

Health science students' well-being during distance learning: a qualitative interview study

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Abstract

The recent shift from face-to-face learning to distance learning has affected students' well-being, which could impact commitment to studies and lead to delays or interruptions. The aim of this study was to describe health science students' experiences of well-being during the distance learning and social isolation resulting from the COVID-19 pandemic. A qualitative descriptive interview study was conducted with virtual semi-structured individual interviews. A total of 15 first-year health science students participated. Content analysis was used to analyse the data. The study identified six main categories of well-being: social relationships; healthy lifestyle; versatile everyday life; psychophysical well-being; the physical living environment; and adaptation to a new situation. The participants mainly reported satisfactory well-being, but they needed support to maintain it. The study showed that students' well-being and resilience increased when distance learning lasted longer. In the future, it will be important to study how to combine the flexibility of distance learning with the communality of contact teaching.

Citation

Pramila-Savukoski, S., Kärnä, R., Kuivila, H., Juntunen, J., Oikarainen, A., Kääriäinen, M., Hylkilä, K. & Mikkonen, K. (2024). Health science students' well-being during distance learning: a qualitative interview study. *Journal of University Teaching and Learning Practice*, 21(1).

Editors

Section: Student Experience
Editor-in-Chief: Dr Joseph Crawford
Senior Editor: Dr Sally Ashton-Hay

Publication

Received: 14 November, 2022
Revision: 20 December 2023
Accepted: 9 January, 2024
Published: 31 January, 2024

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Introduction

Well-being has always been an important part of life, which has been particularly emphasised during recent years. University students' everyday life was widely transformed due to the transition to emergency remote learning due to the pandemic, which has noticeably impacted student well-being, as this mode of teaching has been found to increase student-experienced stress, anxiety, and loneliness (Cao et al., 2020; Khadirnavar et al., 2020; Son et al., 2020). In this study, we use the term distance learning meaning the rapid transformation of face-to-face teaching into e-learning during a crisis that is also called emergency remote learning (Bozkurt & Sharma., 2020). Previous studies have shown that problems related to well-being and academic studies, along with interpersonal problems, can reduce a student's commitment to study (Daniels et al., 2020) and cause delays or interruptions (Bakker et al., 2020). Well-being is connected to students learning (Zhoc et al., 2022). The prevalence of psychological problems have been significantly high (Giovenco et al., 2022; Tran et al., 2022) and higher among university students than among the rest of the population (Parikka et al., 2022).

There is an acute shortage of health care professionals (World Health Organization, 2016), which is why it is vital to ensure that health sciences students continue their studies and will be graduated. Health sciences is a field of science that produces bachelor's and master's degrees in management, expertise and development of social and health care services (Pramila-Savukoski et al., 2023). Focusing on students' well-being is one way to motivate them during their studies. Although studies have shown that distance learning can negatively affect student well-being (e.g., Cao et al., 2020), there is limited research concerning health science students' experiences on the topic. Health care or health sciences students' experiences of distance learning have been studied, for example, in terms of the teaching method (e.g., Abbasi et al., 2020; He et al., 2021; Nyman et al., 2023), lifestyles (Imaz-Aramburu et al., 2021), and coping methods (Majrashi et al., 2021). Research on university students' well-being during distance learning has focused on mental health (e.g., Fawaz & Samaha, 2020; Obermeier et al., 2022), and previous studies suggesting that these situations increase depression and anxiety (Loades et al., 2020). Research focusing on the overall well-being of health sciences students during a rapid shift to distance (emergency remote teaching) is limited.

There is a research gap regarding health science students' well-being in learning and social isolation during emergency remote learning. This study fills this gap by providing information on educational organisations and how the continuity of studies, along with student well-being and resilience, can be supported. This study provides further insight into how teaching methods can be developed and aligned with the needs of students. By understanding students' well-being, and developing and implementing innovative solutions to enhance well-being in learning, the graduation of skilled experts will be enhanced. Graduated experts will further enhance digital environments, work in leadership positions or as educators and they will have a crucial role in developing social and health care services. Well-being is a crucial issue in the attractiveness and retention of experts in the health care sector.

Literature

Throughout the years there have been many attempts to define well-being, but no consensus has been reached. The World Health Organisation (WHO) (2023) defines well-being as a positive

state experienced by individuals and societies. Well-being is understood as a resource for everyday life (e.g. learning), and includes quality of life and the ability of people to contribute to the world (Dodge, 2012; WHO, 2023). It is defined by social, economic and environmental conditions (WHO, 2023) and balance in a person's physical, mental and social state (Dodge et al., 2012). Well-being can also be considered from the perspective of an individual's subjective experience of a good life, life satisfaction and positive and negative effects (Diener et al., 2018). From the health science student's perspective, one of the biggest factors influencing well-being is the choice of teaching method(s).

Due to changes in educational culture caused by the COVID-19 pandemic, distance learning has been implemented in curricula and daily practices (Bozkurt & Sharma, 2020). Although distance learning and emergency remote learning are not directly comparable to each other, this study makes extensive use of recent research. Generally, distance learning resembles e-learning and online learning, with different terms being applied in different studies (Pelikan et al., 2021; Traxler, 2018). Typically, distance learning is defined as a teaching situation in which students are temporally or locally independent of each other (Pelikan et al., 2021). Distance learning has traditionally been asynchronous (no restrictions on time or space), but synchronous teaching (a teaching which occurs at a set time but can be accessed from anywhere) is becoming more common due to advances associated with digitalisation (He et al., 2021; Nyman et al., 2023). Technology is globally and constantly shaping and changing the health care sector in many ways. The effects of digitalisation are bringing new demands and changing the structure of the education system as a whole (Sætra & Fosch-Villaronga, 2021). Digitalisation has transformed society, and this is why education institutions need to improve their digital capacities. The pandemic boosted online and hybrid learning. It led to the development of new ways of teaching and to a more flexible and personalised approach to learning. At the same time, the increased use of technology in education highlighted the challenges and inequalities associated with digital literacy, as not everyone has equal access to the technology needed for learning (European Parliament Digital Education Action Plan 2021-2027).

Higher education students' experiences of well-being during distance learning greatly vary (Schlesselman et al., 2020). In distance learning, the teaching method has a holistic impact on student well-being, as it affects students' overall experiences and satisfaction (Bond et al., 2020). Distance learning is generally considered a useful teaching method (Almarzooq et al., 2020), but varying learning outcomes have been reported. Distance learning, when compared to face-to-face learning, has impaired students' competence and social skills (Bączek et al., 2021). In contrast, no differences have been found in the effectiveness of synchronous distance learning and traditional teaching, with the students being more satisfied with distance learning (He et al., 2021). Higher education students' satisfaction with distance learning has been found to be related to flexibility (Bączek et al., 2021; Schlesselman et al., 2020). On the other hand, the freedom offered by distance learning can also be seen as a challenge, i.e., students need to demonstrate responsibility and motivation in completing their studies (Pelikan et al., 2021). This can cause problems with schedules and deadlines (Abbasi et al., 2020), especially if a student finds it challenging to stay motivated.

In addition to educator-student interaction, distance learning poses challenges to student-student interactions. Higher education students have missed social interactions with their classmates, and

Loneliness has affected study motivation (Langegård et al., 2021). Student-teacher interaction has also challenged students (Pramila-Savukoski et al., 2022). These are recognised problems, and efforts have been made to improve the interactivity of distance learning (Almarzooq et al., 2020). These approaches have been found to improve learning experiences to promote the development of higher education students' knowledge, competences and problem-solving skills, as well as increase satisfaction (Männistö et al., 2019; Pramila-Savukoski et al., 2022). In addition, distance learning enables diverse educational opportunities, for example, different disciplines can be combined in a course (McNaughton et al., 2023).

Completing health science education enables graduates to work in a variety of expert roles, as well as participate in multi-professional environments. In Finland, higher education is offered at three levels: Bachelor's, Master's, and Doctoral degrees (Ministry of Social Affairs and Health, 2020). First-year health science students, relevant to the inclusion criteria of this study, will graduate with a Bachelor's degree that reflects level 6 of the European Qualifications Framework (EQF); more specifically, they have advanced knowledge of the field of work or study, advanced management skills, as well as the ability to innovate and solve unforeseen problems (European Union, 2017). Bachelor's degrees can be conducted at i) universities of applied sciences providing degrees in nursing, physiotherapy, occupational therapy and other allied health care degree professions; or ii) at universities providing degrees in health sciences, clinical expertise, leadership or teacher training. In this study, the inclusion criteria were the latter option. In order to develop health sciences education and to improve education, competence, and support for the students in distance learning, information on students' experiences is needed. This study was motivated by the following research question: What are first-year health science students' well-being experiences during distance learning caused by the COVID-19 pandemic?

Method

Study design

This qualitative descriptive interview study utilised inductive content analysis to provide a deeper understanding of participants' experiences (Kyngäs, 2020). As such, the participating health science students were able to describe their accounts of well-being during distance learning. Individual interviews were used during data collection so that participants had the opportunity to share their own experiences with no time pressure. We have followed the framework of Elo et al. (2014) and Kyngäs (2020), which covers the preparation, organisation, and reporting stages of the content analysis in a qualitative study.

Participants and settings

Participants were selected by purposive sampling to provide rich and accurate information for the study. The participants were first-year health science students from a Finnish university. All first-year students were invited, with 15 deciding to participate in the study. The inclusion criteria were: 1) the student was in their first year of studies in health sciences; 2) the student was able to participate in a virtual interview; and 3) the student had volunteered to participate in the research.

The exclusion criteria were: 1) the student was from other degree programmes than health sciences; 2) the student was unable to participate in a virtual interview. The participants were recruited during their first-year studies by their teacher. Students' participation was entirely voluntary, and their participation or non-participation had no impact on their activities. Exclusion criteria did not include previous university studies as the degree was designed as a first university degree. After confirming the participants with written consent, the researcher contacted the volunteers via email to schedule an interview. The interviewers had no relationship and were not acquainted with any participants.

Data collection

The data was collected in the spring of 2021 through semi-structured individual thematic interviews. This approach allowed researchers to gather information on subjects' personal experiences. The themes – distance learning during the COVID-19 pandemic, well-being during distance learning, and resilience during distance learning – that served as the basis for the thematic interviews were formed based on previous research and the research question. The themes were used as main topics to guide open-ended questions in the discussion between the participant and the researcher. The employed interview method was tested during the first interview. Only minor refinements were made and, therefore, the first interview was included in the final study. The interviews lasted from 42 to 89 minutes, with an average duration of 61 minutes. Because of the COVID-19 pandemic, the interviews were conducted virtually in Microsoft Teams software, video recorded for analysis, and coded by each participant's ID number.

Data analysis

The obtained material was transcribed into a Word document, after which it underwent inductive content analysis. The inductive analysis sought to answer the research question by organising extensive data into open codes, and grouping codes into sub-categories and categories (Kyngäs, 2020). An individual word or a sentence could represent one meaning unit; in the next step, the identified meaning units were reduced to codes. (See an example of the analysis in Table 1). The 399 identified codes were further grouped into 77 sub-categories and 21 categories. The categories were then grouped into six main categories. The analysis was carried out by one researcher (blinded), after which the findings were discussed with other researchers (blinded). Data saturation was achieved, which meant that a sufficient amount of research material was gathered.

Table 1

Example of coding interview data in inductive content analysis

| Interview statement | Condensed meaning unit | Coding or code |
|---------------------|------------------------|----------------|
|---------------------|------------------------|----------------|

| | | |
|---|--|---------------------------------------|
| Such monotony. If the days don't go the same way, it weakens that well-being and I begin to recognise a little corona fatigue, so to speak... If you have normal teaching, there are more other people in your life... And now, what I've noticed is that I can spend much more time on studying, which means that I spend more time on it ...and forget breaks, maybe forget to eat more easily than normally. | Such monotony. If the days go the same way, it weakens that well-being | Feeling of monotony |
| | and I begin to recognise a little corona fatigue, so to speak... | Feeling of corona fatigue |
| | If you have normal teaching, there are more other people in your life... | Decreased interpersonal relationships |
| | And now, what I've noticed is that I can spend much more time on studying, which means that I spend more time on it, | Increased time spent on studying |
| | ...and forget breaks, | Forgetting breaks |
| | maybe forget to eat more easily than normally. | Forgetting to eat |

Ethical issues

The dean of the University under the study approved the implementation of the research. This approval indicates that the research design is ethically acceptable. The research was carried out in accordance with the principles of good scientific practice recognised by the scientific community (Declaration of Helsinki, 2013). The participants in the study were informed about the research purpose and its voluntary nature. Students had the opportunity to withdraw their participation in the study at any point. All of the research material has been stored according to GDPR regulations (European Parliament, 2016).

Results

All participants were women between 19 and 40 years of age, with an average age of 23 years. Three of the participants had a previous background in nursing. According to the analysis, first-year health science students' experiences of well-being during distance learning caused by the COVID-19 pandemic fall under six main categories: social relationships; healthy lifestyle; versatile everyday life; psychophysical well-being; physical living environment; and adaptation to a new situation (Table 2).

Table 2

Health science students' well-being during distance learning

| Main category | Categories | Sub-categories |
|---------------|------------|----------------|
|---------------|------------|----------------|

| | | |
|----------------------|--|--|
| Social relationships | Social interaction and its effectiveness | Activity required to maintain social relationships |
| | | Loneliness |
| | | Importance of social relationships |
| | | Importance of diverse social relationships |
| | | Lack of social contacts |
| | | Talking to someone |
| | Contacts with classmates | Developing social relationships with classmates |
| | | Studying together |
| | | Lack of student events |
| | | Contact with classmates |
| | | Success of group formation |
| | | Group work |
| | Friends and loved ones | Support from friends and loved ones |
| | | Seeing friends |
| | | Contact with friends |
| | | Contacting loved ones by phone |
| | Relationship | Spousal support |
| | | State of the relationship |
| | Family | Family support |
| | | Being with family |
| | | Being close to family |
| | | Close relationships with family |
| Healthy lifestyle | Exercising | Exercise |
| | | Home workout |
| | | Limited forms of exercise due to COVID-19 |
| | | Exercising feels unnatural |
| | | Passivity |
| | Nutrition | Eating |
| | | Regular meal times |
| | Rest | Resting and laying down |
| | | Relaxing |

| | | |
|-----------------------------|------------------------------|---|
| Versatile everyday life | Leisure time | Disengagement from studies |
| | | Restrictions on life |
| | | Being with animals |
| | Enjoying life | Hobbies |
| | | Daily tasks |
| | | Meaningful everyday life |
| | | Enjoying the basic routines |
| | Time management | Feeling of freedom |
| | | Freedom of scheduling |
| | | Feeling of monotony |
| | | Regular rhythm |
| | | Taking a break from studies |
| Working life | Time spent on studies | |
| | Going to work | |
| | Balancing work and school | |
| Psychophysical well-being | Physical health | Being healthy |
| | | Illnesses |
| | | Physical well-being |
| | Mental health | Work ergonomics |
| | | Experience of high well-being |
| | | Experience of low well-being |
| | | Well-being perceived as contradictory |
| | | Change from previous well-being |
| | | Mental workload |
| | | Feeling of insecurity caused by COVID-19 |
| Physical living environment | Home environment | Being at home |
| | | Difficulty settling in the place of study |
| | | Cozy home |
| | Environment outside the home | Outdoor activities |
| | | Season |
| | | Sunlight |

| | |
|-------------------------------|---|
| Adaptation to a new situation | Information about the COVID-19 news coverage |
| | Amount of information about COVID-19 |
| Resilience development | Getting used to a new life situation |
| | Positive thinking |
| Self-care | Taking care of one's own well-being |
| | Being merciful towards oneself |
| Progress of studies | Motivation |
| | Rushing during studies |
| | Taking responsibility for studies |
| | Development of study skills |
| Organising studies | Getting help with one's studies |
| | Face-to-face teaching instead of independent studying |
| | Number and length of lectures |
| | Getting feedback on studies |

Social relationships

Participants perceived social relationships to be part of their well-being, which includes social interaction and maintaining relationships with their family. The participants found social relationships to be important and empowering during distance learning and reported that the pandemic made it challenging to stay in touch. Conversation was seen as an important way to cope with the situation and express thoughts. On the other hand, relationships were perceived as laborious, since maintaining them required more activity and effort than normal because people no longer encountered each other in everyday life. The lack of social contact also caused students to feel lonely, with one student expressing: *“I have noticed that I did not think of my mental well-being before, but now it has come to the surface and is present in my mind. I don't feel that I have any mental health problems or that I need help, but yes, I feel lonelier than before... (Interview 11)”*.

Participants also reported problems with student groups and a sense of community. For example: *“It's like the student group and forming a class is a bit incomplete. Of course, you expect that when you come to university and you start everything at the same time, there will be a group you belong to (Interview 15)”*. This process of joining a group was hampered by the lack of student events and an opportunity to study together. Students wanted to connect with classmates and, therefore, reported group tasks and meetings to be more enjoyable than other aspects of distance learning.

Friends, loved ones, family members, spouses, and boyfriends/girlfriends were perceived as factors that promote well-being, with the participants being appreciative of these people. On the other hand, the students also reported that maintaining relationships with acquaintances and friends was stressful and laborious. Meeting with friends contributed to well-being, but there were limited possibilities for socialising during the pandemic; one participant stated: *“Because of the corona pandemic you can't get out to relax and see friends in the same way, I'm sure it has a big effect (Interview 3)”*. As a result of distance learning, students felt that they had more time to be

with their family. Well-being was impaired if students could not be in contact with their family as much as before the pandemic.

Healthy lifestyles

According to the participants, a healthy lifestyle consists of exercise, nutrition, and rest. The interviewed students practised sports and exercise indoors and outdoors and reported these activities to reduce stress and increase well-being; for example: *“Well, the number one thing certainly exercises. It’s just something that without it, I’m not sure I can manage (Interview 6)”*. Restrictions caused by the pandemic hampered physical activity and increased students’ everyday passivity.

Students felt that regular and healthy nutrition was an important part of well-being, but this was difficult to maintain during distance learning. There was no time to cook between lectures, which led to fatigue and reduced concentration in the studies. One of the students stated: *“Just that you don’t have regular meal times. At least I have not kept regular meal times and I may have eaten poorly during the day. It affects energy levels, especially if you don’t eat enough, often enough or include enough variation (Interview 1)”*.

Resting was perceived as important in terms of both general rest and relaxation. Students reported not getting adequate sleep and felt that rest promotes well-being; for example: *“All in all, I know that rest is important for me. I need sleep. That’s what I demand (Interview 7)”*. However, the students felt that it was difficult to stop thinking about their studies, which affected sleep quality. Furthermore, the students felt that relaxation – either alone or in the company of a loved one – is important, but there was often not enough time for it during distance learning.

Versatile everyday life

Versatile everyday life promotes well-being; this aspect of well-being comprises leisure time, enjoyment of life, time management, and working life. Leisure time helped students detach from their studies and strike a balance in everyday life. However, the students found it difficult to forget about school, with one student expressing: *“Trying to get the school stuff out of your head, to think about something else, and then even if I was alone, I would still really try to relax and completely forget about school assignments (Interview 5)”*. The students mentioned several ways that helped them not think about studies, e.g., reducing screen time, hobbies, pets, and everyday activities such as gaming, crafts, cooking, and music. On the other hand, life during the pandemic was perceived to be limited, which impaired well-being. For example, students felt that their lives were missing things due to the pandemic and it was not possible to live a normal life.

Participants felt that distance learning made their everyday lives freer and offered possibilities to do what they wanted. They felt that life was more flexible, with one student stating: *“In my opinion, it provides opportunities and flexibility to studies (Interview 10)”*. Distance learning made it easier to schedule tasks, with a regular daily schedule promoting well-being. On the other hand, studies could stretch into evenings and weekends. Participants felt that there was no variation in their days: *“There is nothing in the day other than sitting here in front of the school desk and going to sleep, and eating. There is no walk to school, which would be a little bit of exercise, or that someone might send a message that ‘hey, let’s go and have lunch or go to the school to study’*

which would bring something more to your day (Interview 2)". Going to work made it possible to leave home and forget about school for a while. Furthermore, the students enjoyed seeing more people when at work. Balancing work and studies was considered to promote well-being. In this way, well-being was impaired whenever a student experienced stress in balancing their work and studies.

Psychophysical well-being

Participants valued their physical and mental health. The students reported that physical well-being, ergonomics and staying healthy promoted well-being, while illness and concern for the well-being of oneself and/or loved ones weakened well-being. Constantly sitting at a computer gave students headaches, which is why students actively tried to stretch and change positions. In terms of mental well-being, the participants generally felt good, yet distance learning caused severe anxiety and stress for some students; for example: *"...In November-December I experienced strong anxiety, I was haunted by being inside, and it felt like I had to do anything to get out of there. That, yes, was already a strong case [of anxiety], a really strong kind of anxiety, that it was like I had to do something. I couldn't stand it (Interview 13)*". Students also expressed that they were tired of the situation and missed contact teaching. The COVID-19 pandemic also raised welfare concerns. However, students described that – throughout the pandemic – their mental well-being improved from the early stages of their studies.

Physical living environment

Students felt that distance learning gave them the opportunity to spend more time at home and study at their own pace; Nevertheless, some of the students were stressed by constantly being alone. They also reported hoping for a possibility to leave home for a lecture, see friends, or go outside. The students spent time decorating and cleaning to help them enjoy life at home, but moving to a new city for their studies was still perceived as difficult. Daily outdoor activities helped the students cope and increased well-being. Spending time outdoors also gave the students a break from studying when other places were closed. One of the students stated: *"Remember that even if the situation is what it is, you can at least still go outside (Interview 1)"*". The students felt that it was nice to be outdoors, especially when the weather was good. Sunlight and warmth increased well-being, while winter and darkness decreased well-being.

Adaptation to a new situation

Participants felt that adaptation to a new situation was reflected in their self-care, development of resilience, information about the coronavirus, and being aware of the progress of studies. Some students reported that they stopped following the news because of negative coronavirus coverage. On the other hand, certain students felt that increased knowledge, understanding, and peer support eased uncertainty and promoted well-being. The students reported that positive thinking was empowering and helped them get used to everyday life during the pandemic. One of the students stated: *"Trying to focus on positive things instead of thinking that I can't go to this place and I can't go to that place (Interview 11)"*". Students expressed that their coping strategies had improved during the year. They felt that taking care of their well-being was important and tried to find new ways to do this. They felt that it was important to forgive oneself and not demand too

much during distance learning; for example, one student shared: *“Being merciful in some sense, in that you don’t have to be so active because there aren’t so many opportunities to be active during the day (Interview 4)”*.

According to the participants, advancing their studies required motivation. Students found staring at the computer screen to be dull and reported that long stretches of screen time decreased their motivation. Moreover, busy schedules during studies caused stress, and students felt that they were left alone to deal with the rush. The students also felt that support from the university was insufficient and not concrete enough: *“So I have to say that if there has been anything [help from the university], it has just been some emails, that say ‘hey you can contact this place if you need help’ (Interview 13)”*. Participants wanted more actual teaching alongside independent work. More specifically, the students felt that the lectures were often long and too infrequent, which weakened their focus on studies. In addition, the students felt that they received limited feedback from their teachers. Students had to take more responsibility for their own studies and found studying at school to be more efficient and easier than at home; for example, one student stated: *“You have to take more responsibility for studying... or at least I think that if the teaching were normally organised then it would somehow be a little easier to study. Because you’re at home, then basically you have to do a lot all alone (Interview 10)”*. However, the interviewed students felt that they were able to maintain a comfortable pace in their studies and complete all the required tasks. This was facilitated by the development of study skills and completing tasks on time.

Discussion

Subjective experiences of the transition to distance learning have an impact on students' perceived well-being. For example, evaluations of distance learning have been shown to predict engagement, but also exhaustion (Juntunen et al., 2022). The well-being of health science students during distance learning and social isolation varied, but the interviewed students generally experienced satisfactory levels of well-being. It is noteworthy that the students' well-being required active maintenance and did not occur automatically. Thus, the students had to come up with ways to promote their well-being. This was perceived as difficult in light of the pandemic restrictions. Many of the students reported that they maintained their well-being and daily learning through exercise and leading a healthy lifestyle. In contrast, Imaz-Aramburu et al. (2021) found that health science students' exercise habits did not increase during the COVID-19 pandemic. Our study showed that health science students did their best to exercise daily, and the importance of exercise was emphasised in their experiences. The students felt that exercise and sports were vital to their well-being and described that they would not be able to cope without them. Exercise was often associated with outdoor activities. Spending time surrounded by nature and exercise have both been reported to positively affect well-being, health, and recovery from stress, as well as social relationships (Hunter et al., 2019; Quarta et al., 2022). Outdoor activities and nature have been found to play a role in how young people adapted to the sudden changes brought about by the COVID-19 pandemic (Jackson et al., 2021). Our research supports that indoor and outdoor exercise is important for well-being. Interestingly, the season was not found to affect the students' exercise activity, which remained at a similar level throughout the year.

In social relationships, friends were found to be pivotal in the maintenance of well-being during distance learning; unfortunately, health science students often described a sense of loneliness.

Due to social isolation, the students could not physically see their friends as much as they would have liked, which made it difficult to maintain social relationships and increased loneliness. This is in line with earlier studies. Social support has significantly reduced anxiety during the COVID-19 pandemic (Cao et al., 2020). Those students who have experienced less loneliness, have reported less stress (Matos Fialho et al., 2021; Obermeier et al., 2022). According to our study, social contact was most often maintained by phone or virtually, but this was sometimes described as complex and tiring by the students. Distance learning does not necessarily require living in the city where the teaching takes place. This dynamic allowed health science students to stay and live in a familiar environment, which helped maintain social relationships via support from parents, spouses, and friends. Other studies have also found that distance learning afforded health science students the opportunity to spend more time with their families (Bączek et al., 2021; Schlesselman et al., 2020). Flexible learning possibilities have been found to support students' overall well-being by providing adapted studies in their own life situations and saving resources (Nyman et al., 2023). Supporting students' social interaction and community should take into account developing curricula and learning methods.

Constantly being at home also had certain drawbacks. The physical living environment was perceived as an important part of well-being, and the students reported that studying at home began to feel difficult after some months of social isolation. It was also stressful to stay indoors. Educational institutions mandated measures to avoid the presence of students on campus and curb rising infections. However, according to our interviews, this negatively affected students' recovery preventing versatile everyday life. Health science students reported that since everything happened in the same environment – their home – the boundaries between studying and leisure time blurred and they had no time to recover. Studies dragged on into the evening as the students were not able to study at the campus. Langegård et al. (2021) and Son et al. (2020) also highlighted the importance of the study environment. Our research revealed that health science students' ability to concentrate suffered from constantly staring at the computer screen and lacking interaction. The lack of social interactions also caused problems in forming student groups. The interaction may remain superficial, or the remote connection may challenge social interaction (Pramila-Savukoski et al., 2022). As previously described by Chan et al. (2021), our study showed the importance of the social presence of classmates. Participation in groups is an important part of student life, yet the interviewed students only had limited experiences with student groups. Loneliness seems to be associated with low motivation to study (Langeård et al., 2021; Pelikan et al., 2021), which may weaken higher education students' social engagement in their studies. The worst possible outcome of this is the interruption of studies. Low-level activities should be developed to reduce loneliness.

According to a study by Chan et al. (2021), only 45% of higher education students were committed to their studies during the COVID-19 pandemic. Our research also identified problems in study motivation. Health science students found it difficult to work at the computer for extended periods, which was exacerbated by long and infrequent lectures. Avoiding long lectures and carefully considering lecture intervals could promote students' concentration. Problems in psychophysical well-being were seen, when health science students experienced social isolation and studying at home as a strong source of anxiety. This anxiety was sometimes so powerful that they needed help to overcome it. They also felt that educational institutions provided insufficient support and

expressed that they wanted more concrete help. According to our research, health science students found it difficult to get feedback. It is difficult for higher education students to take responsibility for their own studies without the necessary guidance to complete the courses (Abbasi et al., 2020; Langegård et al., 2021; Nyman et al., 2023).

Previous studies have revealed poor well-being among higher education students during the COVID-19 pandemic (Khadirnavar et al., 2020; Obermeier et al., 2022; Son et al., 2020). In contrast, our research showed that health science students' subjective experiences of well-being increased during distance learning. According to the interviews, students experienced low levels of well-being in the early stages of distance learning but, over time, found different ways to strengthen and maintain their well-being by adapting to the new situation. Recent studies have provided evidence that nursing students' resilience has decreased students' level of strain and stress (Drach-Zahavy et al., 2022; von Keyserlingk et al., 2021; Özdemir et al., 2023). According to our research, health science students' coping strategies and resilience have developed as distance learning progressed; for example, by focusing on positive thinking. This helped the students maintain, strengthen, and achieve well-being. Positive thinking and strong resilience are important components of students' well-being during distance learning (Majrashi et al. 2021; Rahiem, 2021). Optimistic attitude and gratitude have helped the student to cope in challenging times (Martinez et al., 2022) but also the ability to self-regulate own activities well has been found to reduce the experience of stress (von Keyserlingk et al., 2021). Education is essential in supporting higher education students' resilience (Taylor et al., 2020), and a future challenge is ensuring that student support is considered in education planning. Students globally experience similar challenges during their studies, and distance learning caused by the COVID-19 pandemic has brought a new challenge. Although the target group in this study were health sciences students from one Finnish University, the results are applicable internationally. These results will help to develop solutions to support the well-being of students in higher education, especially those at the beginning of their studies. As education policy is a long-term development effort to improve the efficiency and quality of education, this research can contribute to sustainable education solutions that support students' well-being and teachers' competence so that they can better support students. Educational organisations could use the results in developing activities promoting student well-being. Emotions play a role in learning (Artino, 2012; Mänty et al., 2023), for instance, negative emotions cause challenges in learning and competence development influencing even graduation. Higher education institutions should take students' needs into account when designing student-centred solutions, distance or blended learning. This research also provides an understanding of the experiences of unexpected change that has been experienced, which can be useful if facing similar situations in the future but should also be critical, because these were experiences from a special timeframe.

Limitations and trustworthiness of the study

This research only involved students from one Finnish university and, as the study was conducted during the COVID-19 pandemic, the student experiences are limited to the practices of this university. In addition, experiences of distance learning are limited to the social isolation associated with the COVID-19 pandemic; this may have impacted the students' experiences of distance learning. The results could have been different if distance learning had occurred during a more "normal" life situation. To ensure trustworthiness, the study utilised the framework defined

by Elo et al. (2014), which covers the preparation, organisation, and reporting stages. According to this framework, the trustworthiness of qualitative research is defined in terms of credibility, dependability and confirmability. Credibility was ensured as the research data was not manipulated or under any bias. Dependability was carried out by interviewing all the participants consistently and under the same conditions. During the analysis, the research question was constantly returned to, and the resulting categories were critically examined by the researchers. The study's confirmability was visible in that the researchers did not influence the participants' experiences by criticising or guiding them. In the design and implementation of the study, confirmability was also ensured through choices that the researchers made based on mutual agreement. The final report provided systematic and accurate descriptions, including original quotations of the participants' experiences. The SRQR checklist was utilised in the reporting of results (O'Brien et al., 2014).

Conclusion

The study showed that the well-being of health sciences students during the COVID-19 pandemic is affected by several factors, which include social relationships, healthy lifestyle, versatile everyday life, psychophysical well-being, physical living environment and adaptation to a new situation. The experience of well-being was varied, with emphasis on different areas. It was clear that maintaining well-being required activity and help from various agencies. The results of this study will help international experts understand how students' well-being can be improved. We recommend that the development of distance learning methods should consider interactivity, the importance of feedback and scheduling. Educational institutions must further develop support mechanisms, and the support must be more concrete, if they are to ensure sufficient student well-being. Educators and educational organisations should also be provided with ways to support students' well-being. Organisations should develop and implement innovative solutions that are based on e.g. artificial intelligence for supporting students in well-being and social interaction and support teachers so that they could further support students. Social isolation during the COVID-19 pandemic has shown how important it is to study which teaching methods can effectively combine the flexibility of distance learning with the commonality of contact teaching. The most effective approaches will ensure well-being and motivation among students so that most, hopefully, finish their education. To achieve this, we suggest that educational institutions explore the possibilities of organising blended or hybrid education with a possibility to choose to come to the campus of study in distance mode with asynchronous methods. Moreover, completely new teaching methods need to be developed to meet future educational challenges.

Conflict of Interest

The authors have no actual or perceived conflicts of interest.

Funding

This work was supported by the Generation Z and beyond: Co-evolution of human capabilities and intelligent technologies in the 21st century (GenZ) (project number 318930), Finland. Funding source had no involvement in any way in the conduct or participation in the research.

Acknowledgement

We would like to acknowledge Sees-Editing Ltd (<http://www.seesediting.co.uk>) service for improving the language and helping us to communicate our findings to readers of the journal. In addition, we would like to thank the participants for their time to enable the study.

There was equal authorship contribution by Sari Pramila-Savukoski and Raila Kärnä.

Artificial intelligence statement

The reporting of the research has been done with transparency in consideration (Crawford et al., 2023). No artificial intelligence has been used in this study.

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