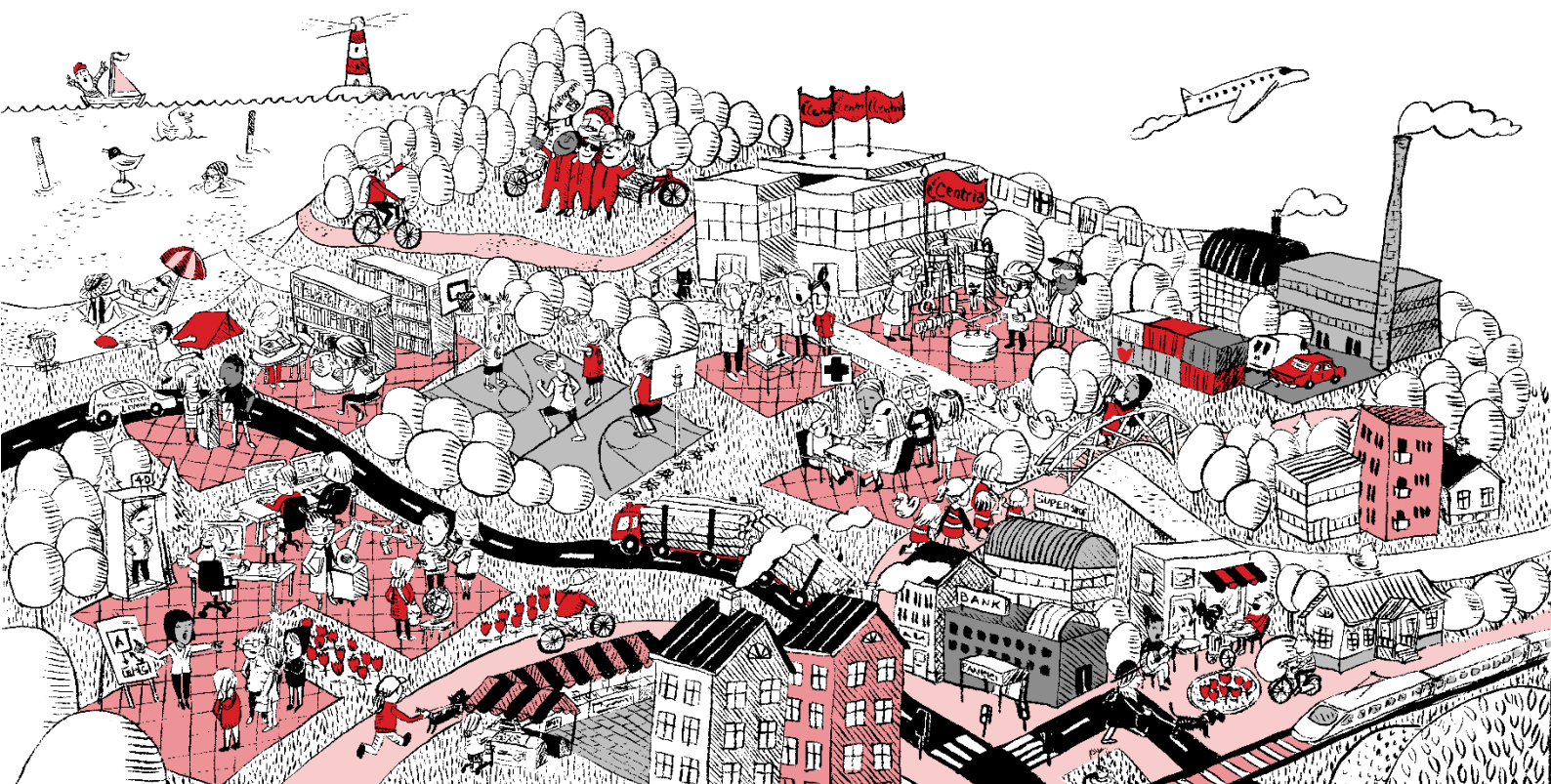


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**COVID 19 – HOW CENTRIA UAS INTERNATIONAL STUDENTS
HANDLED THE EXCEPTIONAL SITUATION IN ACCORDANCE
WITH COVID 19 REGULATIONS**

Thesis
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ABSTRACT

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<p>At the end of 2019, the outbreak of the COVID-19 epidemic caused negative influences as well as widespread difficulties around the globe. Different social categories are impacted, but especially among them, students are one of the most affected group.</p> <p>The purpose of this thesis is to identify the challenges that Centria UAS international students faced during the COVID-19 epidemic and to explore methods of how that target group handled the exceptional situation according to government regulations on COVID-19. The goal of this thesis is that based on these results, Centria UAS manages to determine and analyze the pandemic’s impact on students, thereby, providing the most effective supports and decreasing the burden of international students.</p> <p>In this thesis, quantitative research methodology was used through an online survey based on five-point Likert-type scales. The data analysis was based on two softwares including Google Forms and Microsoft Excel. The data was collected based on the target group of sophomore, junior and senior international students. The survey was sent to international students via Centria’s emails and also to the Facebook group of Vietnamese international students at Centria UAS. As a result, 81 responses were received on the Google Form platform.</p> <p>The survey results indicated that COVID-19 has had the profound effect on the learning behaviors, physical and mental health, and financial problems of international students at Centria UAS, those who are separated from their families for a long time and have faced the crisis of this contagion on their own. Besides, the study also contributed efficient values by providing a general overview and realistic perspective of the various aspects surrounding students' lives, proposing appropriate solutions for students to overcome the global COVID-19 pandemic. Therefore, through this research, not only Centria's students but international students at other higher education institutions are able to find their own effective and appropriate methods to cope with similar situations or circumstances.</p>		

Key words Centria UAS, COVID-19, distance learning, financial problems, international student, psychological challenges, regulations, social distancing.
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CONCEPT DEFINITIONS

CDC	Centers for Disease Control and Prevention
COVID-19	Coronavirus disease 2019
Kela	The Social Insurance Institution of Finland
MERS	Middle East Respiratory Syndrome
SARS	Severe acute respiratory syndrome
THL	Finnish Institute for Health and Welfare
TYY	The Student Union of the University of Turku
UAS	University of Applied Sciences
WHO	World Health Organization

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1 INTRODUCTION

At the end of December 2019, the first case of unknown cause pneumonia in Wuhan, China was the beginning of a chain of infections that later became a worldwide pandemic. Pandemic known as the COVID-19. This new strain of virus has caused difficulties and confusion for numerous countries around the world in the process of implementing ways to slow down and prevent the spread of this disease. Specifically, COVID-19 epidemic has led to serious consequences, greatly affecting the economy, education, social instability, particularly to the health and well-being of people around the world. (Laitila & Lindqvist 2021; McKinsey & Company 2021; Tran 2020). Up to now, according to data from Worldometer, 232,775,876 COVID-19 cases have been confirmed worldwide since the pandemic started, of which, the number of recorded deaths is 4,765,272 cases. (Worldometer 2021).

In Finland, the epidemic has also reached 140,889 cases to date, on September 28 (2021), of which 1,062 deaths have been reported. The amount of infections of people with COVID-19 between cities Finland is continuously updated. The first recorded case of COVID-19 in Finland was confirmed on January 29, 2020. (Clausnitzer 2021). However, the number of new CORONAVIRUS cases still remained at controlled level until they started developed in early March 2020. From there, the epidemic began to broaden into the first wave in Finland and endured until late spring. Afterward, for the period from September 2020, the second wave of epidemics with new cases started to extend once more and as it diminished altogether between April and June 2021. This is explained by the reason that in September, schools were open, welcoming students for a new academic year. Moreover, social activity restrictions also were gradually being relaxed more during that time. As of July 2021, the third wave arrived in Finland. There were a thousand new confirmed cases on August 9, 2021, which is the highest number of cases recorded in a single day. (Finnish Institute for Health and Welfare 2021).

When faced with unpredictable epidemic developments, people's safety has always been the primary concern of governments. Consequently, governments around the world have responded to protect the health of people as well as community groups around the globe. (Eggers, O'Leary & Chew 2020). The Finnish government also immediately reviewed the situation and took timely measures to slow down and limit the spread of this dangerous infectious disease. Those measures have been restricting movement, quarantine, using curfews, implementing social isolation, cancelling crowded events and less important service and business establishments, encouraging people to raise their own awareness of disease prevention, wearing face masks, limit going out when unnecessary. (Finnish Government

2021). At the same time, transforming business, study and work models from traditional to online was implemented. When it comes to education, schools were ordered to close and switch to distance learning to ensure the students' and teachers' safety. (Finnish National Agency for Education 2021). This measure is extremely appropriate and necessary because students have not been interrupted in the acquisition of knowledge. Indeed, the epidemic has led to unprecedented threat worldwide on human beings. (World Health Organization 2021).

According to Beckstein (2020), when international students coped with COVID-19 situation, this was even more complicated and problematic because they had to manage on their own while in a nation that was not their home country. Homesickness, having to be independent, facing financial problems, studying are the difficulties that most international students experience when encountering this circumstance. As a result, international students' life and study path has been harder due to the impact of COVID-19 epidemic. (Kovalonoks 2020; Laitila & Lindqvist 2021; Tran 2020). Its impact has created numerous challenges and insecurities for international students when they have to worry about acquiring knowledge, paying for study and living expenses as well as about their health and safety. (Tran 2020).

In Finland, there have been a few studies showing the psychological impact of COVID-19 on students such as "The effects of Covid-19 on the psychology and learning behaviors of Vietnamese students in Finland " (Tran 2020) and "I can't visit or meet my friends or family anymore, it's kind of hard without them" (Laitila & Lindqvist 2021). However, the researcher would like to provide a deeper perspective on international students, focusing on Centria University of Applied Sciences, those who live far from their home country and have had experiences when coping with COVID-19 epidemic circumstances under government regulations.

The purpose of this thesis is to identify the challenges that Centria UAS international students faced during the COVID-19 epidemic and to explore methods of how that target group handled the exceptional situation according to government regulations on COVID-19. The goal of this thesis is that based on these results, Centria UAS manages to determine and analyze the pandemic's impact on students, providing the most effective supports and decreasing the burden of international students.

2 THEORETICAL BACKGROUND

In this theoretical review, research is explored and built upon important existing theories and previous studies. Materials used include reputable government websites, published books, online and printed materials, Theseus system research, and other relevant resources. Due to the study topic being recent, most of the documents are updated with selective, useful and reliable information sources. As a result, the author is able to provide a cohesive and important theoretical framework for readers in this chapter to have a direct perspective about the object in the thesis. Although the topic is a recent issue, there are various factors that still need to be studied further.

2.1 International students in Centria UAS

According to Oluwafunmilola (2012), international students are known to be those who temporarily live and study in a foreign country. Studying abroad can give them new opportunities in terms of learning new languages, working in a multicultural environment, meeting new people, improving knowledge about society and culture. (Adebayo 2013). Based on a report from Studee (2021), as of 2019, more than 5.3 million students around the world have decided to study abroad to integrate into an international environment, accumulate new knowledge, and to explore the world. However, this number will not decrease, it could substantially hit reach the 8 million mark by 2025, if the increase continues as it is.

In recent years, Finland has been one of the favored countries for international students to study abroad. Moreover, there are numerous Universities or UAS in Finland that offer study programs in English. (Studyinfo 2021). Popular majors can be mentioned include information technology, nursing, engineering, environment, business administration, international business, tourism. (Adebayo 2013). According to the latest figures from the Finnish National Agency for Education (2021), 9600 international students have been offered a place to study at the bachelor and master's level in Finland.

Centria UAS currently offers eight bachelor's degree programmes in English and one master's degree programme in English. The majors are divided into many different groups include Business Management, Business Intelligence Technologies, Environmental Chemistry and Technology,

Industrial Management, Information Technology and Nursing. (Centria University of Applied Sciences 2021).

According to research from Kipkoech & Shrestha (2019), a group of Centria UAS international students come from numerous countries include Vietnam, China, Russia, Nepal, Bangladesh, Cameroon, India, Kenya, Nigeria, Pakistan, Argentina. At Centria UAS, international students are free to experience and accumulate knowledge under the dedicated guidance of teachers, lectures are divided into theory classroom, practice sessions, workshops and simulations with modern facilities for optimal learning. Annually, Centria UAS has about 500 graduates, of which about 90 graduates are international students. (Centria University of Applied Sciences 2021).

2.2 COVID-19

According to the definition of COVID-19 by the WHO, COVID-19 (2019-nCoV) is a new respiratory virus that causes acute respiratory infections in humans and spread from person to person. This virus was identified during an outbreak investigation that originated in a large seafood and animal market in Wuhan, Hubei province, China. (Mallapaty 2021). Besides, the World Health Organization (2020) also defined that 2019-nCoV is a new virus that has not been identified before. According to research by UK Research and Innovation (2020), CORONAVIRUS also belongs to a family of viruses which infect in both animals and humans. In this family of viruses, based on evidences, seven different kinds of viruses have been recognized and found in the human body. Notable examples can be mentioned include SARS - the first case was in China 2003 (World Health Organization 2021), MERS - the first case was in Saudi Arabia 2012 (Centers for Disease Control and Prevention 2021) and the latest is COVID-19.

Based on the study by UK Research and Innovation (2020), COVID-19 disease is transmitted in humans through numerous modes of contact. It can be direct or indirect contact, by touching contaminated objects. Close contact with an infected people with CORONAVIRUS through secretions from the mouth, eyes and nose is also the cause of disease transmission. Symptoms may appear 2-14 days after exposure to the virus. Through that contact, anyone can have mild to serious symptoms such as fever, chills, cough, shortness of breath, fatigue, muscle pain, headache, loss of taste or olfactory, sore throat, runny nose, nausea, vomiting and diarrhea. (World Health Organization 2021).

2.3 COVID-19 regulations

Due to the emergency situation of the pandemic as well as the rapid rate of infections worldwide, on March 11, 2020, the World Health Organization (WHO) issued a statement calling "COVID-19" a "Global Pandemic" (World Health Organization 2020). Consequently, facing this condition, governments around the world have declared a state of emergency as well as set up strict regulations to cope with the COVID-19 epidemic in their countries. (Eggers et al. 2020).

In Finland, until the end of October 2021, the COVID-19 infection cases were still increasing daily. Therefore, the authorities reacted quickly and analyzed the causes, infection rates in different cities, implemented suitable perspectives into each solution with varied regulations. (Finnish Government 2021). The measures announced include border closure, quarantine, social distancing, the shift to online learning, remote working modes among other important solutions. (Finnish National Agency for Education 2021; Kovalonoks 2020; Laitila & Lindqvist 2021 & Tran 2020). It can be seen that those restrictions are to ensure the safety, minimizing the infection in the community as well as raising people's awareness of protecting the society's health as well as each person.

2.4 Social distancing

According to The Harvard Gazette (2021), the concept of social distancing has been around since the 14th century. The phrase means "maintaining a greater than usual physical distance" when global epidemic known as the Black Death. At that time, before being docked, all ships arriving in Venice were forced to quarantine or anchor for about 40 days to protect the safety of the city's residents from the bubonic plague that took the lives of 25 million people in Europe (Mineo 2021). They were only allowed to enter the city after the quarantine period ended and it was confirmed that they were not sick. Johns Hopkins University (2020) defined social distancing as the public health practice situation of limiting and preventing contact between healthy and infected people.

Messbarger (2020) also presented that past pandemics as well as the current COVID-19 epidemic, social distancing has been an important method that can save lives. This was reflected limiting the spread of infectious diseases and keeping the health system from being overloaded. During the COVID-19 pandemic, social distancing has been implemented first in China and then in most countries in Europe. This was due to the fact that after China, Europe was a red alert area, where Spain

and also Italy experienced a significant rise in the number of COVID-19 cases. (Serafini, Parmigiani, Amerio, Aguglia, Sher & Amore 2020).

In this chapter, the author reviews a specific perspective on social distancing as well as its effects on international students. There have been quite a few studies that have done research on the challenges of COVID-19 pandemic (Laitila & Lindqvist 2021; Tran 2020; Kovalonoks 2020). These researchers also emphasized that social distancing included various policies put in place by the governments. Those policies include keeping a distance of at least two meters from others; staying away from crowded places and gatherings; wearing a face mask; following hand hygiene; implementing the form of learning and working remotely; conducting isolation of an infected people and reminding others to self-quarantine for 14 days if suspecting being infected; closing schools, restaurants, bars, cinemas and even borders. (Finnish Government 2020). For students, these factors also have some obvious effects on their lives as well as on their studies, physical and mental health. (Kovalonoks 2020).

During COVID-19 circumstances, the closure of the Finnish border was strictly implemented to prevent the spread of disease. (Finnish Government 2020). As a result, there were numerous students who have not been able to return to their home countries or to meet their family and friends. (Beckstein 2020; Salim 2020). The main reason was due to the difficulty and tightening of travel regulations. (Centers for Disease Control and Prevention 2021). In addition to border closures, domestically, the social distancing order also created certain other effects on international students. (Tran 2020). For instance, facilities that had to be closed include restaurants, bars, cinemas and sports centers. Consequently, these regulations also limited students's opportunities to relieve stress and relax after school. Tran (2020) also emphasized that schools were closed, they did not have the chance to participate in school activities, not being able to interact and meet friends caused students anxiety and mental health problems. The crisis situation led them to no longer feeling interested in their previous hobbies, so their quality of life was also considerably affected in the COVID-19 pandemic. (Beckstein 2020; Kovalonoks 2020; Tran 2020; Salim 2020).

2.5 Distance learning

According to research by The Association for Educational Communications and Technology (2001), the concept of distance learning is no longer a new concept. The University of Chicago in the late 1800s established the first major correspondence program in the United States. The interesting thing,

when both the teachers and students were in different locations. Besides, the study of Börje Holmberg (2005) also showed that the theoretical foundation of distance education was based on the hypothesis that the teaching and learning process can still be effective and feasible and thus there is no need for teachers and learners to meet face-to-face. M. Kaplan & Haenlein (2016) stated that distance learning means learners have access to education without being present physically at school. In this form of learning, course materials will be prepared and made available to students through the online classroom and via internet connection. This method helps students to easily access learning despite difficulties in circumstances include not being able to attend classes, schools being restricted from opening for some reason and unable to organize classes. (Tech Smith 2021).

In Finland, since the outbreak of the COVID-19 epidemic, the government has swiftly implemented measures to convert traditional learning into distance learning. The key point to this measure has not only been to ensure uninterrupted learning progress, but also to help protect the teachers' and students' safety. (Finnish National Agency for Education 2021). Information from the Finnish National Agency for Education (2021) stated that distance learning policy in Finland was established in various forms that include laboratory study or small group teaching in campus, if necessary, hybrid and mainly online studying. These study modes help learning to be done wherever and whenever needed. Some international students were not able to come to Finland because of travel restrictions, however with online studies, they could still study in their home countries and ensure they acquired enough knowledge. Compliance with keeping a distance of two meters from others, washing hands and disinfecting fully, wearing protective masks have been regulations that students are reminded of and must fully follow, not only at school but also in other places. (Finnish National Agency for Education 2021; Finnish Government 2021; Study in Finland 2021).

On the one hand, the prompt and timely transition to distance learning was an important factor in the fight against the COVID-19 pandemic. On the other hand, COVID-19 and distance learning factor also brought certain impacts to international students. (Tran 2020). Research showed that distance learning caused students to lack face-to-face interaction between teachers and students. This partly made the challenge for students to concentrate and study, thus leading to lower study performance. Similarly, when studying at home, students were also prone to learning interruptions and lack of concentration due to the social media's influence. Long-term distance studying and the use of e-learning tools caused students boredom, fatigue, sometimes nervousness and tension. The lack of mobility and activity due to long periods at home made students less energetic, more lethargic and lazier.

Finally, the COVID-19 epidemic has brought numerous difficulties to not only education, but also to the economy. That impact has caused various companies to close. For students about to graduate, this has meant finding work and their careers would be more difficult. Not only that, the worry about graduating on time caused them even more stressed. If they do not graduate on time, they would have to pay tuition fees for the next semester. This means that it would entail a financial burden for them. (Kovalonoks 2020; Tran 2020).

2.6 Financial problems

There have been a few studies focusing on how financial elements influence students' life in the COVID-19 crisis situation. While some studies showed that struggling to cover study and living costs, some other researches show that facing with financial difficulties may cause student on psychology as well as learning performance. (Association of International Educators 2020; Bista, Allen & Chan 2021). The main reasons identified include that, when the pandemic broke out, numerous students were laid off or could not apply for a part-time job, no financial support from family or state was received, limited employment opportunities, loss of grants. As a result, these factors partly led them to be unable to handle as well as manage their personal financial matters. It affected international students' difficulty ability to concentrate on their studies and also impacted to other psychological problems. (Association of International Educators 2020; Beckstein 2020; Bista et al. 2021; Kovalonoks 2020; Salim 2020; Tran 2020).

The University of Regina (2020) stated that the majority of international students were worried and insecure about their personal finances due to the challenges of COVID-19 pandemic. A survey from the University of Turku highlighted that international students also experienced financial anxiety if they did not graduate on time, they had to pay extra tuition for the next semester. (Kovalonoks 2020). No jobs, no grants meant it added to their economic burden. (Salim 2020). The COVID-19's crisis situation increased community infections and caused fear of becoming infected by the CORONAVIRUS. Numerous students worried about the cost of treatment and the associated problems if infected. Reports and researches from Cao, Fang, Hou, Han, Xu, Dong & Zheng (2020); Tran (2020); Bista et al. (2021) showed different levels of influence on international students' psychology, lifestyle and also learning performance.

2.7 Psychological challenges

Since the outbreak of the COVID-19 pandemic, until November 2021, numerous surveys and studies have been conducted on different subjects including healthcare staff, the elderly, students, workers. Among them, there have been quite a few researches focusing on psychology. Research data showed a significant impact of the COVID-19 epidemic on people's mental health. Particularly, these effects include stress, boredom, anxiety, sadness and depression. (Serafini et al. 2020).

In the study of Bhattarai & Timsina (2021), the authors defined psychology as "... the scientific study of the mind and behaviour". Liu (2013) stated that the term "psychology" focuses on studying about social life, in which people behave in social circumstances. Complementing the above definition, the researcher further explained that psychology directly affects human behaviours and emotions.

During the COVID-19 epidemic, psychological problems affecting people mainly stem from various causes, which including unemployment, reduced or lost income, economic and financial burden, separation from family and friends. (Salim 2020). These aspects shows multiple psychologically stressful challenges and is associated with an increased risk for mental health problem, since the COVID-19 outbreak. (Serafini et al. 2020). In their research, Salim (2020) and the University of Regina (2020) emphasized on financial difficulties and theirs effects on life and well-being for international students.

Focusing on students, the study by Cao et al. (2020) showed that levels of psychological symptoms were highly dependent on aspects, which include gender, living location in urban or rural areas, living with family or alone, family economic stability whether or not, and whether a relative or acquaintance is infected with COVID-19. Students participating in the survey showed stress and different levels of anxiety. Tran (2020) emphasized that the COVID-19 epidemic has affected the psychology and at the same time the learning behavior of students. Her study proved that long-term separation from family as well as worrying about the health of loved ones and family members during the COVID-19 epidemic has led students to homesickness, loneliness, anxiety and stress. Through these elements, participants of Tran's survey (2020) showed that depression, anxiety, and stress caused them to procrastinate studying, some respondents agreed that they participated less and considerably avoid learning-related activities. In the University of Turku's survey, numerous students had difficulty in the shift from traditional to online learning, which made them feel anxious, stressed or bored if studying online for a long time and lack of direct contact between teachers - learners. (Kovalonoks 2020).

The group most affected by the COVID pandemic was the international students who were about to graduate. (Tran 2020). Graduating on time has been always the biggest stage to manage in students' life. As for associated factors, disrupted learning and assessment could potentially delay graduation for students. Unlike Finnish students, the graduation of international students may also affect other issues including financial or residence permit. For instance, if students did not complete the thesis on time or were late to graduate, they had to pay extra tuition for the next semester. If the graduation is delayed, students may struggle to renew their residence card as well as finding a job. The global COVID-19 pandemic also created a big wave impact on the economy, and the labor market in particular. For the majority of students, completing studies and graduating also means facing the anxiety of getting a job during the difficult pandemic situation. (Kovalonoks 2020; Tran 2020).

2.8 Handling the exceptional situation accordance with COVID-19 regulations

There have been various studies showing that the impact of COVID-19 pandemic on the health and psychology of students has been a concern. In order to support and promote students' well-being, guidelines and care measures should be taken. (Bista et al. 2021; Cao et al. 2020).

According to research by Brooks, E Smith, Greenberg, Rubin, Webster, Wessely & Woodland (2020), during the development of COVID-19 epidemic, the government's policy planners have quickly analyzed the situation and publicly released guiding information to communities. When social distancing is implemented, psychological support measures and online guidance services are agreed to be effective and useful. (Cao et al. 2020; Serafini et al. 2020; Bista et al. 2021).

Since the COVID-19 epidemic broke out, the Finnish government has implemented regulations to slow the spread of the pandemic, provided specific health care guidances for the citizens' health, reduced and managed to the burden on the healthcare system. (Finnish Government 2021). Under the governments' policies, studying has been one of the top priorities. In order to ensure learning would not be interrupted during the COVID-19 situation, the form of online and hybrid learning has been conducted. The safety regulations include keeping a distance of at least two meters from others, washing hands, disinfecting, wearing a protective mask, self-isolating for 14 days at home if arriving from outside Finland has always followed. In which case the study's planning need to be held on

campus, the number of students will be kept not exceed the specific limitations as governments' regulations. (Finnish National Agency for Education 2021; Study in Finland 2021).

Higher education institutions play an important role in supporting students to overcome the global COVID-19 pandemic. (Tran 2020). Turun Yliopiston Ylioppilaskunta - University of Turku Student Union (2020) also recommended that international students should share and talk openly about their studies and life experiences, through which they can gain effective support from the school. Various forms of support were provided to connect the university community, including cottage weekends or Zoom coffee breaks. This helped maintaining a positive mental state as well as promoting cohesion among students. (Kovaļonoks 2020). Numerous universities have also overcome challenges and difficulties during the pandemic by providing online counseling services by phone, email or video call to students who needed help. (Beckstein 2020).

Research by Tran (2020) showed that using online mobile applications for health counseling or psychological counseling has been one of the appropriate interventions for students during the COVID-19 epidemic. Horne's article (2020) mentions the measures when faced with travel restrictions and being away from family for a long time. Various students chose to connect with family and friends through video call, share experiences about living away from home to relieve their emotions, stresses and worries during the global COVID-19 situation. In addition to supporting psychological health, measures to improve physical health have been also extremely crucial for students. The author suggested that practicing healthy living habits as well as taking good care of oneself is a method to help maintain a stable physical and mental life, so that students are able to cope with challenges during this COVID-19 crisis circumstance. Avoiding crowded places, practicing sports at home, self studying new fitness subjects through online programs have been good ways to exercise. (Horne 2020).

The European Commission (2021) showed that in order to face the exceptional situation of the COVID-19 pandemic, European countries have given financially support to students through certain grants. If international students have been studying in Europe and dealing with financial challenges, they may get advices and other support resources from the international organizations as well as from the host and sending university. In Finland, international students could find guidance and financial support from Kela. The basic support is based on Kela's assessment of the student's situation and living conditions, among other factors. (Kela 2021; University of Oulu 2021). Moreover, financial supports, which including scholarships or tuition reductions are provided for students to reduce financial burden. Specifically, at Centria University of Applied Sciences, at the time of the recent COVID-19 epidemic,

the school had a policy of 1000 euro exemption and reduction for students. At the same time, if students achieved a certain number of credits as required, students would get a scholarship of 50 % of the full tuition fee and the second half of the tuition fee would not be charged. (Centria University of Applied Sciences 2021).

3 PURPOSE, GOAL, OBJECTIVES AND RESEARCH QUESTIONS

The purpose of this thesis is to identify the challenges that Centria UAS international students faced during the COVID-19 epidemic and to explore methods of how that target group handled the exceptional situation according to government regulations on COVID-19. The goal of this thesis is that, based on these results, Centria UAS manages to determine and analyze impact of the pandemic on students, providing the most effective supports and decreasing burden for international students. The main research objectives in this thesis are sophomore, junior and senior international students of eight degree programmes in Centria UAS. This target group was selected because this is the part of students who have lived and studied in Finland at least one year, so they could give the most profound experience during the COVID-19 epidemic.

This study's research questions are:

1. What kind of impact has COVID-19 had on life and studying of international students?
2. How did international students handle the exceptional situation in accordance with government regulations on the COVID-19 epidemic?

As a result, the following tasks are required in order to answer the research questions:

1. To determine the factors causing obstacles and difficulties for Centria UAS international students during the exceptional situation in accordance with COVID-19 regulations
2. To analyze the impact level on Centria UAS international students during the exceptional situation in accordance with COVID-19 regulations
3. To determine the methods to handle the exceptional situation under the COVID-19 regulations that students preferred using during COVID-19 pandemic

4 METHODOLOGY

When choosing the research approach, there are various methods that can be used to present, explain or analyze the problem as well as to clarify the main content. In order to choose an appropriate method, factors to be considered include information background, purpose as well as the research object needs to be considered carefully. In this chapter, with the author's research goals and subjects, the author will mention and discuss how the thesis was implemented. The main sections will be introduced in turn, which include the selected research methodology, the collected data, the data analysis method, and finally, ethical issues, reliability and validity.

4.1 Research method

In this thesis, quantitative research method was used, which is a method that uses different techniques, mainly statistics to quantify, measure, reflect and interpret the relationships between factors (Williamson & Johanson 2018). This means that for quantitative research, the basic condition required is a measurement tool, for instance a specific questionnaire, and then sample of the data from observational research phenomena or from participants, who answered the questions. The data, with the help of statistics, will be analyzed scientifically and in detail for research purposes. Data collection is often gathered from a representative population group or people with knowledge and having direct experience about the problem. For this reason, in scientific research, quantitative method can be applied in various fields, such as psychology, economics, sociology, health and social care (Gorard 2003).

The main purpose of the author for choosing quantitative research was to identify the challenges that Centria UAS international students face during the COVID-19 pandemic. With the characteristics of a large denominator from the research object group, the use of quantitative research method helped to accurately approach this group of survey subjects, and thus information could be collected objectively and accurately.

4.2 Data collection process

In this study, questionnaire was used to collect data from participants. The questionnaire in the thesis "The effects of Covid-19 on the psychology and learning behaviors of Vietnamese students in Finland" created by Tran (2020) was adopted and some additional changes were made by the author to match the research purpose and objectives of the thesis. The author asked permission from Tran (2020) about using and adjusting to the survey in this thesis, and thus permission was granted. A five - point Likert-type scale was used, where the scale of one to five represents answers from Strongly Disagree to Strongly Agree. After the adjustments, the survey was reviewed by the supervisor to ensure feasibility and suitability for data collection.

Based on Google Forms, the survey was sent to international students through their Centria emails and to the Facebook group of Vietnamese international students at Centria UAS. The data was collected anonymously in both forms (Centria emails and Facebook group). After the conducting time about two weeks, the total number of 81 international students took part in this survey.

In the 5-point Likert survey, ratings from 1 to 5 include (1) Strongly disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree were converted to percentages to clarify student responses about factors that interfere and affect Centria students during the exceptional situation in accordance with the COVID-19 regulations.

The survey was divided into four main parts with a total of ten questions. The first part, with multiple choice questions from 1 to 4, was built for the purpose of collecting background information. The second part, with question number 5, using a Likert scale, aimed to identify factors causing difficulties and obstacles for foreign students during the COVID-19 epidemic situation. The third part, with questions from 6 to 9, using a Likert scale, aimed to analyze the impact level on international students based on learning habits, health and well-being, financial and social relationships during the exceptional situation in accordance with the COVID-19 regulations. The last part, question number 10 was researched on needed method for international students during this circumstance in accordance with the COVID-19 regulations. The questionnaire can be found in Appendix 1. Finally, collected information and data from the respondents was used to consider, and to contribute to the conclusions of the study.

4.3 Data analysis

In this study, data was analyzed using statistical analysis. After completing the data collection, the next step was data analysis directly on the software of Google Form. Based on each question and the answers, this platform clearly displayed the survey results, and the results were calculated as well as converted to percentage (%). They are represented as graphs in the thesis. The analysis of this data contributed to assess the COVID-19's impact on international students at Centria UAS. The data about these solutions support the researcher's conclusions to be more scientific and detailed. For the results to be presented and analyzed, Microsoft Excel was used in addition to the Google Forms.

4.4 Ethical issues, reliability and validity

In the research, the author always considers ethical issues as one of the top priorities factors. Respecting moral principles when studying people will include in various elements. With the thesis using quantitative research methods, details which including questionnaires, designed questions, data collection, data analysis should be considered carefully and have a transparent, accurate process. The questionnaire will only be sent to the survey participants when it has been systematically designed both in content and form, the importance is to obtain permission from instructors as well as competent authorities (R. Knapp 1998; Gorard 2003). This thesis was commissioned by Centria UAS so the research permit was granted by Ms. Jennie Elfving, Director of Centria (Teaching). The application for a research permit with attachments was sent to Ms. Jennie Elfving via e-mail. A thesis agreement is concluded when a representative of the working life - Centria UAS has been appointed as a supervisor for this study. When conducting research as well as during the process of writing theses, it is necessary to emphasize the importance of being careful, open and respecting the work of other researchers. The phase was done by citing reference informations owned by other authors fully and accurately in this thesis. (The Rectors' Conference of Finnish Universities of Applied Sciences Arene 2020).

In the survey form, an attachment informs the respondents that participation in the survey is voluntary. This aims to ensure the rights and privacy of individuals participating in answering questionnaires. In addition, respecting the personal rights can also be clearly expressed by not mentioning excessive questions as well as irrelevant aspects. For instance, in the survey table, questions about name, religion, political factor are not included because these are sensitive and unnecessary data in the research. The use of information and data processing in the study was informed to the survey

participants. This was included in the information at the top of the questionnaire, before choosing to participate in research, they would have time to read and decide. The collected results from the questionnaire was only used for the thesis's purpose, not used for other unrelated purposes. This is to avoid harming the research subjects, both the respondents' basic laws as well as personal privacy rights. (The Rectors' Conference of Finnish Universities of Applied Sciences Arene 2020).

In order to ensure reliability, the purpose of creating questions should be consistent with the structure of the questions in the survey. Questions in the questionnaire need to provide information correctly and properly for participants. Besides, the questions was designed to be presented clearly, coherently, and easy to understand. The main purpose is to avoid confusing participants when giving answer options. Ensuring the consistency of questionnaires also needs consideration. This was done by assuring all questions answer the thesis's purpose. The question's responses should also be considered reasonable. Furthermore, the time to answer the questionnaire also needs to be considered and adjusted accordingly. On the one hand, if the estimated time to answer the survey is too long, it will consume a lot of time for the participants. On the other hand, a too short estimated survey time may result in insufficient information for the study. Finally, the data was collected and handled properly, accurately and transparently. (Gerrish & Lacey 2010).

Considering validity of the study, the author complied with the recommendations when writing the thesis. The instructions for conducting research and writing theses from "Centria Guide for Thesis and Academic Writing" was carefully reviewed to ensure accuracy and validity. On the use of references, the selected documents were the studies, researches, scientific articles and the official government websites. In order to ensure the research findings are directly accessible, accurate and scientific through numerous reference materials, production time is up to date, published within the last 10 years. (Gerrish & Lacey 2010).

5 RESULTS

Through this chapter, after collecting and analyzing the results carefully, the latest data presented the overview findings in this thesis. The responses to the survey were intended to answer the research questions. The data after processing was converted to percentage. The final results represented using tables, charts and illustrations.

In order to clarify as well as answer the questions in the thesis, the tasks that need to be done will be reviewed and presented below:

1. To determine the factors causing obstacles and difficulties for Centria UAS international students during the exceptional situation in accordance with COVID-19 regulations
2. To analyze the impact level on Centria UAS international students during the exceptional situation in accordance with COVID-19 regulations
3. To determine the methods to handle the exceptional situation under the COVID-19 regulations student preferred using during COVID-19 pandemic

5.1 Student demographic information

In this student demographic information section, the author mainly focused on collecting background information of respondents in the first four questions. Those data variables were identified and presented respectively as Gender; Age; Level/year of study; Study major.

With a total of 81 responses, in the first question about gender, 46.9% are male, 49.4% are female, the remaining 3.7% prefer not to disclose their gender. (FIGURE 1).

Gender

81 responses

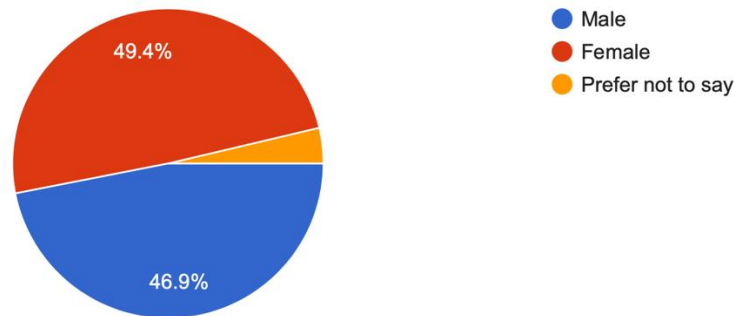


FIGURE 1. Respondents' gender distribution

Meanwhile, when it comes to age, the 18-24 age group accounts for 53.1%, equivalent to half of the of the respondents. On the other hand, the remainder is divided equally between the ages of 25 - 30 and 30+, when each part accounts for an equal percentage of 23.5%.

Age

81 responses

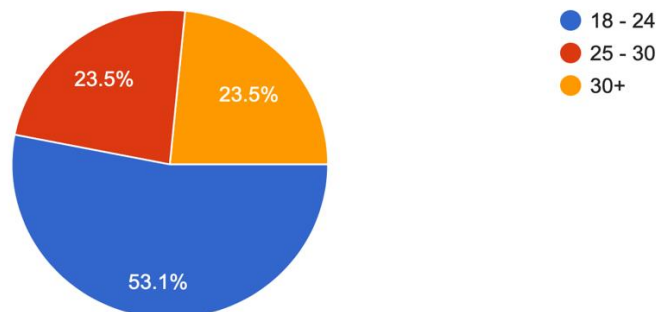


FIGURE 2. Age classification

About the level of study information, there is significant difference between the study years. Second-year students account for the largest share with a rate of 51.9%. In second place are third-year students with 38.8%. The remaining 12.3% are final year students. (FIGURE 3).

Level/Year
81 responses

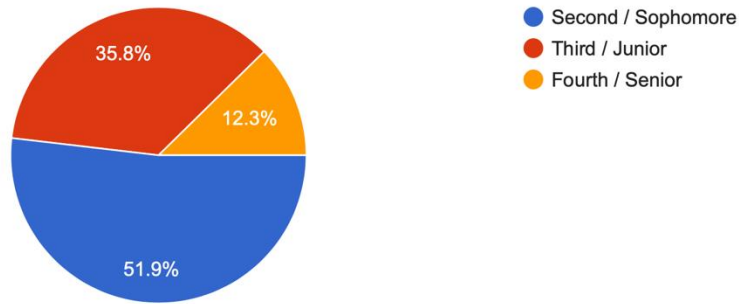


FIGURE 3. Level/year of study

In the last question about majors, the most respondents study Business Management (25.9%), Nursing (22.2%), Information Technology (21%), Business Management - Enterprise resource planning (ERP) (14.8%), International Business (8.6%) and the rest equally divided into 1.2% each by Industrial Management and Business Intelligence Technologies.

Major
81 responses

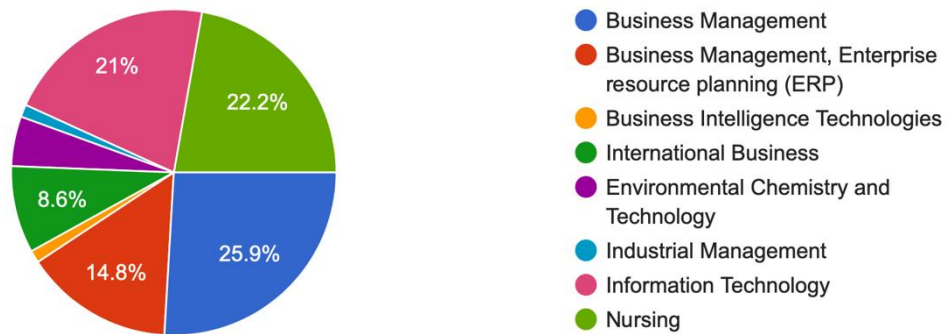


FIGURE 4. Study major

5.2 Factors which cause difficulties and stress for international students during the COVID-19 epidemic

In this section, the aspects that brought challenges, obstacles as well as stress for students are shown in the table below. The number of student responses is converted to a percentage to make comparisons easier to see. Almost more than 50% of the respondents agreed or strongly agreed with the factors causing difficulties as well as stress that the author put in the survey questions. To illustrate further, the two aspects that received the most agreement are “Afraid of infection and worried about the family” and “Financial insecurity - economic impact” with equal proportions at 65.43%.

The other two factors have approximately 50% agree or strongly agree are “The distance learning system” (37.04%) and “I am worried about health care access and treatment cost if I get infectious” (45.68%).

TABLE 1. Factors cause difficulties and stress for international students during the COVID-19 epidemic

	The distance learning system	Prolonged use of e-learning tools often leads to boredom, nervousness and tension	I am stressed about my career and late graduation	Measures of lockdown, closures and quarantine, brought by Covid-19	Long-term separation from family members resulted into home sickness and loneliness	Afraid of infection and worried about the well-being of family increased the stress	I am worried about health care access and treatment cost if I get infectious	Financial insecurity and economic impact of Covid-19 created anxiety and difficulties
Strongly agree	9	17	21	17	27	22	13	23
Agree	21	29	20	33	21	31	24	30
Neither agree nor disagree	28	16	22	18	15	14	18	16
Disagree	12	15	14	6	11	8	16	6
Strongly disagree	11	4	4	7	7	6	10	6
Strongly agree (%)	11,11 %	20,99 %	25,93 %	20,99 %	33,33 %	27,16 %	16,05 %	28,40 %
Agree (%)	25,93 %	35,80 %	24,69 %	40,74 %	25,93 %	38,27 %	29,63 %	37,04 %
Neither agree nor disagree (%)	34,57 %	19,75 %	27,16 %	22,22 %	18,52 %	17,28 %	22,22 %	19,75 %
Disagree (%)	14,81 %	18,52 %	17,28 %	7,41 %	13,58 %	9,88 %	19,75 %	7,41 %
Strongly disagree (%)	13,58 %	4,94 %	4,94 %	8,64 %	8,64 %	7,41 %	12,35 %	7,41 %
Total percent of strongly agree and agree (%)	37,04 %	56,79 %	50,62 %	61,73 %	59,26 %	65,43 %	45,68 %	65,43 %

5.3 Impact level on international students during the exceptional situation in accordance with the COVID-19 regulations

In this section, the author will gradually introduce the results of the influence levels for each factor. The four factors that will be mentioned are study habits, health and well-being, financial and social relationship.

5.3.1 Impact on learning habits

The first aspect is the impacts of the COVID-19 epidemic on students' study habits. The majority of the responses agreed with the criteria set forth by the author. 70.37% admitted that staying at home for a long time leads them feel lazy and lack of energy. Besides, online learning along with the lack of direct interaction makes it difficult for students to concentrate on studying (62.96%). At the same time, 55.56% also agreed that online learning makes them easily distracted by social networks.

As mentioned in the theoretical part, due to travel restrictions, a certain number of international students were unable to come to Finland to study. This is an obstacle that 19.75% of students have experienced and agree with this level of influence.

TABLE 2. Impact on learning habits

	Staying home for long periods of time leads to lethargy and laziness	100% online studying gives me distraction due to online social media	I have difficulty in concentrating and learning due to lack of direct interaction between teachers and students, which leads to lower study performance	Stress and depression during Covid-19 increase my procrastination in studying	Due to depression and stress, I avoid learning and activities related to studying (Absence from class)	Because of travel restrictions, I were not able to arrive in Finland to study
Strongly agree	20	17	21	17	9	10
Agree	37	28	30	29	15	6
Strongly agree and Agree	57	45	51	46	24	16
Strongly agree and Agree (%)	70,37 %	55,56 %	62,96 %	56,79 %	29,63 %	19,75 %

5.3.2 Impact on health and well-being

More than 50% of respondents indicated that the COVID-19 pandemic has affected them so that they no longer felt interested in their previous hobbies, this level is 50.62%. Equally, various students also agreed that they had unhealthy eating habits due to stress. The figure of 45.68% shows that a large number of students felt stress and depression. Many of them were not able to go to fitness centers due to social distancing or because they were afraid of being infected and did not want to practice in crowded places.

TABLE 3. Impact on health and well-being

	Social distancing caused fitness center to close OR I was too afraid to do exercise in a crowded place (fitness center)	During Covid-19 time, I no longer enjoy my previous hobbies	Unhealthy eating habits due to stress during the Covid-19 epidemic	I feel stressed and depressed
Strongly agree	13	9	11	13
Agree	24	32	30	24
Strongly agree and Agree	37	41	41	37
Strongly agree and Agree (%)	45,68 %	50,62 %	50,62 %	45,68 %

5.3.3 Impact on financial situation

According to the survey, the biggest financial impact on students is when they worried about paying tuition fees for the next school year, which is 44.44%. Students are worried about because during the COVID-19 epidemic, they could not go to work. 43.21% agreed that they did not have a part-time job due to the impact of the COVID-19 crisis, which has resulted in them having no source of income. Besides, 35.80% had difficulty with financial control and 32.10% did not receive financial support from family during the pandemic. (TABLE 4)

TABLE 4. Impact on financial situation

	I have trouble controlling my finances during the Covid-19 epidemic	I do not have a part-time job because of the covid-19 pandemic, so I have no extra source of income	I am worried about paying tuition fees for the next school year, because not working means no money	My parents can not support me financially because of the Covid-19 epidemic.
Strongly agree	11	17	22	9
Agree	18	18	14	17
Strongly agree and Agree	29	35	36	26
Strongly agree and Agree (%)	35,80 %	43,21 %	44,44 %	32,10 %

5.3.4 Impact on social relationship

It can be easily seen that the highest rate is 72.84% agreeing that the COVID-19 epidemic made them more worried about their family in their home countries. For the same reasons and circumstances, 70.37% of the students agreed that they could not see family and relatives, loved ones, as well as 50.62% could not see their friends. 22.22% experienced the loss of someone close to them due to the COVID-19 pandemic.

The inability to participate in activities at school as well as in society led numerous people to feel difficult and tired, the number of agreeing is 64.20%. As a result, the effect of this exceptional situation made it impossible for them to connect with others, resulting in 48.15%.

TABLE 5. Impact on social relationship

	I was not able to meet my family / relatives	I was not able to meet my friends	Not being able to participate in activities at school as well as in society makes me feel difficult and tired	I lost someone close to me because of the Covid-19 pandemic	I worried about my family in my home country	I could not be friends with people
Strongly agree	32	14	14	12	40	10
Agree	25	27	38	6	19	29
Strongly agree and Agree	57	41	52	18	59	39
Strongly agree and Agree (%)	70,37 %	50,62 %	64,20 %	22,22 %	72,84 %	48,15 %

5.4 Student's methods to handle the exceptional situation under the COVID-19 regulations

The author researched about student's preferred measures to cope with stressful situations during COVID-19 according to the government's regulations. Only a small number of students, 20.99% reported using an app or an online program for health and psychological counseling. 46.91% - almost half of the students who participated in the survey chose to seek guidance from an academic counselor, tutor teachers, teachers or school nurses. A large percentage of students with 60.49% chose to exercise at home or do jogging outside to improve their health. (TABLE 6).

Regarding financial support from Finnish agencies such as Kela or receiving scholarships from Centria UAS, 38.27% chose this support. A similar rate of 38.27% for students, they actively participated in associations and groups on social networks.

Following safety regulations, which include keeping a safe distance, washing hands, disinfecting and wearing protective masks is the most popular measure with 90.12% of students choosing it. Talking, calling to family and friends are also methods that students were willing to use, 83.95% preferred to talk with family and 72.84% preferred to talk with friends. Likewise, about studying, 76.54% followed to the method of hybrid, online learning as safety regulations given by the government. In order to implement the online learning process, 82.72% of the students agreed to study the online materials provided by the teachers, as well as through other materials on the Internet.

TABLE 6. Student's methods to handle the exceptional situation under the COVID-19 regulations

	I used hybrid/online learning as the government policy	I studied the materials that teachers provide online as well as found more on the internet	I have followed the safety regulations such as keeping a safe distance, washing hands, wearing a protective mask	I sought advice from an academic counsellor, tutor teacher, teachers or school nurses,...	I did exercise, sports at home / jogging outside to improve my health	Used apps or online programs for health and psychological counseling	Talked / called to my family / relatives	Talked / called to my friends	Actively participated in associations and groups on social networks	Institution of Finland) or a scholarship from Centria University of Applied Sciences and Sciences
Extremely likely	43	36	43	9	13	3	36	21	7	22
Likely	19	31	30	29	36	14	32	38	24	9
Extremely likely (%)	53,09 %	44,44 %	53,09 %	11,11 %	16,05 %	3,70 %	44,44 %	25,93 %	8,64 %	27,16 %
Likely (%)	23,46 %	38,27 %	37,04 %	35,80 %	44,44 %	17,28 %	39,51 %	46,91 %	29,63 %	11,11 %
Extremely likely and Likely (%)	76,54 %	82,72 %	90,12 %	46,91 %	60,49 %	20,99 %	83,95 %	72,84 %	38,27 %	38,27 %

6 DISCUSSION

In this chapter, the discussion part is expected to provide explanations as well as highlight the importance of these findings in the study. They are contributed to solving research problems, improving readers' understanding of the COVID-19's burdens on Centria UAS students, as well as how they handled the exceptional situation under COVID-19 regulations.

From the 81 respondents, 51.9% of them are sophomores. The remaining 35.8% are juniors and 12.3% are seniors. More than 50% of respondents agreed or strongly agreed with most of the aspects that have negatively affected by causing stress and challenges for students during the COVID-19 global pandemic. These factors created sudden changes that severely impacted study habits, health and well-being, finances and psychology, and social relationships.

6.1 Difficulties and effects of COVID-19 on Centria UAS students under government regulations

The results of these elements that caused difficulties and obstacles for international students during the COVID-19 epidemic was shown in table 1. More than 50% of the students who responded either agree or strongly agree on the aspects that the author established in the survey question. The highest proportion with 65.43% chose that they worried about the health and well-being of their family as well as are afraid of getting infected, facing with financial difficulties. 37.04% of students agreed with the difficult aspect due to distance learning system.

6.2 The impact level of the COVID-19 epidemic on Centria UAS students under government regulations

When studying the survey results, the degree of influence on students through learning habits is clearly indicated in table 2. Presenting with the most agreement, 70.37% chose that staying at home for a long time leads to laziness and lack of energy. Meanwhile, 19.75% demonstrated that in the previous year as freshmen, they were unable to come to Finland to study due to travel restrictions (as of the fall 2021 semester, they are second year students).

About the results affecting health and well-being, 50.62% answered that they were no longer interested in their previous hobbies, and the same percentage also had unhealthy eating habits due to the COVID-19 pandemic. 45.68% expressed that they felt stressed and depressed. When compared with the study of Cao et al. (2020), the survey result in that study indicated that 24.9% of university students were afflicted by the COVID-19 outbreak with the anxiety experiences. In a previous study by Chaturvedi, Vishwakarma & Singh (2021), 51.4% of students showed that in the lockdown time, they did not use their time effectively. Their daily habits, which include fitness, sleeping and socializing significantly affected their health status. Moreover, the comparisons shows the similarity in the effects on health and psychology when students have faced the global pandemic of COVID-19.

Following up with the financial implications, 44.44% indicated that they worried about having to pay tuition fees for the next school year. 43.21% chose that in the context of facing the epidemic, they did not have a part-time job, which resulted in them having no additional source of income. 32.10% said their parents were unable to financially support them during the COVID-19 pandemic. In the category of factors which causing difficulties and obstacles for students in table 1, the results showed that 65.43% of students faced financial and economic problems. In the same way, Tran's research (2020) showed that 77.45% of students had struggling with financial challenges as well as economic impacts caused by the COVID-19 epidemic. It was explained that a stable family income or living with parents is also an important factor that has a huge impact on the anxiety in particular, and the of students's psychology in general during the COVID-19 epidemic (Liu 2013). The study of Peng, Zhang, Li, Li, Zhang, Zuo, Miao & Xu (2012) further argued that the outbreak of the COVID-19 epidemic led some families to lose their source of income, and as a corollary, paying tuition fees increased students' anxiety.

Finally, affecting social relationships, 72.84% represent the majority of opinions agreeing with the factor that due to the impact of the COVID-19 epidemic, students worried about their family in their home country. 70.37% agreed and strongly agreed that students were not able to meet their family and relatives during the COVID-19 pandemic. An explanatory similarity for this is found in the study of Cao et al. (2020), researchers showed that living away from family, relatives or acquaintances infected with COVID-19 is also a risk aspect for psychological instability, more anxiety, and has an enormous influence on student health.

6.3 Students' measures to handle the exceptional situation in accordance with COVID-19 regulations

In the crisis situation of the COVID-19 pandemic, it can be easily seen that students made choices mainly to follow regulations from the government to ensure safety as well as to avoid interruption of learning. The evidence from the survey shows that the highest rate is 90.12% with following safety regulations include keeping a safe distance, washing hands, wearing protective masks. Following that, 83.95% of students agreed with the plan of talking and calling with their families. 82.72% of the respondents chose to study from materials provided online by teachers as well as search more on the Internet. 76.54% of the students followed the hybrid and online learning method according to government regulations.

From the above rates, most students chose mainly through online modes, avoided direct contact in crowded places, studied and exercised at home. To illustrate from results, which include hybrid/online learning (76.54%); calling, talking to family or friends (83.95% and 72.84%); exercising at home, jogging outside (60.49%); participating in association, groups on social networks (38.27%); complying with COVID-19 regulations (90.12%); seeking advice from academic counsellor, tutor teachers, teachers or school nurses (46.91%). 20.99% of students prioritized using apps or online counseling programs on health and psychology. This can be explained by the reluctance to seek help through the different channels. The counseling channel via app and online program would be really effective if it was prioritized by universities in health and psychological counseling interventions. (Sundarasan, Chinna, Kamaludin, Nurunnabi, Baloch, Khoshaim, Hossain, & Sukayt 2020).

Finally, an issue that has been also extremely important is the finances. 38.27% of students were able or extremely likely to receive financial aid from a government agency such as Kela or a scholarship from Centria UAS. This support plays an useful role for students when they had to face the impact of economic problems in the context of the COVID-19 epidemic. The study of Solomou, Constantinidou, Karekla, Psaltis & Chatzittofis (2021) showed the similarity that economic aspect was a risk factor leading to mental health disturbance of students. Hence, the government agencies or universities need to recognize and analyze the level of impact and vulnerability of students. Only then will support measures from government organizations as well as universities to cope with the pandemic be effective on a large scale and support more students.

7 CONCLUSION AND RECOMMENDATION

In this research thesis, the author focuses on providing information about COVID-19 and how Centria UAS students handled the exceptional situation in accordance with COVID-19 regulations. Firstly, the main method in the study is quantitative, with the use of a survey questionnaire based on a Five - point Likert scale. After data collection, statistical data analysis method was used. Secondly, the survey results showed that the effects and consequences of the COVID-19 on international students at Centria UAS, those who have been separating from their families for a long time and must face the pandemic crisis on their own. Thirdly, based on the findings, the study helps readers get a more focused and accurate view of students' measures to cope with COVID-19 when coped sudden changes as well as health and mental health risks. The research also supports Centria UAS to determine and analyze the pandemic's impact on students, providing the most effective aids and decreasing the burden of foreign student groups. Therefore, through this research, not only Centria's students but international students at other higher education institutions are able to find their own effective and appropriate methods to cope with similar situations or circumstances.

There have been various previous studies on COVID-19 and its effects and consequences. However, research on international students in Finland is still limited. For this reason, the author has focused on the main target group of international students in Centria UAS, Finland. The study provides the most practical information on the situation of international students at Centria UAS during the global COVID-19 pandemic.

7.1 Limitations of the study

In this section, the author mentions some limitations that the study still encounters. First, the object of research in this thesis is only limited to international students at Centria UAS. Therefore, it can be seen that the sample here is only from Centria University of Applied Sciences, which is located in Kokkola, in Pietarsaari and in Ylivieska, Finland, while the number of international students in the whole country of Finland is much more.

Besides, another limitation is about time. Because the survey and research time period was limited and collected at a single point of time, the study was not capable of measuring the change in the subject or during another time period.

Since this is an individual study, there will still be limitations and shortcomings. The author provides the point that more research is needed in the future to bring the issue to a broader perspective with more unique aspects. From there, readers can compare as well as collect more features and useful information about the research problem.

7.2 Recommendation for other future studies

For future studies, there will be a broader perspective if the research object is expanded in the population sample. For instance, more researchs about international students is needed in other cities throughout Finland, and then the differences will be seen through those comparisons. In addition, researchers can focus on exchange students in different countries as well as the difficulties they face during the COVID-19 epidemic. From there, they may collect data and compare the differences. Although it might be a small group of research subjects, it is still a group that deserves attention and further study.

7.3 Own learning experience

Since the outbreak of the COVID-19 pandemic, universities in general and Centria UAS in particular have implemented infection prevention methods and managed an appropriate learning environment for students. As an international student, the author also realizes that there are numerous difficulties and challenges when studying during a time of unpredictable global pandemic. Homesickness, online learning or worrying about financial situation at this time are all issues for the learning passion not only for the author but also for other international students. However, the researcher understands that challenging does not mean faltering or stopping.

The study's topic has also opened up for the author a new and broader perspective on the human well-being around with COVID-19 pandemic situation, as well as the whole picture of the student's life. This contributes to offering the researcher having more incisive viewpoint in the world that seems to

be slowing down due to the COVID-19. The diversity of studies around the world about the impacts of the COVID-19 epidemic provide various aspects through which to analyze their effects.

The author finds that a problem can be fully exploited if it is viewed, analyzed and compared from various different perspectives. As a researcher, this topic provides the author with a profound research process as well as a general picture of COVID-19 and its specific effects on the economy, society, and education.

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APPENDIX

APPENDIX 1: Survey questions



Covid 19 – How Centria UAS international students handled this exceptional situation in accordance with Covid-19 regulations

Dear student,

This research questionnaire is a part of my thesis and it is designed to elicit student's responses about "Covid 19 – How Centria UAS international students handled this exceptional situation in accordance with Covid-19 regulations". The period when the Covid-19 epidemic took place the most was studied by the author: from 2/2020 to 8/2021. Therefore, your answer should be based on this time period.

Your participation in this research is completely voluntary. In addition, your survey responses will be strictly confidential and data from this research will be reported only in the research.

Please start with the survey and respond to the following questions.

Thank you very much for your time and support!

Best regards.

*** Background information****Gender ***

- Male
- Female
- Prefer not to say

Age *

- 18 - 24
- 25 - 30
- 30+

Level/Year *

- Second / Sophomore
- Third / Junior
- Fourth / Senior

Major *

- Business Management
- Business Management, Enterprise resource planning (ERP)
- Business Intelligence Technologies
- International Business
- Environmental Chemistry and Technology
- Industrial Management
- Information Technology
- Nursing

1. Factors causing obstacles and difficulties for international students during the exceptional situation in accordance with the Covid-19 regulations

What factors cause difficulties and stress for you during the Covid-19 epidemic?

*

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The distance learning system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prolonged use of e-learning tools often leads to boredom, nervousness and tension	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am stressed about my career and late graduation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Measures of lockdown, closures and quarantine, brought by Covid-19	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Long-term separation from family members resulted into home sickness and loneliness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Afraid of infection and worried about the well-being of family increased the stress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am worried about health care access and treatment cost if I get infectious	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financial insecurity and economic impact of Covid-19 created anxiety and difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. The impact level on international students during the exceptional situation in accordance with the Covid-19 regulations

a. Impact on learning habits *

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Staying home for long periods of time leads to lethargy and laziness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
100% online studying gives me distraction due to online social media	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have difficulty in concentrating and learning due to lack of direct interaction between teachers and students, which leads to lower study performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress and depression during Covid-19 increase my procrastination in studying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Due to depression and stress, I avoid learning and activities related to studying (Absence from class)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because of travel restrictions, I were not able to arrive in Finland to study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

b. Impact on health and well-being *

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Social distancing caused fitness center to close OR I was too afraid to do exercise in a crowded place (fitness center)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
During Covid-19 time, I no longer enjoy my previous hobbies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unhealthy eating habits due to stress during the Covid-19 epidemic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel stressed and depressed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

c. Impact on financial *

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I have trouble controlling my finances during the Covid-19 epidemic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not have a part-time job because of the impact of the covid-19 pandemic, so I have no extra source of income	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am worried about paying tuition fees for the next school year, because not working means no money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My parents can not support me financially because of the Covid-19 epidemic.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

d. Impact on social relationship *

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I was not able to meet my family / relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was not able to meet my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not being able to participate in activities at school as well as in society makes me feel difficult and tired	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I lost someone close to me because of the Covid-19 pandemic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I worried about my family in my home country	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I could not be friends with people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Method needed for international students during the exceptional situation in accordance with the Covid-19 regulations?

How likely did you use these methods to handle the exceptional situation under the Covid-19 regulations? *

	Extremely unlikely	Unlikely	Neutral	Likely	Extremely likely
I used hybrid/online learning as the government policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I studied the materials that teachers provide online as well as found more on the internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have followed the safety regulations such as keeping a safe distance, washing hands, wearing a protective mask	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sought advice from an academic counsellor, tutor teacher, teachers or school nurses,...	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I did exercise, sports at home / jogging outside to improve my health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Used apps or online programs for health and psychological counseling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Talked / called to my family / relatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Talked / called to my friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Actively participated in associations and groups on social networks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Got financial help from an institution like Kela (Social Insurance Institution of Finland) or a scholarship from Centria University of Applied Sciences and Sciences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

APPENDIX 2: Ethics declaration (see in Appendix 1)

Covid 19 – How Centria UAS international students handled this exceptional situation in accordance with Covid-19 regulations

Dear student, this research questionnaire is a part of my thesis and it is designed to elicit student's responses about "Covid 19 – How Centria UAS international students handled this exceptional situation in accordance with Covid-19 regulations". The period when the Covid-19 epidemic took place the most was studied by the author: from 2/2020 to 8/2021. Therefore, your answer should be based on this time period. Your participation in this research is completely voluntary.

In addition, your survey responses will be strictly confidential and data from this research will be reported only in the research. Please start with the survey and respond to the following questions.

Thank you very much for your time and support!

Best regards.

