levels as well as privacy concerns (Dadaczynski et al. 2021). Nevertheless, as higher daily screen-time is also associated with lower well-being scores (Stieger et al. 2021), the ideal amount of online solutions is yet to be decided.

In a German sample, individual student coping was reported as adequate (Kohls et al. 2021). While coping competences seem to be good for over 50% in the study at hand, targeted advice could reduce social conflicts. Though these were not pronounced, students had more issues to deal with than staff members, showing that courses on conflict management might be profitable when available in the curriculum and as additional activities. In addition, the university might provide time and (digital) spaces for bringing up social issues and receiving input on how to deal with this extra pressure. Digital contact and networking opportunities should be structurally embedded (Leal Filho et al. 2021). In addition to using online tools for improving psycho-social health, practical advice for online learning may be needed (Nöhammer 2022).

Future studies should investigate which coping strategies are most adequate for different socioeconomic and health behavior-related subgroups in the student population (Busse et al. 2021). It might also be advisable to include resilience as a construct since a study in the UK showed that although students might be more challenged in a pandemic compared to staff, their resilience levels might be higher (Van Der Feltz-Cornelis et al. 2020). This may be due to higher responsibility levels in later life phases, especially when being a parent, though this decreases the likelihood of depression (Kohls et al. 2021). However, another UK-based study stated rather limited student resilience levels in summer 2020 (Chen and Lucock 2022), slightly after (Van Der Feltz-Cornelis et al. 2020), which makes further inquiries and longitudinal investigations advisable (Chen and Lucock 2022).

Ensuring vulnerable staff and student groups (e.g., those living with disabilities, having multiple social roles, etc.) are supported is vital (Van Der Feltz-Cornelis et al. 2020). Training individual coping and self-care strategies as part of the curriculum is suggested, plus ensuring that existing inequalities are not aggravated. Since the negative impacts of the pandemic for students are pronounced, these should be in the center of attention after aiding staff regarding the changes to online teaching. Moreover, for future changes to online

teaching due to pandemics or other crises, staff needs to be aware of the impact on students. When adequately trained, they might be able to use the capacities that are freed after the immediate high workload to counsel their students. Though information is available, it should match the students' needs, so asking about these can be a first step (Sabie et al. 2020). In addition, psycho-social support options should be strengthened to ensure students are provided with the help they require. Though domestic abuse did not seem to be a major issue, this may have changed in the course of the pandemic (Desson et al. 2020).

4.2. Limitations and Routes for Research

The limitations of this study are the cross-sectional design, the focus on one country, and potential self-selection biases. As mentioned above, participation numbers varied between institutions. Since the aim was to investigate the national situation, the study does not compare groups that stated the same affiliation, but aggregates students and staff. Moreover, memory effects may have caused issues since the points in time the questions were related to were all in the past and in one survey. However, international data is very similar (Dodd et al. 2021; Kohls et al. 2021; Fang et al. 2022), which indicates comparability. Nevertheless, this study was focused on reporting whether issues were present or not, and if they had increased or decreased. Detailed investigations on the degree or pathology of mental health leads to alarming results, diagnosing a partly immense burden regarding stress, depression, and generalized anxiety disorder in student populations (Ochnik et al. 2021), underlining the importance to act.

While this study was on the first phase of the pandemic, overall health related impacts were slightly better six months after the start of the pandemic (Pieh et al. 2021) but then worsened again for the general population (Łaszewska et al. 2021). A French study on students vs. non-students found that mental health for the former improved after the first lockdown, but worsened again in the second, while being relatively stable for non-students (Macalli et al. 2021), while a Polish study on students noted differences in mental health depending on the phase of the pandemic (Rogowska et al. 2021). Therefore, the impacts of the pandemic on student and staff health require further investigation (Van Der Feltz-Cornelis et al. 2020; Lee et al. 2021) to be able to alleviate issues and learn for the future to create and improve health-promoting universities (Busse et al. 2021). In this context, a further differentiation of coping strategies and investigations on resilience are required, as outlined above. Groups identified as being at risk might be specifically invited for interventions (Lee et al. 2021). Resource and infrastructure availability (Leal Filho et al. 2021), health needs, and study condition perceptions should be monitored to create an adequate basis for doing so (Fialho et al. 2021). For a pandemic situation, this study suggests ensuring a continuation of academic activities and positive online teaching and learning experiences, providing support—in some case even financially, and job security are vital for staff and student mental health.

Funding: The author received no external funding for this research.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki. Due to the nature of questions posed plus the anonymous and voluntary design no ethical review and approval were required.

Informed Consent Statement: Participation was voluntary, anonymous and in accordance with informed consent standards. The aims of the study were disclosed to the participants.

Data Availability Statement: The dataset is not publicly available. For more information on the study please see (Nowrouzi-Kia et al. 2022) and the project website (<https://www.healthbit.com/the-lockeddown/>, accessed date 13 December 2022).

Acknowledgments: The author would like to thank all organizers of and participants in the project.

Conflicts of Interest: The author declares no conflict of interest.

References

- Al-Maskari, Azzah, Thurayya Al-Riyami, and Siraj K. Kunjumuhammed. 2022. Students academic and social concerns during COVID-19 pandemic. *Education and Information Technologies* 27: 1–21. [CrossRef] [PubMed]
- Ali, Wahab. 2020. Online and remote learning in higher education institutes: A necessity in light of COVID-19 pandemic. *Higher Education Studies* 10: 16–25. [CrossRef]
- BMBWF (Bundesministerium für Bildung, Wissenschaft und Forschung [Federal Ministry for Education, Science and Research]). 2021a. Liste der Fachhochschulen in Österreich [List of Universities of Applied Sciences in Austria]. Available online: https://www.oesterreich.gv.at/themen/bildung_und_neue_medien/fachhochschulen/Seite.810400.html (accessed on 27 December 2021).
- BMBWF (Bundesministerium für Bildung, Wissenschaft und Forschung [Federal Ministry for Education, Science and Research]). 2021b. Übersicht aller Universitäten [Overview of all universities]. Available online: https://www.oesterreich.gv.at/themen/bildung_und_neue_medien/universitaet/Seite.160302.html (accessed on 27 December 2021).
- BMBWF (Bundesministerium für Bildung, Wissenschaft und Forschung [Federal Ministry for Education, Science and Research]). n.d. Pädagogische Hochschulen in Österreich (University colleges of teacher education in Austria). Available online: <https://www.ph-online.ac.at/> (accessed on 27 December 2021).
- Boukhobza, Sarra, Valentin Ritschl, Tanja Stamm, and Katrin Bekes. 2021. The COVID-19 Pandemic and Its Impact on Knowledge, Perception and Attitudes of Dentistry Students in Austria: A Cross-Sectional Survey. *Journal of Multidisciplinary Healthcare* 14: 1413. [CrossRef] [PubMed]
- Busse, Heide, Christoph Buck, Christiane Stock, Hajo Zeeb, Claudia R. Pischke, Paula Mayara Matos Fialho, Claus Wendt, and Stefanie Maria Helmer. 2021. Engagement in Health Risk Behaviours before and during the COVID-19 Pandemic in German University Students: Results of a Cross-Sectional Study. *International Journal of Environmental Research and Public Health* 18: 1410. [CrossRef]
- Carr, Ewan, Katrina Davis, Gabriella Bergin-Cartwright, Grace Lavelle, Daniel Leightley, Carolin Oetzmann, Catherine Polling, Sharon A. M. Stevelink, Alice Wickersham, Reza Razavi, and et al. 2022. Mental health among UK university staff and postgraduate students in the early stages of the COVID-19 pandemic. *Occupational and Environmental Medicine* 79: 259–67. [CrossRef]
- Chen, Tianhua, and Mike Lucock. 2022. The mental health of university students during the COVID-19 pandemic: An online survey in the UK. *PLoS ONE* 17: e0262562. [CrossRef]
- Dadaczynski, Kevin, Katharina Rathmann, Melanie Messer, and Orkan Okan. 2021. COVID-HL: A cross-sectional study on digital health literacy in university students in Germany. *European Journal of Public Health* 31: ckab164-037.
- Desson, Zachary, Lisa Lambert, Jan Willem Peters, Michelle Falkenbach, and Lukas Kauer. 2020. Europe's COVID-19 outliers: German, Austrian and Swiss policy responses during the early stages of the 2020 pandemic. *Health Policy and Technology* 9: 405–18. [CrossRef]
- Dodd, Rachael H., Kevin Dadaczynski, Orkan Okan, Kirsten J. McCaffery, and Kristen Pickles. 2021. Psychological Wellbeing and Academic Experience of University Students in Australia during COVID-19. *International Journal of Environmental Research and Public Health* 18: 866. [CrossRef]
- Fang, Yang, Bo Ji, Yitian Liu, Jingyu Zhang, Qianwei Liu, Yunpeng Ge, Yana Xie, and Cunzhi Liu. 2022. The prevalence of psychological stress in student populations during the COVID-19 epidemic: A systematic review and meta-analysis. *Scientific Reports* 12: 12118. [CrossRef]
- Fialho, Paula, Franca Spatafora, Lisa Kühne, Heide Busse, Stefanie Helmer, Hajo Zeeb, Christiane Stock, Claus Wendt, and Claudia Pischke. 2021. Perceptions of Study Conditions and Depressive Symptoms During the COVID-19 Pandemic Among University Students in Germany: Results of the International COVID-19 Student Well-Being Study. *Public Health Frontier* 9: 674665. [CrossRef] [PubMed]
- Goldrick-Rab, Sara. 2021. Students are humans first: Advancing basic needs security in the wake of the COVID-19 pandemic. *Journal of Postsecondary Student Success* 1: 3–17. [CrossRef]
- Hamouche, Salima. 2020. COVID-19 and employees? mental health: Stressors, moderators and agenda for organizational actions. *Emerald Open Research* 2: 15. [CrossRef]
- Heiden, Marina, Linda Widar, Birgitta Wiitavaara, and Eva Boman. 2021. Telework in academia: Associations with health and well-being among staff. *Higher Education* 81: 707–22. [CrossRef]
- Holzer, Julia, Marko Lüftenecker, Selma Korlat, Elisabeth Pelikan, Katariina Salmela-Aro, Christiane Spiel, and Barbara Schober. 2021. Higher education in times of COVID-19: University students' basic need satisfaction, self-regulated learning, and well-being. *Aera Open* 7: 23328584211003164. [CrossRef]
- Kohls, Elisabeth, Sabrina Baldofski, Raiko Moeller, Sarah-Lena Klemm, and Christine Rummel-Kluge. 2021. Mental Health, Social and Emotional Well-Being, and Perceived Burdens of University Students During COVID-19 Pandemic Lockdown in Germany. *Frontiers in Psychiatry* 12: 441. [CrossRef]
- Kreidl, Peter, Daniela Schmid, Sabine Maritschnik, Lukas Richter, Wegene Borena, Jakob-Wendelin Genger, Alexandra Popa, Thomas Penz, Christoph Bock, Andreas Bergthaler, and et al. 2020. Emergence of coronavirus disease 2019 (COVID-19) in Austria. *Wiener klinische Wochenschrift* 132: 645–52. [CrossRef]
- Kroisleitner, Oona. 2020. Coronavirus: 380.000 Studierende bleiben spätestens ab Montag zu Hause. *Der Standard*, March 11.
- Łaszewska, Agata, Timea Helder, and Judit Simon. 2021. Perceptions of COVID-19 lockdowns and related public health measures in Austria: A longitudinal online survey. *BMC Public Health* 21: 1502. [CrossRef]

- Leal Filho, Walter, Tony Wall, Lez Rayman-Bacchus, Mark Mifsud, Diana J. Pritchard, Violeta Orlovic Lovren, Carla Farinha, Danijela S. Petrovic, and Abdul-Lateef Balogun. 2021. Impacts of COVID-19 and social isolation on academic staff and students at universities: A cross-sectional study. *BMC Public Health* 21: 1213. [CrossRef]
- Lee, Jungmin, Hyun Ju Jeong, and Sujin Kim. 2021. Stress, Anxiety, and Depression Among Undergraduate Students during the COVID-19 Pandemic and their Use of Mental Health Services. *Innovative Higher Education* 46: 519–38. [CrossRef]
- Long, Emily, Susan Patterson, Karen Maxwell, Carolyn Blake, Raquel Bosó Pérez, Ruth Lewis, Mark McCann, Julie Riddell, Kathryn Skivington, Rachel Wilson-Lowe, and et al. 2021. COVID-19 pandemic and its impact on social relationships and health. *Journal of Epidemiology and Community Health* 76: 128–32. [CrossRef] [PubMed]
- Macalli, Melissa, Nathalie Texier, Stéphane Schück, Sylvana M. Côté, and Christophe Tzourio. 2021. A repeated cross-sectional analysis assessing mental health conditions of adults as per student status during key periods of the COVID-19 epidemic in France. *Scientific Reports* 11: 21455. [CrossRef]
- Mittelmark, Maurice B., and Georg F. Bauer. 2022. Salutogenesis as a Theory, as an Orientation and as the Sense of Coherence. In *The Handbook of Salutogenesis*. Edited by Maurice B. Mittelmark, Georg F. Bauer, Lenneke Vaandrager, Jürgen M. Pelikan, Shifra Sagy, Monica Eriksson, Bengt Lindström and Claudia Meier Magistretti. Cham: Springer International Publishing, pp. 11–17.
- Moshammer, Hanns, Michael Poteser, Kathrin Lemmerer, Peter Wallner, and Hans-Peter Hutter. 2020. Time Course of COVID-19 Cases in Austria. *International Journal of Environmental Research and Public Health* 17: 3270. [CrossRef] [PubMed]
- Mosiagin, Ivan, Katharina Pallitsch, Immo Klose, Alexander Preinfalk, and Nuno Maulide. 2021. As Similar As Possible, As Different As Necessary—On-Site Laboratory Teaching during the COVID-19 Pandemic. *Journal of Chemical Education* 98: 3143–52. [CrossRef]
- Müller, Florian H., Almut E. Thomas, Matteo Carmignola, Ann-Kathrin Dittrich, Alexander Eckes, Nadine Großmann, Daniela Martinek, Matthias Wilde, and Sonja Bieg. 2021. University Students' Basic Psychological Needs, Motivation, and Vitality Before and During COVID-19: A Self-Determination Theory Approach. *Frontiers in Psychology* 12: 775804. [CrossRef] [PubMed]
- Nimmervoll, Lisa. 2020. FH-Studium in Corona-Zeiten? Mit Gesundheitstagebuch und Schnelltests. *Der Standard*, October 9.
- Nitschke, Jonas P., Paul A. G. Forbes, Nida Ali, Jo Cutler, Matthew A. J. Apps, Patricia L. Lockwood, and Claus Lamm. 2021. Resilience during uncertainty? Greater social connectedness during COVID-19 lockdown is associated with reduced distress and fatigue. *British Journal of Health Psychology* 26: 553–69. [CrossRef] [PubMed]
- Nöhammer, Elisabeth. 2022. The LockedDown: Austria. Report on Analysis of Surveys. Project Website. Available online: https://www.healthbit.com/wp-content/uploads/2022/03/report_lockeddown_fin.pdf (accessed on 27 December 2021).
- Nowrouzi-Kia, Behdin, Leeza Osipenko, Parvin Eftekhari, Nasih Othman, Sultan Alotaibi, Alexandra M. Schuster, Hae Sun Suh, and Andrea Duncan. 2022. The early impact of the global lockdown on post-secondary students and staff: A global, descriptive study. *SAGE Open Medicine* 10: 20503121221074480. [CrossRef]
- Ochnik, Dominika, Aleksandra M. Rogowska, Cezary Kuśnierz, Monika Jakubiak, Astrid Schütz, Marco J. Held, Ana Arzenšek, Joy Benatov, Rony Berger, Elena V. Korchagina, and et al. 2021. Mental health prevalence and predictors among university students in nine countries during the COVID-19 pandemic: A cross-national study. *Scientific Reports* 11: 18644. [CrossRef]
- ÖH Uni Wien. 2020. Student Representative Council at the University of Vienna. Studieren unter Corona: ÖH Uni Wien ortet große Missstände im Distance Learning. APA/OTS. Available online: https://www.ots.at/presseaussendung/OTS_20201029_OTS0082/studieren-unter-corona-oe-h-uni-wien-ortet-grosse-missstaende-im-distance-learning (accessed on 29 December 2021).
- Pieh, Christoph, Sanja Budimir, and Thomas Probst. 2020. The effect of age, gender, income, work, and physical activity on mental health during coronavirus disease (COVID-19) lockdown in Austria. *Journal of Psychosomatic Research* 136: 110186. [CrossRef]
- Pieh, Christoph, Sanja Budimir, Elke Humer, and Thomas Probst. 2021. Comparing Mental Health During the COVID-19 Lockdown and 6 Months After the Lockdown in Austria: A Longitudinal Study. *Frontiers in Psychiatry* 12: 197. [CrossRef]
- Pollak, Markus, Nikolaus Kowarz, and Julia Partheymüller. 2020. Chronology of the Corona Crisis in Austria—Part 1: Background, the Way to the Lockdown, the Acute Phase and Economic Consequences. Available online: <https://viecer.univie.ac.at/en/projects-and-cooperations/austrian-corona-panel-project/corona-blog/corona-blog-beitraege/blog51/> (accessed on 4 January 2021).
- Prowse, Rebecca, Frances Sherratt, Alfonso Abizaid, Robert L. Gabrys, Kim G. C. Hellemans, Zachary R. Patterson, and Robyn J. McQuaid. 2021. Coping With the COVID-19 Pandemic: Examining Gender Differences in Stress and Mental Health Among University Students. *Frontiers in Psychiatry* 12: 650759. [CrossRef] [PubMed]
- Raihan, Mohammad Mojammel Hussain. 2020. Mental health consequences of COVID-19 pandemic on adult population: A systematic review. *Mental Health Review Journal* 26: 42–54. [CrossRef]
- Rogowska, Aleksandra M., Dominika Ochnik, Cezary Kuśnierz, Karolina Chilicka, Monika Jakubiak, Maria Paradowska, Luiza Głazowska, Dawid Bojarski, Julia Fijolek, Marcin Podolak, and et al. 2021. Changes in mental health during three waves of the COVID-19 pandemic: A repeated cross-sectional study among Polish university students. *BMC Psychiatry* 21: 627. [CrossRef] [PubMed]
- Sabie, Ana-Catalina, Katharina Brunnmayr, Kristina Weinberger, Renée Sophie Singer, Rafael Vrekar, and Katta Spiel. 2020. This is not the new normal: Studying during a pandemic. *Interactions* 27: 12–15. [CrossRef]
- Simon, Judit, Timea M. Helter, Ross G. White, Catharina van der Boor, and Agata Łaszewska. 2021a. Impacts of the COVID-19 lockdown and relevant vulnerabilities on capability well-being, mental health and social support: An Austrian survey study. *BMC Public Health* 21: 314. [CrossRef] [PubMed]
- Statistics Austria. 2021a. Students in Austria from 2018/19 to 2020/21. Available online: http://www.statistik.at/web_en/statistics/PeopleSociety/education/universities/students_studies/029840.html (accessed on 28 December 2021).

- Statistics Austria. 2021b. Teaching Staff at Universities. Available online: http://www.statistik.at/web_en/statistics/PeopleSociety/education/universities/teaching_staff/index.html (accessed on 28 December 2021).
- Statistics Austria. 2021c. Total Population. Available online: http://www.statistik.at/web_en/statistics/PeopleSociety/population/population_censuses_register_based_census_register_based_labour_market_statistics/total_population/index.html (accessed on 28 December 2021).
- Stieger, Stefan, David Lewetz, and Viren Swami. 2021. Emotional well-being under conditions of lockdown: An experience sampling study in Austria during the COVID-19 pandemic. *Journal of Happiness Studies* 22: 2703–20. [[CrossRef](#)]
- Van Der Feltz-Cornelis, Christina Maria, Danielle Varley, Victoria L. Allgar, and Edwin De Beurs. 2020. Workplace stress, presenteeism, absenteeism, and resilience amongst university staff and students in the COVID-19 lockdown. *Frontiers in Psychiatry* 11: 1284. [[CrossRef](#)]
- Watermeyer, Richard, Tom Crick, Cathryn Knight, and Janet Goodall. 2021. COVID-19 and digital disruption in UK universities: Afflictions and affordances of emergency online migration. *Higher Education* 81: 623–41. [[CrossRef](#)]
- Wray, Siobhan, and Gail Kinman. 2022. The challenges of COVID-19 for the well-being of academic staff. *Occupational Medicine (Oxford, England)* 72: 2–3. [[CrossRef](#)]
- Yildirim, T. Murat, and Hande Eslen-Ziya. 2021. The differential impact of COVID-19 on the work conditions of women and men academics during the lockdown. *Gender, Work & Organization* 28: 243–49.

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.