

Stress and Young Adults During the COVID- 19 Pandemic

An Interview Study

Hanna Korhonen

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Author: Hanna Korhonen

Degree Programme and location: Bachelor's in Healthcare, Nursing, Vaasa

Supervisor: Rika Levy-Malmberg

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Abstract:

The purpose of the research is to describe the main stressors and coping mechanisms for a group of adults in the Vaasa area during the COVID-19 pandemic.

This qualitative research used semi-structured interviews and content analysis as methods. Interviews were done via the Teams online platform for five voluntarily chosen participants in the Fall of 2022. The research led to some findings that make this pandemic time more understandable from other people's perspectives. Even the small sample size gave good variation and added some value.

The five themes that arose from the research are uncertainty, loneliness, school, fear of COVID-19 infection, and relief/coping. The totally "new for all" pandemic-time has many challenges and effects that are worth making visible to all. Because of the small size of the study sample, the findings are no subject for generalization.

The main findings are that COVID-19 was increasing stress for all participants. The Pandemic affected individuals in different ways and levels, and these effects in this study were not genderrelated, nor consequences of prior experienced stressful events. The level of COVID-19 -related stress was dependent on the current life situation of these participants. The uncertainty and primary fear of infection was there for all. The findings suggested secondary stress symptoms and trauma, the triggers of which varied from mild—not to be able to go to the gym—to more serious— rumors, discrimination, and unwanted behavior. The findings culminate to the idea that even a global shared catastrophe, as the COVID-19 pandemic, affects everyone individually and causes different levels of stress. Stress differs for everyone.

Language: English

Key words: COVID-19 stressors, coping, qualitative interview study, pandemic, nursing

OPINNÄYTETYÖ

Tekijä: Hanna Korhonen

Koulutus ja paikkakunta: Sairaanhoidajan tutkinto-ohjelma, Vaasa

Ohjaaja: Rika Levy-Malmberg

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Tiivistelmä:

Tutkimuksen tarkoituksena on kuvata Vaasan alueella asuvan aikuisryhmän tärkeimpiä stressitekijöitä ja selviytymiskeinoja COVID-19-pandemian aikana.

Tässä laadullisessa tutkimuksessa käytettiin menetelminä puolistrukturoituja haastatteluja ja sisällönanalyysia. Haastattelut tehtiin Teams-verkkoalustan kautta viidelle vapaaehtoisesti valitulle osallistujalle syksyllä 2022. Tutkimus johti tuloksiin, jotka auttavat avaamaan ymmärrystä ihmisten kokemuksista pandemian vaikutuksista. Pienikin otoskoko antoi tarpeeksi vaihtelua ja arvoa tähän tutkimukseen.

Tutkimuksesta nousseet viisi teemaa ovat epävarmuus, yksinäisyys, koulu, pelko COVID-19-tartunnasta ja helpotus/selviytyminen. Ennenkokemattomalla pandemia-ajalla on monia haasteita ja vaikutuksia, jotka on hyödyllistä tehdä näkyväksi. Tutkimuksen pienen otoskoon vuoksi tuloksia ei kuitenkaan voida yleistää.

Tärkeimmät havainnot ovat, että COVID-19 lisäsi stressiä kaikilla osallistujilla. Pandemia vaikutti yksilöihin eri tavoin ja eri tasoilla, eivätkä nämä vaikutukset tässä tutkimuksessa liittyneet sukupuoleen eivätkä olleet seurauksia aiemmin koetuista stressitilanteista. COVID-19:n aiheuttaman stressin määrä riippui osallistujien nykyisestä elämäntilanteesta. Epävarmuus ja ensisijainen pelko tartunnasta oli läsnä kaikilla. Tulokset viittasivat toissijaisiin stressioireisiin ja traumoihin, joiden aiheuttajat vaihtelevat lievistä — ei voinut mennä kuntosalille — vakavampiin— huhut, syrjintä ja ei-toivottu käytös. Havainnot yhdistävät ajatuksen siitä, että jopa maailmanlaajuinen yhteinen katastrofi, kuten COVID-19-pandemia, vaikuttaa ihmisiin yksilöllisesti ja eri stressitasoilla. Stressi on jokaiselle erilaista.

Kieli: suomi

Avainsanat: COVID-19-stressitekijät, selviytyminen, laadullinen haastattelututkimus, pandemia, hoitotyö.

Table of Contents

1	Introduction	1
2	Background	2
2.1	What is Stress.....	2
2.2	Symptoms of Stress.....	3
2.3	Coping Strategies for Stress.....	3
2.4	Stress During the Pandemic	4
2.5	Young Adults and Covid-19	5
3	Aim and Research Questions	6
4	Theoretical Framework.....	6
4.1	Appraisal Process	6
4.2	Coping Process and Resources.....	7
4.3	Culture and Social Structures of Stress	8
5	Methods	8
5.1	Qualitative Research.....	9
5.2	Data Collection and Sampling.....	9
5.3	Data Analysis – Content Analysis	10
5.4	Ethical Considerations.....	10
6	Results	10
6.1	Uncertainty	11
6.2	School	12
6.3	Loneliness/Isolation.....	13
6.4	Fear of the Covid-19 infection	14
6.5	Relief and Coping.....	15
7	Discuss and Critical Review	16
7.1	Results Discussion.....	17
7.2	Method and Discussion	19
8	Conclusion	20
9	References	22
10	Appendices.....	25

1 Introduction

According to the World Health Organization (WHO, coronavirus (COVID-19) dashboard, from January 2020 to October 2022, there have been about 1 300 000 confirmed COVID-19 cases in Finland, which is approximately 24% of the Finnish population. Globally the confirmed case number for COVID-19 is over 619 770 000 cases, which is close to 8% of the world's population. Based on the same dashboard, the percentage of fully vaccinated people in Finland was almost 79%, while at the same time the worldwide percentage was a little over 63%.

The highest case peak in Finland, this far, for the COVID-19 infection was in January 2022, and the highest death peak was in March of the same year (WHO, 2022). According to a THL study, in May 2022 a total of 73% of Finnish children under the age of 17 were found to have antibodies indicating COVID-19 infection (Melin, 2022). There are not yet (October 2022) results of the adult population's antibodies from THL (2022).

According to the WHO (2022), anxiety and depression increased globally by 25% during the first year of the pandemic. The COVID-19 pandemic has been a collective trauma, developing possible secondary stress and trauma (Silver et al., 2021, Bethune, 2021). Stress reactions from the pandemic might even cause psychological effects more often than the medical effects (Taylor et al., 2020). A THL study suggests that COVID-19 caused psychological distress especially among highly educated women in Finland (Suvisaari, 2021).

This study will explore, describe and try to understand how stress affects young adults, how the COVID-19 pandemic touched them, and what types of stress coping mechanisms they have been utilizing during the COVID-19 pandemic. Additionally, previous studies that have studied stress, stress symptoms, and coping with stress, will be examined, leading to the aim of the study.

The word stress is used with meanings that can include symptoms, causes, effects, and different kinds of stress (Ahola & Lindholm, 2012). Stress is a fundamental survival mechanism found in nature (Dhabhar, 2018). Stress affects the whole body and people tolerate stress differently. Stressors can lead to positive or negative outcomes (Lawson, 2018). According to several studies (Ahola & Lindgreen, 2012, Segal et al. 2020, Haasjoki & Ollikainen 2010), signs and symptoms of stress differ from physical (rapid heart rate) to cognitive (difficulties to focus) or behavioral (increased alcohol use). Stress can be found in physiological, psychological, and sociological ways of observation (Lazarus & Folkman, 1984). Stress has devastating effects and it holds back quality of life. Knowing more about stress and learning about stress management might help keep stress at a healthy level.

2 Background

There is a good number of studies in general about stress and stressors, done in Finland as well as worldwide. People have very individual experiences in stressful situations, and aspects like gender can affect how people react to stress, how they feel and see it (Mazure, 2018). Stress is different for everyone. This chapter will describe stress, its prevalence and coping mechanisms.

2.1 What is Stress

Stress is a fundamental survival mechanism found in nature (Dhabhar, 2018). The basic survival reaction, the “fight or flight” -response, was first introduced by Walter Cannon in his book *“The Wisdom of the Body”* as early as 1932. A challenging, threatening or uncontrollable situation can drive stress response (APA, 2018). A stress reaction mobilizes all available protective functions of the body, and the reaction requires behavioral or bodily adaptation (Ahola & Lindholm, 2012; Young et al., 2014). In a stressful dangerous situation, the body releases hormones to react quickly (Segal et al., 2020). Stress increases the product of steroid hormones, including cortisol, which is also known as the “stress hormone” (APA, 2018). Stress takes place when individuals extend themselves over their comfortable limits (Damour, 2019). Stressors can lead to positive or negative outcomes (Lawson, 2018).

A short-term stress reaction will allow the body to return to its normal state, and if not repeated, is milder than long-term stress. Stress is no longer beneficial if it lasts for a long time or is too strong (Ahola & Lindholm, 2012). Chronic or traumatic stress can affect health (Damour, 2019). Physical stress changes that last a long time will weaken physical performance (Haasjoki & Ollikainen, 2010). A reasonable amount of pressure can help people to give their best, reach successful results (VilkkoRiihelä & Laine, 2010). Sometimes stress can improve focus and help reach a person’s best potential (Damour, 2019). After stressful situations time to rest and recover is needed, and enough recovery time helps stress not to turn harmful for a person's health (Young et al., 2014). It might be challenging to separate positive and negative stress.

People tolerate stress individually. Similar situations can be motivating to some, while causing distress to others (Damour, 2019). According to a study from the American Psychological Association, women and men have different ways of reacting and managing both physical and mental stress. Women report more about rising stress levels and show more physical and emotional stress symptoms (APA, 2010). Similarly Palumbo et al., 2020, suggest that females show more anxiety-like behaviors with stress than men. Girls and women under stress turn more into themselves, when boys and men usually act out (Damour, 2019, Salmela-Aro, 2011). A WHO study

shows that women, as well as people with pre-existing physical health conditions, were more likely to develop mental health symptoms during the COVID-19 pandemic (WHO, 2022).

Although the experiencing of stress is individual, a person can not affect all situations causing stress (Haasjoki & Ollikainen, 2010). Social injustice and mass violence, economic tension, and the increasing pressure in studies, relationships and independent lives cause stress for young people (Abrams, 2022).

2.2 Symptoms of Stress

Stress affects the whole body and increases risk of mortality (Young et al., 2014). According to the American Psychological Association, chronic stress increases heart rate, increases stress hormones, and raises blood pressure levels. Tension-type headache and back pain has been linked to stress. Chronic stress can be a beginning for hypertension, heart attack and stroke (APA, 2018). Sweating, muscle pain, sleeping difficulties and difficulties to maintain normal body weight, are physical stress symptoms (Haasjoki & Ollikainen, 2010). Pressure on the chest, difficulties to breathe and relax, and an upset stomach are stress symptoms (Ahola & Lindholm, 2012). Stress can cause stomach and gut discomfort, bloating and pain, as well as rapid breathing which can even bring a panic attack for a person (APA, 2018).

Constant worrying, anxious thoughts, poor judgment, difficulties to focus and memorize are cognitive stress symptoms (Segal et al., 2020), as well as forgetfulness, anxiety, and decision making problems (Benke et al., 2020). Chronic stress over a long time, with the constant activation of the nervous system, can lead to negative effects also to other bodily systems (APA, 2018). Behavioral stress symptoms can increase alcohol, cigarettes, and drug use. Behavioral nervous stress habits are nail biting and avoiding responsibilities (Segal et al., 2020). People may eat much more or much less when stressed (APA, 2018).

2.3 Coping Strategies for Stress

Coping strategies are ways for a person to try to manage and prevent stress. Emotional support, talking about feelings, pampering and caring, healthy eating, physical activity, creativity, and good interaction skills with humor can help to overcome stressful times (Peters et al, 2021, Haasjoki & Ollikainen, 2010). Over-eating or excessive use of drugs or alcohol are also ways to try and cope with distress, but not in a long termly successful way (Taylor et al., 2020). People usually start to look for help and treatment for distress if the stress is frequent or affects the central area of a person's life (Lazarus & Folkman, 1984). Mental health services are reported increasing usage across

many countries during and even before the COVID-19 pandemic, which makes it more difficult in many countries to access mental health services when needed (OECD, 2022).

Vitamin B-supplements might help manage work stress (McCarty, 2000). People could benefit from flax seeds (Han & Deng, 2020), multivitamins and minerals (Kaplan, Crawford, et al, 2007) when coping with stress. Having clear priorities with organized thoughts and goals, are found to be ways to reduce stress (Mikkonen & Nieminen, 2011). Positive thinking and attitude, spiritual and philosophical search for meanings can help people to cope over stressful situations (Haasjoki & Ollikainen 2010). During the COVID-19 pandemic people who could keep their daily routines, exercise, and were able to keep a positive attitude, were at lower risk for emotional distress (Shanahan et al., 2020). Familiar everyday habits can be useful to prevent and reduce stress. Employment can save mental well-being during hard times (OECD, 2021). The Canadian program *Text4Hope*, is an example of remote support, in which participants are sent daily supportive text messages (Agyapong et al, 2021). Knowing more about stress and learning about stress management might help keep stress at a healthy level.

2.4 Stress During the Pandemic

The COVID-19 pandemic affected the whole world with lockdowns, stay-at-home orders, social distancing restrictions and traveling limitations, increasing unemployment numbers and uncertainty of the future. Uncertainty has the potential to cause anxiety, stress, depression and other mental health problems with people (Shanahan, et al., 2020). Loneliness, fear of infection, financial worries, suffering and grief have been mentioned as stressors during the COVID-19 pandemic (WHO, 2022). Loneliness is a risk factor for poor mental health, especially for young people (OECD, 2021). All new situations, limited ability to work, support each other, and participate with communities caused stress (WHO, 2022). Benke et al., 2020 suggested that higher levels of lock down restrictions were causing more loneliness, higher distress, and lower life-satisfaction, but were not necessarily related to anxiety, depressive symptoms or discomfort and fear. Lockdowns can produce panic, anxiety, and other unwanted thoughts. People with emotional pre-existing stress conditions are more often at risk of distress (Shanahan et al., 2020).

Psychological distress increased among working-age adults during the COVID-19 pandemic; especially in people from ages 30 to 49 seemed to use more mental health services than before (Suvisaari, 2021). The pandemic's effects on mental health and well-being will remain for a long time (Fiorillo & Gorwood, 2020). During pandemics and other kinds of catastrophes, it would be important to support people's mental health and overall well-being (Pàlen & Kiviniitty, 2021). Another COVID-19 related study from the year 2020 suggests some groups are at a higher risk to

develop severe depressive symptoms during the pandemic. These groups include women, younger adults, low-level educated people, unemployment individuals, people living alone, people living without children, single people, and people with a history or current link to mental treatment (Benke et al., 2020). Being not alone in stressful situations seems to protect from severe symptoms. Family presence refers to lower levels of stress, less anxiety, and depression during the pandemic (Shanahan et al., 2020).

A THL study discovered that COVID-19 increased psychological distress especially in higher educated women (Suvisaari, 2021). Another Finnish study suggested that the sensitivity of persons' interoceptive awareness (the ability to identify and understand their own internal signals), was linked to how a person experienced stress. Interoceptive awareness helped people be better prepared for uncertain situations during the COVID-19 pandemic (Pálen & Kiviniitty, 2022). People infected with the COVID-19 virus can experience long-term effects called post-COVID conditions (PCC) or long COVID. Long COVID, where the symptoms of COVID-19 are lasting for weeks, months or even years, can be extremely stressful. The risk of lengthened symptoms increases with higher age (Thompson et. al., 2022).

People infected with COVID-19 with pre-existing conditions, such as diabetes, heart failure or neurological conditions, may be more likely to develop post-COVID conditions. Vaccinated people, compared to unvaccinated ones, were less likely to report post-COVID conditions after their infection (CDC, 2022). WHO reports that approximately 10%-20% of people experience some mid- and long-term effects after the COVID-19 infection (WHO, 2021).

2.5 Young Adults and Covid-19

The pandemic has affected the mental health of young people increasing risk of suicidal and selfharming behaviours (WHO, 2022). Numerous COVID-19 restrictions and loss of freedoms caused stress to young people (Abrams, 2022). School closures with remote learning often lack protective factors, such as daily routines and access to exercising, teacher support, social contacts, and feeling of community (OECD, 2021). Professional and educational development restrictions, lack of social and romantic relationships, and changes in living situations apply extra pressure especially on young people (Shanahan et al., 2020). In general, in young people, relationship problems and fear of rejection are stress symptoms (Haasjoki & Ollikainen, 2010). Hamaideh reported in 2011 that most stress experienced by students is caused by them seeking to win or be loved. Additional support and in-person services should be a priority for young people (OECD, 2021). Sarasjärvi et al., 2022 suggested based on the study in Finland, that students have not felt unsafe because of the virus, and were more concerned about others being infected than themselves. Young adults infected with

the COVID-19 virus, and with ongoing symptoms, long COVID, were found in close to 8% of cases (Thompson et. al., 2022). Mental health support with integrated employment has been found an effective way of support, although it is not available in many countries yet (OECD, 2021).

3 Aim and Research Questions

The purpose of this thesis is to describe and better understand how stress affects young adults, and to investigate what types of stress coping mechanisms have been utilized during the COVID-19 pandemic.

The research questions are the following:

1. What are the main stressors that have affected young people during the COVID-19 pandemic in the Vaasa area?
2. What kind of coping methods have young adults utilized under the COVID-19 pandemic?

4 Theoretical Framework

Stress can be found in physiological, psychological, and sociological ways of observation (Lazarus, R.S. & Folkman, S. 1984, 325). Conflict, uncertainty, and overload are factors creating stress (Lazarus & Folkman, 1984, 237). Stress approaches the relationship between the person and the environment. It goes beyond an individual's resources, and could be a risk for a person's well-being (Lazarus and Folkman, 1984, 19-21). This chapter will review the detailed theory of the psychology of stress as a combining theoretical analysis, leaning on the theory of cognitive appraisal and coping, and reflect on the many dimensions of stress-related problems within the social context. The authorities are centered here on individual coping and adaptation. As Richard S Lazarus and Susan Folkman write in the preface of the book "Stress, Appraisal, and Coping" (1984), it "...is oriented toward professionals in many areas; psychiatrists, social workers, nurses, clinical psychologists, sociologists, anthropologists, medical researchers, and physiologists".

4.1 Appraisal Process

Cognitive appraisal is an ongoing process where a person is categorizing and evaluating situations to understand the meaning and importance of the experience (Lazarus and Folkman, 1984, 31). The appraisal process is divided into primary and secondary appraising. Primary appraisal can result as irrelevant, benign-positive or stressful appraisal. Irrelevant appraisal does not affect the person's well-being. Nothing relevant is lost or gained in the irrelevant appraisal transaction. In benign-

positive appraisal the outcome of the experience is interpreted as positive. Benign- positive appraisal changes a person's well-being with pleasurable emotions, for example joy, for now or in the future. Quite common thinking is that the desirable state will sour and be paid later with harm. In this way benign-positive appraisal can create stress and anxiety (Lazarus & Folkman, 1984, 32).

“Stress appraisal includes harm/loss, threat, and challenge.” Harm/loss has either already happened, in the case of injury, illness, loss or damage that did occur, or has not yet taken place, and can so be appraised as threat. Threat is expected to happen or/and it might have negative effects for the future (Lazarus & Folkman, 1984, 32). Challenge appraisal has common aspects with threat. They both are calling for coping efforts. The challenge is focusing more on the gain or growth, on pleasurable emotions, rather than threat. Threat focuses more on negatives such as fear, anxiety, and anger. A person can appraise both threats and challenges at the same time. For example, a student nervous a day before a big exam may feel threatened and challenged at the same time. Challenge offers suggestions for the adaptation of stressful situations. A situation appraised as more threatening than challenging can be turned opposite during the process, because the cognitive coping efforts and changes the person face enable the individual to see everything in a more positive light (Lazarus & Folkman, 1984, 33-34). “...Whether it be a threat or a challenge, something must be done to manage the situation “, (Lazarus & Folkman, 1984, 35). People have the need to react to upcoming situations.

Secondary appraisal is the evaluation process of what might, can, if anything, be done and an evaluation of which coping options are available. Primary appraisal, and secondary appraisal with coping options, are shaping the degree, and quality of stress as well as the strength of the emotional reaction that a person has (Lazarus & Folkman, 1984, 35). Reappraisal is rising from the pressure from the environment and from the needs of the person. The new reappraisal information from the environment and the individual's own reactions may protect and nourish the person. Reappraisal simply follows the earlier appraisal and modifies it (Lazarus & Folkman 1984, 38).

4.2 Coping Process and Resources

A coping process involves a person's defensive and problem-solving strategies, as well as changes the person-environment relationship position (Lazarus & Folkman, 1984, 142). Coping is not a random process. It has three main characteristics: observation, specific context, and change. The coping process increases understanding, and changes may occur within a few quickly resolved (argument) moments, or may continue for hours, days, weeks, or even longer for example during grieving years (Lazarus & Folkman, 1984, 143). People differ in how they cope in stressful situations. A resourceful person has enough resources in finding different ways to cope with stress (Lazarus & Folkman, 1984,158). Social skills are important coping skills and can be practiced improving

interpersonal communications skills (Lazarus & Folkman, 1984, 163). Problem-solving skills are also important coping resources; the ability to search for information, analyze and generate alternatives, and select a plan of action to manage stress (Lazarus & Folkman, 1984, 160).

Physical well-being, health and energy are all important coping resources. Positive views of oneself including hope, beliefs of free will, justice, or God, can have the power to lead to more effective outcomes (Lazarus & Folkman, 1984, 159). Social and emotional support are good sources when coping with stress. Social support can be a softening bumper towards stress. A reasonably sized good network has the potential to meet basic social needs. A social network is essential for everyone to feel good about themselves and their lives (Lazarus & Folkman, 1984, 245–247).

4.3 Culture and Social Structures of Stress

Cultural and social structures have a central impact on a person's emotional life, and on which emotions will appear in different situations. The same events can be faced fearfully or benignly depending on the cultural background of the individual. The cultural system behind the people tells what is important, desirable, damaging, or allowing for them (Lazarus & Folkman, 1984, 229). Culture and social structure have an impact on what makes people anxious and how this embodies emotional life.

The situations and experiences between a person and the environment are interconnected, influenced and changed by every moment and occasion, and therefore the fit between the individual and environment is never perfect (Lazarus & Folkman, 1984, 227-228). People are shaped and influenced by the social system, as well as by their uniqueness of personal experience and biology. The direct social experiences of a person's life vary (Lazarus & Folkman, 1984, 231). Coping mechanisms, stress controlling and adaptational outcomes are depending on individual values, commitments, and beliefs (Lazarus & Folkman, 1984, 240). Environmental changes are not dependant on a person's coping activity (Lazarus & Folkman, 1984, 142–143). Cultural values and uniqueness of society can also be affected by globalization, as shared internet connections have become available for larger populations.

5 Methods

The chosen method depends on the research questions. The quality of the study depends on the researcher's methodical skills, sensitivity and integrity as the researcher is the instrument of the study (Patton, M.Q, 2002). This research uses qualitative semi-structured interview questions as a method to collect data and analyze it. All the interviews are recorded with the interviewees

permission and deleted after 10 days from the interview date. Qualitative research requires understanding and cooperation between the researcher and the interviewees.

5.1 Qualitative Research

This study is based on qualitative interviews and evaluation of five to six individuals. The study group is chosen to be small enough to keep in mind during the analysis process and large enough to be considered a whole (Graneheim & Lundman, 2003). Qualitative interview provides detailed information about a small number of people, in purpose to increase the depth of understanding, but at the same time reduces generalization of the results. This qualitative study uses purposeful sampling. People for the sample are selected, because they offer useful rich information for the phenomenon of interest. This kind of small study group does not allow generalization from the sample to a population. In this study about young adults' stressors and pandemic, the sample includes voluntarily chosen people from Novia in Vaasa.

5.2 Data Collection and Sampling

This study uses individual semi-structured interviews for data collection. We cannot observe everything, so we need to interview for the purpose to get into another person's perspective, hear about feelings, thoughts, meanings, intentions, and behavior (Patton, 2002:341). To get in-depth responses from the interviewees, the questions are made open-ended. The more open-ended or unstructured questions are, the more answers can vary. The small sample size and open-ended questions add depth, details, and meaning to the study (Patton, 2002:17). What the text says is often the raw content, while the expressions, voice, silence, and feeling can be seen as expressions of the latent content (Graneheim & Lundman, 2003).

Semi structured interviews are done for the purpose of capturing all information shared by individuals truthfully and precisely. Digital recording is used with the participants' permission. The goal is to get responses that are trustworthy and not rushed. This requires to develop a trusting relationship with the researcher and the interviewees, and by empathetic listening understand experiences and perceptions. Recordings must be transcribed with great care. All direct quotations are written down carefully and information fitted in different categories in the meaning to get answers to the research questions. The semi structured interview questions can be found in Appendix 1. The sampling in this thesis consists of five students from the Vaasa area (between 18 to 35 of age, two females and three male). The semi structured interview (appendix 1) was developed based on the background, and it includes two appendices: the invitation letter (appendix 2) and signed agreement paper for the interviewees (appendix 3).

5.3 Data Analysis – Content Analysis

Qualitative interview responses can be long and include a lot of details. The content can also vary a lot from someone's answers to some others. The data is analyzed here using qualitative content analysis. The unit of analysis is here the recorded interview text about the stress, written open carefully. Interviews are read through several times to get the idea of the whole content. The text that addresses a specific issue or topic in the interview is a content area. There are several content areas based on the interview text here. Text from different interviews that fits to a specific content area, are written together.

The text is divided into meaning units, different units of words/sentences related through the content/context to each other. The text is condensed, making it shorter but saving the core idea. Meaning units are labeled to codes. These codes are now the manifest content of the data. Codes are compared and reflected, looking for the differences and similarities of the codes. Codes are divided into categories and subcategories, grouping text data to categories. All the data from the interviews must fit in a suitable category. The latent content is formulated into themes. Creating themes links meanings together. A condensed meaning unit, code, can fit into several themes or sub-themes. (Graneheim & Lundman, 2003). The goal for the researcher is to be able to understand and capture all points of view of everyone interviewed, so the analysis process takes time.

5.4 Ethical Considerations

Ethical considerations are very critical to any research. The researcher needs to follow the rules of ethics to not to make any harm for the research subjects. Participants need to be fully aware about their participation and role and treated with respect. All participants must be informed about the study before being included in it and sign informed consent (appendix 2). Confidentiality must be guaranteed as well as anonymous data collecting and handling. Participants are not named in any stage of the study. Participation is totally voluntary, and individuals can withdraw their data from the study at any time if liked. There must be enough privacy and trust to not give the answers someone thinks the researcher likes to hear. The average length of the interview should be told beforehand as well as permission for recording and publishing needs to be asked (tenk.fi).

6 Results

The results of this study are based on five interviews done during October and November 2022. The interviews were conducted via Teams and recorded. Transcribed, the recordings resulted in about 20 pages of material. The interviews took between 13-42 minutes each. The group of interviewees

consists of three females and two males between 24 and 50 years old. Four of the interviews were held in English and one in Finnish. This interview was translated to English before analysis. As most interviewees were English as a second language speakers, quotes may contain minor linguistic errors, which were not corrected in the transcription process to assure the intent of the speaker was preserved. Three of the participants are currently in the nursing program in Vaasa, and two of the participants have recently graduated from the program.

After analyzing the content of these interviews some shared topics arose, from which themes were developed. These five themes were uncertainty, school, loneliness, fear of COVID-19 infection, and relief/coping.

6.1 Uncertainty

Uncertainty refers to a situation in which a person is unsure about the things and events happening around, and does not have enough information or experience to choose what would be the right thing to do, or how to react.

Uncertainty was a common theme among the participants in the interview study. People faced a totally surprising challenge with the unknown virus that seemed to spread and affect people's lives many ways all over the world. There were many questions that could not be answered. There were no ready answers to give, even from experts.

The new situation raised fear, worries, uncomfortableness, and stress among people. "No one really knew what was going to happen in a week from now" (P1). Resolving the uncertain situation required time. "The beginning of the pandemic ...was so new, different and strange [compared to] what we did have before..." (P3), "What else did COVID mess with? Well, everything really!" (P5).

As regulations and restrictions were launched, the COVID-19 pandemic" ...[opened] the door into another world...I don't think the world has been programmed for something like a pandemic..." (P2), "...when we never really had this kind of problem before..."(P5).

Work and income worries affected the study participants: "...I was like super afraid that I was going to get COVID...and I wasn't going to be able to do my job..." (P1), "COVID affected their jobs you know, they could have increased worries about money" (P4), "I stress so much about the income..." (P2).

Mental health was under pressure especially during the early times of the pandemic: “Everyone went a little bit crazy in my opinion, but mostly COVID affected people’s mental health” (P5). “...[It] is like everything froze— people lost their relatives and people lost jobs, lost friends, and some got lost, what am I saying, lost touch from feeling and everything...” (P2).

6.2 School

Restrictions and shutdowns affected all the interviewees' lives as nursing students during the pandemic. Restrictions during the pandemic gave us new policies and recommendations about how people should act and behave in their everyday life. “Schools went all of sudden online” (P1), “...restrictions were set upon for the public, schoolwork and school became a lot harder to cope with” (P5), “...just like so hard to pay attention, so hard to learn anything and interact...” (P4).

Interviewees were finding online classes more challenging than going to the physical school to learn, for many reasons: “...there were no classmates to work with...and then when I had online school, my motivation was very low, and it was difficult to concentrate on the lectures when I had other things to do at home” (P3). “Schoolwork and school came a lot harder to cope with, it was so easy to become quite relaxed, turn on your laptop in the morning and listen to the lectures (but not) fully being involved if you know what I mean” (P5), “...and it was difficult and sometimes some assignments could be forgotten” (P3).

Interviewees were missing daily basic routines which were part of their normal school schedules before transition to online classes: “I would like to go to school in the morning, and in the afternoon after we got classes I would have biked into town.... getting lots of exercise and I probably was like eating more healthy at school” (P4). Exercising was challenging for many of the interviewees during the public lockdowns: “Gyms and public places, the extracurricular activities were also just stopped, and you were not able to do anything like that (P5), “I didn’t go to the gym” (P1), “And then the gym was canceled, it was really stressful...and I couldn't go because of the pandemic, which then affected my mental health because I couldn't go to the gym to de-stress” (P3).

During the pandemic many nursing students were not able to do their practices as planned. Students with canceled practices and other unexpected events did not exactly know how their studies would be affected by the COVID-19: “It was very stressful, when you didn’t know how and

when you would be able to graduate” (P3), “I had to be doing all my classes, it was just a lot (with everything else), I had to pass my exams at home...” (P2).

6.3 Loneliness/Isolation

Loneliness is a condition in which someone is feeling or being alone, having no, or only few social contacts. Loneliness can be emotional or physical: “Sitting in the apartment by myself” (P4).

Connections were drying out and caused mental challenges during the COVID-19 pandemic: “...it causes a lot of stress [being] locked in your own room and in your house...” (P5), “I think there’s been a lot of mental cases because of COVID, people just don’t agree with you, people just tripped” (P2), “Not being able to go out and have that freedom” (P5), “...just that feeling of you know, isolation...sitting in the apartment by myself, you know, I never had any idea what anybody was doing, the [social media] group was pretty much dead...”(P4).

Travel bans and canceled flights made it impossible for some participants to meet their family for a long time: “I couldn’t see my friends, I couldn’t travel see my relatives, I was so lonely, I was very lonely” (P2), “I didn’t like go to family functions that maybe I wanted to” (P1), “...everyone was in their own homes...

and by going out, I mean not being able to go for coffee, shopping” (P3), “...social life went from semi active to absolutely nothing...I cried every afternoon after [online] school was over so, like you know, during [physical] school you’re having interactions with people...” (P4).

Loneliness challenged people's relationships and mental health: “There was a lot of isolation, you could not see your friends or family for a long time... ”(P5). Even close relationships were under bigger pressure during the pandemic: “...with this person who’s not going anywhere, you’re also not going anywhere...everybody now just decided to be like okay, I’m okay after all, I cope alone, stuff like that,so now everybody just stayed in their own homes” (P2). “When you’re in a situation with like no interaction with other people it is really hard and difficult, I mean it was rough you know the pandemic time“(P4).

6.4 Fear of the Covid-19 infection

Fear is an uncomfortable emotion that a person experiences or feels under frightened situations or events. People differ in what their fear is, and what is frightening to them. COVID-19 pandemic seemed to affect all of the interviewees in eventually causing them fear.

“You...just developed that fear, if you hear that oh, this one had COVID, then you just was scared...” (P2), “...this is in 2020 before vaccines..we saw people that her age and my age in the ICU not in good shape you know, like it affected many elderly people but it wasn’t the only people that affected” (P1).

COVID-19 raised fear and worries of the serious illness, the spread of it, and the deaths. Nobody could be sure what kind of effects this virus would have for them. COVID-19 infection symptoms were known to be scary: “I was failing to breathe well, I couldn’t even lie in bed like to sleep...this one was like in the air you breathe, I breathe, I get it...it was just something else...” (P2), “... (COVID19) was everywhere and in every place, it had a huge impact on my anxiety” (P3).

Fear and showing emotions publicly developed arguments and unpleasant experiences: “She started screaming at me...it has been a lot during the pandemic for her I'm pretty sure” (P2), “..[fear of COVID] brought some division also beside the division that has been there all along all these years” (P2).

During a certain period of time all of us were expected to follow social distance guidelines, and wear masks when in public in order to prevent the spreading of the virus. “On the bus or on the train you should stand alone like we're just scared to be where people are...” (P2), “Then wearing a mask was strange because for example in shops, on the train, in public places in general you had to wear a mask. I got used to that surprisingly quickly, although it was strange at first. Now it feels strange not having to wear a mask anymore” (P3), “I used a mask and I tried to be responsible” (P4), “I think we like taking precautions. I still wear masks which is not at all common anymore but to this day I do that” (P1).

Not everyone agreed with the policies: “I work in an environment where we have COVID-19 patients...you are walking by all these doors with COVID patients and you’re not wearing a mask...in a hospital that even has a mask policy...I feel like I have still certain amount of stress about other people” (P1).

Vaccines was a subject which expanded rumors and beliefs to many pairs of ears:

"...about the vaccines, that it brought more anxiety and fear during the pandemic" (P3), "...there was just a lot of rumors in a lot of things I remember when I got my vaccine" (P2), "...all these conspiracy theories were starting about this vaccine..." (P5), "...[they] said that people [who] have taken the vaccine are going to die" (P2), "...[there were a lot of] myths (on who brought the illness) and then people that don't really think well, they started acting on it" (P2), "There was a lot anxiety around" (P1), and even official info rose stress levels: "The anxiety about Corona was compounded by the news headlines...Let's hope for the best that this terrible pandemic never happens again" (P3).

Fear of being infected by COVID-19 was there: "...going to the shops was stressful" (P3), "At the very beginning of the thing (COVID-19) nobody really knew whether that (wiping every surface of every grocery) was needed to do or not" (P4), "It's very difficult to be vigilant 24/7...at the same time I understand it because we're humans and it's human behavior" (P1).

Fear of getting the COVID-19 infection was also related to the discomfort of not being able to work, or at least needing to be in quarantine for a mandatory time. "...and at the time there was a testing requirement...I was like super afraid that I was going to get COVID..." (P1). "It would be terrible to relive it all again" (P3).

6.5 Relief and Coping

Relief is something that people actively seek to manage mentally and/or physically in a stressful event, in order to cope and feel better with the stress they face.

Interviewees felt most stressed at the beginning of the pandemic, when "...everything kind of was up in the air for a few months..." (P1). COVID-19 pandemic's first case was confirmed in Finland on January 29, 2020, and on March 11, 2020, the World Health Organization (WHO) declared COVID19 as a pandemic (THL, 2022).

Routines, work, school and exercising seemed to help the study group to manage with the stressful COVID-19 situation.: "being in school (online)...gave me something to focus on which was also kind of something that relieved" (P1), "Biking, swimming, hikes" (P4, P5), "Sports is something that helped my mood a lot back then, and distressed me...and I started a [sport] membership as well" (P5), "[trying] to stay physically active" (P4), "Outdoor activities and jogging" (P3), "I'm actually a pretty good cook, and did a lot of cooking" (P4).

Interviewees did benefit from close relationships, when looking for relief from the stress: "I had someone to share those anxieties with...that's been a big help having that relationship, having that support you know, having those connections" (P1), "I was able to be surrounded by people who I loved and who loved me" (P4), "I used to do a lot of video calls" (P2), "With the children [it] was helpful..." (P4), "...maybe being able to see friends again [was a source of relief]" (P3).

Spiritual life, religion and purpose gave relief: "...I used to pray...I used to feel better actually when I pray..." (P2). Positive thinking helped to cope: "...we just hope to live and grow old, I also want to go to old people's homes...I can consider myself a happy person" (P2), "I got to be creative" (P4). Humor helped in a stressful situation to feel better: "I used to joke about it like that..." (P2), as well as rationalizing the situation : "I can like rationalize it in my head..." (P1).

To feel more safe and comfortable, all the participants were vaccinated and willing to wear a mask. "I used the masks and I do try to be responsible..I had the initial shot and two boosters" (P4), "I am also vaccinated...I protect myself, I wear a N95 [to] feel safe..." (P1).

With time, getting more relevant information and ways to manage everyday life with the virus around, gave interviewees more relief from stress: "The most stress was at the end of 2019, and in 2020" (P3), "...I experienced I think stress especially at the beginning [of the pandemic]" ...(P1).

Participants had ways to manage and cope in the COVID-19 environment, and during the interviews in October and November 2022, all of the interviewees found some relief for their stress. "I can look back and I don't feel as unsafe" (P1), "I'm a lot better now. I would consider myself like there where I was some few months ago" (P2), "I'm almost feeling like I'm at a point of like ok now, maybe I can start doing more and more things..." (P1).

7 Discuss and Critical Review

The purpose of this study has been to describe the main stressors of the COVID-19 pandemic for young adults in the Vaasa area, as well as describe their coping methods. This chapter offers analysis of findings based on the interviews.

7.1 Results Discussion

All the interviewees were facing rising stress levels during the COVID-19 pandemic. Four of them had experienced stress on some level prior to the pandemic. Not having a history of prior stress did not protect the individual from the rising stress levels during the pandemic in the study. The findings were answering the research questions, and describing well the main stressors for the participants, as well as coping methods during the pandemic. The interviews resulted in formulating five themes; uncertainty, loneliness, school, fear of COVID-19 infection, and relief/coping.

The very beginning of the COVID-19 epidemic, even before it was officially announced as a pandemic, was the most stressful time for most of the interviewees. The huge amount of uncertainty was confusing and developed challenges among the participants. The unknown situation, which led step by step to the new COVID-19 normal, included restrictions, isolation, fear of the infection, and online school classes.

As findings showed, one of the main stressors for the study group was the overall uncertainty of the new situation affecting the whole world — especially the lack of any known treatments, and at the beginning not even any vaccinations. The uncertain situation raised fear of the COVID-19 infection. It was unclear how the virus spread, but symptoms were known better, and considered very scary. News headlines made it clear that COVID-19 causes deaths.

Strict restrictions and scary, at times conflicting headlines raised negative emotions among the public. Rumors about the vaccination, and myths about the groups that spread this virus, as well as speculations of the origin of the COVID-19 virus, were all bases to raise arguments, discrimination, fear, and confusion, which increased stress levels. Restrictions closing public services such as gyms, shops, day-cares, restaurants, and the school cafeteria were main stressors for the study group as well. Travel bans were also a source of stress, especially for those interviewees whose family was living at a distance, even resulting in heart-breaking events. The lack of normal everyday connections and interactions caused stress and increased pressure on individuals. Isolation was thus also a main stressor for the interviewees.

As earlier scholastics show (Mazure, 2018) people have very individual experiences in stressful situations, and aspects like gender can affect how people react to stress. In this study there were no differences in the findings based on the gender of the interviewees. The experience of stress was considered individual, and dependent on the participant's family status, income, and work or study

situation. Economical situations, fear, and actual loss of work and income affected the study groups' wellbeing and raised stress levels.

As Silver et al. 2021 suggested, the pandemic can be considered a collective trauma. This aspect could be found in this study group as well. Interviewees were suffering from a variety of secondary stress and trauma. The importance of being able to work was by many seen as so central, that an inability to work could in itself increase stress. For students, the uncertainty of being able to graduate in such an uncertain environment caused stress, and overall mental and physical wellbeing was found to be more challenging during the pandemic. Loneliness and isolation had an impact on everybody's lives, even for those who were living with family. Loneliness could thus be both emotional and physical. Cognitive stress symptoms (Segal et al.,2020) such as constant worrying, anxious thoughts, poor judgment, difficulties to focus, and forgetfulness were the most common ways to show stress among the interviewees.

School played a central role for the study group as a source of stress. Most of the interviewees reported that online classes were more challenging and stressful than physical school. There was not as much support from classmates as before, and under stress assignments could be forgotten, or overworked because of a fear of falling behind. Online classes were found harder to follow by all of the interviewed students. Concentration and focusing on relevant content online was a challenge from home, where other attractions and tasks were often readily available. Avoiding responsibilities as a symptom of behavioral stress occurred, when the virtual learning environment was found to be less motivating. School classes online, especially when the physical environment was too busy, were found to be stressful. Caretakers of young children faced this challenge especially at the time when day-cares, and other children's activities were closed. Canceling practices and graduating on time were also raising stress levels among the students.

COVID-19 pandemic restrictions closed gyms and other public places. Not moving as much as before the pandemic, such as the lack of routine biking and walking trips to school and shopping, made it harder for the interviewees to keep their stress levels at a manageable level. However, almost all of them sought out replacement activities for previous routines, and started to walk, hike, bike, and swim more in the surrounding areas.

In a stressful, dangerous situation the body releases hormones to react quickly (segal et al.,2020). Short-term stress is milder than long-term chronic stress, and stress is no longer beneficial when it lasts a long time or is too strong (Ahola & Lindholm, 2012). The COVID-19 pandemic seemed to divide the interview participants to those whose stress was more short term, mostly occurring in

reaction to the restrictions, and to those who were hit harder, and for whom coping took some more time. At the time of the interviews all interviewees were positively on their way to living everyday life, while still using some level of precautions with the COVID-19 virus still around.

If stress turns to be frequent, people start to seek treatment and help with their stress (Lazarus & Folkman, 1984). Findings showed evidence of interviewees' personal coping processes, but no acts of seeking professional help for their stress symptoms. All the interviewees were from the health care area, either students or newly graduated nurses, which might affect the findings. Knowing more about stress, and learning about stress management might be helping to keep stress at a manageable level, even though pandemic related suffering and struggles among interviewees were still present.

Positively, all the interviewed individuals expressed already feeling better at the time of the interviews, and had been successfully coping, or/and still coping with their stress.

7.2 Method and Discussion

This study was a semi-structured interview that consisted of five individuals. Interviews were done using the Teams online platform. The interviewees were chosen based on their voluntariness. Invitation letters were sent via email to the fifteen possible participants, who all were current or graduated students from Vaasa. A consent agreement was sent after that to each of those five who volunteered to participate and be interviewed. Participants were informed of the length of the interview, as well as how it is going to be recorded. Detailed information about confidentiality was included and the subject of the thesis expressed. Furthermore, after signing the agreement each participant chose a time that would best suit them and the interviewer. Overall, the whole process was successful and the participants were fully motivated to be interviewed. All the interviewees were told to be able to ask questions, and the possible interviewees were not pushed or hurried to volunteer.

Time was still a limitation in this study. The pandemic situation was changing nearly constantly, which might disturb the interviewees ability to recall their memories. The continuously stressful world situation with inflation, the Ukraine war, and high energy prices could affect the results as well. Even if the timing of the interviews was pushed forward, a new issue and possible source of bias could always present itself. The interviews relied on the self-reported data from the study group, which can always be a subject to memory and recall-biases.

Another limitation of the study is based on the researcher's ability to create a warm, trustful and open environment to get real answers from the interviewees. There is always the fear that interviewees will answer with statements they think the researcher would prefer to hear. This can also be a source of bias.

After recording the interviews, on the same day, the researcher carefully transcribed every word, to make sure not to miss anything. These scripts were read through several times in order to build the whole picture from the content of the interviews.

After reading the scripts, the researcher divided material into groups based on the content of the interviewees' answers. By using colored markers, the interviewer highlighted all common subjects with the same color. The common subjects made up the main themes of the results. These five themes were partly overlapping each other. There could have been some sub-themes, but instead of doing that the researcher decided to use the interviewees' direct quotes as references. These interviewees seemed to be very verbal, and it was deemed that direct quotes could better describe the experiences of stress, than further interpreted sub-themes. Most interviewees were English as a second language speakers and their statements thus sometimes contained minor linguistic errors, but to assure the intent of the speakers was best preserved, no need was seen to correct these slight errors in the transcription process. Additionally, because of the small study group size, the interviewer could not release any quotes, from which the individual could be somehow recognized. The principle of confidentiality followed the researcher through the whole research process. This semi-structured interview method with content analysis gave an interesting window to the reality of the study group's main stressors during the pandemic. The study also answered the research question of coping mechanisms. It was great to have the opportunity to research this important subject, and to describe and ultimately better understand different stressful situations that we all can have during unexpected, even global hardship like the COVID-19 pandemic.

8 Conclusion

On the whole, this research study describes the main stressors of the COVID-19 pandemic for a small study group of nursing students or working nurses in the Vaasa area. Likewise, this study describes their coping mechanisms in stressful COVID-19 situations.

As result, the heaviest stressors in this study were related to uncertainty, especially during the beginning of the pandemic. Loneliness and isolation caused challenges of different levels, from uncomfortable or bored feelings to human suffering and tragedy. There was the strong fear of getting or spreading the infection, and the fear of strong symptoms or even death. As working

nurses, some of the interviewees had felt pressure in the busy hospital wards, and experienced a lot of stress. The whole study group had some interest and knowledge for the pandemic as healthcare professionals or students, but it is difficult to say whether this led to lower levels of stress.

What the study reveals is that while the main stressors were shared amongst participants, the levels of stress varied individually. These differences were not related to gender, but more to the life situation the person was in. In summary, all these individuals experienced increased stress levels at least during the extremely uncertain first year of the pandemic, and during the time of restrictions and lockdowns.

After more research information was released, and vaccinations and mask-use became routine, the level of stress eased with some of these participants. Coping for this study group happened via cognition and physical movement. Exercising had a central role for these individuals' mental and physical wellbeing, and the closed gyms led to some of them creatively and actively seeking out other ways to cope with their health.

COVID-19 stress affected and, in many ways, changed all the participants' lives. Interestingly, all participants seemed to rather effectively find ways to cope and get relief for stress on their own. Still, turning to health-care practitioners such as nurses for stress support and information is encouraged at early stages of stress. This can prevent the need for expensive special treatments and later larger human sufferings. Kestel:” While the pandemic has generated interest in and concern for mental health, it has also revealed historical under-investment in mental health services. Countries must act urgently to ensure that mental health support is available to all.” (WHO, 2022). Psychosocial crisis prevention and strategic models should be developed by the government, health care personnel and others in interest (Dubai et al, 2020).

For future research, it would be interesting to focus on different ways of coping, and on how social and healthcare systems and the public could together support everyone and each other in need. It would be interesting to collect coping tips and good practices from professionals and the public from all over the world. This all would prepare us for something unexpected, similar or different, and aid in creating helpful policies and new paths to follow for all of us in the future. Even while seeking to be better equipped and informed to handle stressful experiences as individuals and societies, “let’s hope for the best— that this terrible pandemic never happens again” (P3).

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10 Appendices

APPENDIX 1: Interview Questions

1. Tell me about yourself (Age, gender, marital status, education, working position, a little bit about mental health history)
2. Have you experienced a stress situation before the pandemic (If yes, please tell me more, give example)
3. What are the main stressors that have affected you during the pandemic? (In which stage of the pandemic, give examples)
4. What made the situation better and what made it worse? (please explain)
5. What do you wish to tell me more about stress during the COVID-19 pandemic?

APPENDIX 2: Invitation Letter

Dear Young Adult,

I am conducting “Teams” interviews as part of my nursing thesis study to increase understanding of how the COVID-19 pandemic has affected young adults' stress. You are asked to give valuable firsthand information from your own perspective. The interview takes about 20 minutes and is very informal. I am trying to capture your thoughts and perspectives on stress as a young adult during this COVID-19 pandemic.

Your responses to the questions will be kept confidential. Each interview will be assigned a number code to help ensure that personal identifiers are not revealed during the analysis and write up of findings. All interview recordings will be destroyed after.

Participation in this study will be completely voluntary, but your participation will be a valuable addition to my research and findings could lead to greater understanding of young people's stress during pandemic.

If you are willing to participate, please choose a day and time that suits best and get back to me (email below). If you have any questions, please do not hesitate to ask.

Thank you!

Hanna Korhonen, hankor@edu.novia.fi

Rika Levy-Malmberg

APPENDIX 3: Interview Consent Form

Research Project Title: Stress and Young Adults During the COVID-19 Pandemic

Research Investigator: Hanna Korhonen

Research Participant's Name: _____

The interview will take about 20 minutes!

Information: Thank you for agreeing to be interviewed as part of the above research project. You have the right to stop the interview or withdraw from the research at any time. This consent form is necessary to ensure that you understand the purpose of your involvement and that you agree to the conditions of your participation. Please read the accompanying information and then sign this form to certify that you approve the following:

- The interview will be recorded, and a transcript will be produced and analyzed by Hanna Korhonen as the researcher.
- Access to the interview transcript will be limited to Hanna Korhonen and her supervisor.
- All interview content and direct quotations from the interview will be anonymized, and good care will be taken that any other information that could identify yourself is not revealed.
- The recording and all other interview material will be destroyed at the latest 3 months after Hanna Korhonen has submitted the thesis.

By signing this form, I agree that

1. I have read the Information above
2. I am voluntarily taking part in this study. I understand that I don't have to take part, and I can stop the interview at any time
3. The transcribed interview or extracts from it may be used as described above
4. I don't expect to receive any compensation for my participation
5. I have been able to ask questions, and I understand that I am free to contact the researcher with any questions I may have in the future

Participant's Signature, Place and Date

Researcher's Signature, Place and Date

NOVIA, Applied School of Sciences, Vaasa Campus/ Nursing Program, Bachelor's Degree/ Hanna Korhonen, October 2022, hankor@edu.novia.fi