

# **Work-life balance of frontline nurses during COVID-19 pandemic**

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### **Abstract**

COVID-19 outbreak was declared as a pandemic on 11th March 2020. During the time of this pandemic, healthcare professionals have played a major role in managing the crisis and taking care of the infected patients working as frontliners. One of the most essential roles in managing this pandemic has been of frontline nurses. Nurses are the providers in this pandemic with the most prolonged contact with the infected patients which exposes them to the virus as well as patient suffering. A lot of research has been done all over the world since the pandemic started and they have shown how the nurses have been negatively impacted during the pandemic, where their personal lives also have been affected leading to the disruption of their work-life balance.

The aim of this master thesis was to increase knowledge and understanding of the impacts of COVID-19 pandemic on the work-life balance of nurses working as frontliners and the purpose was to provide deeper insight on the challenges faced by frontline nurses during COVID-19 pandemic and to find possible actions to promote their health and wellbeing. Job Demands-Resources theory was used for theoretical framework. Two different data collection methods- systematic literature review and interviews were used for data collection. The research sample consisted of 12 scientific articles for systematic literature review and 6 participants for the interviews. The collected data was then analyzed by using inductive content analysis.

The analysis of data from systematic literature review led to the production of five themes: health and wellbeing, sense of abandonment, working conditions, lack of boundaries between work and home and inadequate leadership. Similarly, the analysis of data from interviews produced the following six themes: coronaphobia, strain in physical and mental health, impact in social life, heavy workload, guidelines and resources at workplace and organizational factors. Apart from the challenges the frontline nurses faced during the pandemic, the results also showed that the leaders played an important role in helping the nurses to maintain their work-life balance. Open communication with the nurses, provision of updated COVID guidelines as well as personal protective equipment, adequate training related to the care of COVID patients, and the use of PPE as well as helping the nurses take care of their mental health by providing necessary resources were the requirements of nurses from their leaders in order to provide good quality care to the patients and to maintain their work-life balance.

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Language: English

Key Words: frontline nurses, COVID-19, pandemic, challenges, work-life balance, leaders

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## 1. Introduction

COVID-19 outbreak was declared as a pandemic on 11th March 2020 (Mahase, 2020). This pandemic has been a rough time for everyone all around the world. It has not only affected people's health and wellbeing but also had a huge effect on the economy. As of February 2, 2023, there have been more than 750 million confirmed cases of COVID-19 including deaths rate close to 7 million (WHO, 2023).

During the time of this pandemic, healthcare professionals have played a major role in managing the crisis and taking care of the infected patients working as frontliners. However, it has put a great psychological pressure on healthcare professionals all around the world because of excessive workload, work pressure, working under difficult conditions, insufficient safety measures etc. and experience fatigue, exhaustion, anxiety, fear of contracting the virus, loneliness and even depression. (Ayar, Karaman & Karaman, 2021). Secondary traumatic stress and professional burnout were found to be present in a large proportion of surveyed frontline healthcare professionals in 45 countries associated with patients' pain, suffering and deaths (Orru et al., 2021).

One of the most essential roles in managing this pandemic has been of frontline nurses. Nurses are the providers in this pandemic with the most prolonged contact with the infected patients which exposes them to the virus as well as patient suffering. (Roe et al., 2022). Their responsibilities have increased greatly due to the insufficient number of nursing staff and growing number of cases. The pandemic has caused severe distress to them and has also affected their mental and emotional health. (Labrague & De Los Santos, 2021). A lot of research has been done all over the world since the pandemic started and they have shown how nurses have been negatively impacted during the pandemic (Roe et al., 2022). They are risking their own health and lives to fulfill their duties and provide care to the patients (Catton, 2020).

Unfortunately, their personal lives have also been affected. They have been stigmatized by societies due to their role in the pandemic and having to take care of the infected patients. (Ayar et al., 2021). They also deal with the risk of transmitting the virus to their families and

friends affecting their interpersonal relationships (Hong et al., 2021). Many of them even used alternative accommodation options to stay away from their family members in order to keep them safe but losing the ability to fulfill their parental roles in the process. Due to these reasons, the pandemic has disrupted the work-life balance of the frontline nurses. The disruption in the work-life balance can lead to many consequences in the lives and behaviors of the frontline nurses. This includes developing a phobia of their workplace, quitting the job as well as willingness to change their profession. (Ayar et al., 2021).

It is very important for the frontline nurses to have good physical and mental health in order to provide good quality care to the patients and pay equal attention to patient safety. Otherwise, they are unable to perform their duties well and the quality of care suffers. (Ding, Wang, Guo, Chen & Jin, 2022). Hence, there is a growing need for interventions to protect the frontline healthcare professionals from the impacts of the pandemic in order to promote their wellbeing and work-life balance (Ayar et al., 2021).

Maintaining work-life balance requires a supportive working environment. Nurse leaders play a very important role especially in the time of pandemic. Stressed and burnout nurses need support from their leaders. The leaders ensure that high quality care is provided to the patients and create and maintain a positive workplace by providing support to the nurses. (Roe et al., 2022; Sihvola, Kvist & Nurmekele, 2022). Being in charge of decision-making, they are responsible for understanding and balancing the needs of both the staff and the patients to increase their wellbeing. Effective leadership in the time of pandemic requires open communication with the staff, provision of necessary resources in patient care and self-protection, effective guidelines for providing care to the patients, flexible working schedules, provision of necessary support to the staffs etc. (Roe et al., 2022).

Naryan and Mehta (2021) recommended similar strategies to help frontline healthcare professionals during the pandemic such as having effective transparent communication within the organization, giving their family priority in getting covid tests as they are in high risk of getting the virus and making them feel appreciated by providing rewards and recognition for their hard work during the pandemic.

## 2. Background

This chapter describes the corona virus and gives information about its transmission, incubation, and diagnosis. It then familiarizes us with the concept of work-life balance and its importance in frontline nurses especially during the pandemic. Lastly, nursing leaders and their roles in the pandemic is described especially in supporting the nurses and helping them achieve work-life balance.

### 2.1 Corona Virus (SARS-CoV-2 Virus)

Corona virus, also known as SARS-CoV-2 virus or COVID-19 virus was first detected in Wuhan, China with the announcement of the first case taking place on December 31, 2019, and it quickly started spreading to other countries. Corona virus is a single stranded RNA virus which affects animals (mammals) and humans and spreads or gets transmitted mainly through droplets and close contact. It causes respiratory symptoms in humans similar to SARS. Due to the rapid spread of the virus, WHO declared it as an epidemic on January 30, 2020, and as a pandemic on March 11, 2020. Most common symptoms of getting infected with the corona virus are fever, cough and fatigue which might even lead to acute respiratory distress syndrome (ARDS), organs such as liver, kidneys, heart, eyes, nervous system might get damaged affecting the sense of smell or taste in the process. Thrombosis is another risk associated with the virus. Millions of deaths have been caused by the virus all around the world. (Mollarasouli, Zare-Shehneh & Ghaedi, 2022).

#### 2.1.1 Transmission

There are many means of transmission of Covid-19 virus such as contact, droplet, aerosol transmission etc. Contact transmission: An object touched by an infected person contains the virus and if a healthy person touches the same object, the virus is transmitted to their hands and causes possible infection if they were to touch their faces. Droplet transmission: The virus is released into the air through coughing and sneezing by an infected person and the person breathing in the same air might get infected. Aerosol transmission: The virus stays in the air

for a certain period of time and infects those breathing in the same air. (Xie, 2020). Systematic review done by Allotey et. al (2022) has found the transmission of the virus to be possible to babies born to infected mothers, but the rate is less than 2%.

### 2.1.2 Incubation

It is the time period between getting exposed to the virus and the onset of the symptoms. It has an incubation period of 1-14 days where 14 days became a guideline for self-isolation/quarantine. However, elderly people have a shorter incubation period, and the virus can be deadly to them. It is recommended to wash your hands frequently and avoid public gatherings to avoid getting infected with the virus. (Xie, 2020).

### 2.1.3 Diagnosis

To diagnose corona virus from the respiratory tract, proper collection of the sample is important at the right time, in the right way and from the right anatomical location. The virus level in the respiratory tract is high after five to six days of the infection. RT-PCR test has been widely used for the detection of the virus with the use of nasopharyngeal swabs (Mollarasouli et al., 2022). Other tests include nucleic acid test, CT test and antigen/antibody tests. (Xie, 2020).

## 2.2 Work-life Balance

The term “work-life balance” refers to the relationship between work and life outside of work and creating a balance between them where they don’t affect each other. The perception of work-life balance varies with different authors as some believe work-life balance refers to the equal distribution of energy, time, and commitment to work and life outside of work whereas others believe work-life balance to depend on the individual’s circumstances i.e., how they perceive their situation. (Kelliher, Richardson & Boiarintseva, 2019).



This term was first introduced in UK in 1970s and in USA in 1980s, referring to the proper division of work and lifestyle with the imbalance between the two causing negative consequences such as decrease in the quality of life and dissatisfaction, stress, psychological health issues etc. It has also been found to have an effect on interpersonal relationships leading to marital issues or harming the relationship of parents with their children due to less involvement. Similarly, stressed, and dissatisfied employees are not able to give their 100% at work and their performance is affected. Hence, a vicious cycle is formed where they are neither able to fulfill their obligations at home nor at work. (Fernandez-Crehuet, Gimenez-Nadal & Reyes Recio, 2016).

Factors such as irregular working hours, low wages, heavy workload, lack of occupational safety affect work-life balance which in turn influences the level of work commitment of the employees. It is very important to maintain work-life balance otherwise it might lead to many consequences and negatively affect the wellbeing of the employees. (Ayar et al., 2021). Research has shown that workplaces need to respect their workers' other obligations outside of work for effective working arrangement which along with family and work status play important role in maintaining work-life balance (Kelliher et al., 2019). Especially in the time of crisis, work-life balance is very important as it affects the employees mentally, emotionally as well as economically. A positive work-life balance helps the employees to gain job satisfaction by lowering their stress and conflict. (Baisa & Nilasari, 2022).

Some of the tips by Lloyd (2022) to attain good work-life balance are leaving work behind after the shift ends, learning to say no when possible, getting enough rest and sleep, exercising, and having hobbies, balancing work hours, maintaining good diet, having positive people around, spending time with yourself etc. Personal and professional life needs constant balancing due to the equilibrium shifting depending on the challenges faced in life but making minor, but relevant adjustments help to make a living worthwhile.

### 2.2.1 Work-life balance of frontline nurses

Covid-19 pandemic has brought a lot of changes with it and altered our ways of living as well as working (Lloyd, 2022). Work-life balance has an impact on the work commitment meaning how dedicated the employees are towards their work and the amount of satisfaction they get from doing it (Ayar et al., 2022). The workload and responsibilities of frontline nurses have heavily increased during the pandemic causing different mental health issues as well as affecting their work-life balance. Working in a vulnerable environment with the lack of required personal protective equipment is not easy as it increases their risk of getting infected as well as the risk of transmission of the virus to their own families. (Greenberg, Docherty, Gnanapragasam & Wessely, 2020). Ayar et al. (2022) believes that different variables are related to the work-life balance of frontliners during the pandemic such as gender, working hours, addiction to work and people you live with.

Inability to balance personal and professional life gives stress and decreases work output and affects job satisfaction. The working hours in healthcare are not standard and is a 24-hour job which can cause health issues, insomnia, accidents as well as reduce social life. Burnout can easily occur when doing excessive night shifts. Frontline nurses are required to work irregular hours during the pandemic, meet the requirements of the organization as well as the wishes of the patients while working under pressure, doing overtime, and being exposed to violence from the patients. (Ayar et al., 2022). It is important to remain self-aware and recognize when the work-life balance is distorted (Lloyd, 2022). Some of the strategies to encourage work-life balance are providing sick leaves to the employees which are paid, open communication with the management and being involved in the planning, flexible working schedule and the ability to trade shifts with coworkers etc. (Phillips, 2020).

### 2.3 Frontline nurses during the pandemic

Healthcare professionals play an important role in the fight against COVID-19 pandemic putting their own life at risk, especially frontline nursing professionals. With the increase in the number of cases, the number of nurses has been decreasing, putting a heavy load on them and

making them work longer hours with additional responsibilities. (Labrague & De Los Santos, 2021). They have to maintain their own needs, their families' as well as the needs of their patients with limited resources creating difficulty in maintaining work-life balance (Greenberg et al., 2020).

Ayar et al. (2021) found out that the work-life balance of frontline health care professionals including nurses was influenced by variables such as work addiction, the number of working hours, gender as well as the person they live with. They also had to face stigmatization due to taking care of COVID patients, many had to cancel their annual leave because of their line of work, work under difficult conditions due to the lack of protective equipment as well as go through despair and felt helpless when they lost their patients. Many frontline healthcare professionals also lost their own lives taking care of their patients.

When ICU nurses working during the pandemic in Wuhan, China were surveyed, they were found to have lack of appetite, fatigue, insomnia along with the feeling of being emotional and suicidal. These psychological factors were especially found in younger nurses with less or no working experience with critically ill patients. The psychological stress was related to anxiousness regarding unfamiliar working environment, lack of experience in the field, heavy workload, fatigue, worrying about their own family members as well as unsuccessful treatment of the patients. Hence, addressing psychological problems of the ICU nurses working with COVID patients and taking action as soon as possible are crucial. (Shen, Zou, Zhong, Yan & Li, 2020).

When people were being careful and socially distancing, frontline nurses were actively taking care of their patients with or without COVID. They were not able to have a normal social life, had to work irregular hours, were stigmatized leading them towards mental health issues such as anxiety, stress and burnout and overall degrading their mental health as well as the quality of their life. Between August 2019 to August 2020, along with the loss of lives of many physicians of Bangladesh due to corona, the healthcare professionals were accounted for about 10% of the total infection in the country according to the Bangladesh medical association showing the vulnerable position they were in as they were fighting the pandemic. (Mehedi & Ismail Hossain, 2022).

Healthcare professionals directly taking care of COVID patients had a much higher risk of facing mental issues and sleep deprivation than the ones with no direct contact. The demand for healthcare professionals grew tremendously during the pandemic, and it has not been easy for them to balance their personal lives and professional lives. They spend more time at work and have less time for their leisure activities and have had to maintain a distance from their families because of the fear of infecting them. Hence, it is very important to understand the factors influencing their work-life balance. (Güney Yılmaz, Zengin, Temuçin, Aygün & Akı, 2021).

The frontline nurses have faced many challenges during the pandemic such as meeting the job demands, working long and irregular hours, maintaining the quality of care provided to the patients with limited resources and following new protocols. They are also met with working under uncertain conditions like coming up with ways to distribute limited resources to the patients, maintaining their own needs along with the needs of the patients and fulfilling personal responsibilities while providing quality care. (Baisa & Nilasari, 2022).

The pandemic has disrupted the boundary between personal and professional life causing work-life imbalance in healthcare leading to burnout and lack of job satisfaction. It has affected the nurses' wellbeing and mental health. Therefore, it is important to provide necessary resources and help them maintain the balance to ensure meeting the job demands and satisfaction. Job satisfaction is the degree to which the employees are satisfied and content with their workplaces whether it's their coworkers, employers, working schedules or the work itself. In the case of nurses, job satisfaction refers to the workload, available resources, their ratio with the patients, organizational support, evidence-based practice etc. Job satisfaction is directly related to performance and patient satisfaction. (Boamah, Hamadi, Havaei, Smith & Webb, 2022).

The corona pandemic has brought changes in the healthcare system and reformed practices all over the world. The loss is high and so is the stress, but the resources are limited. (Dimino, Horan & Stephenson, 2020). Nursing is already a demanding profession, and the pandemic has made it even more challenging and stressful (Chen, Zhou, Luo & Huang, 2022). Nurses are the ones providing direct care to the patients suffering from Covid and working in stressful environments which might also prove to be life threatening to them (Dimino et al., 2020).

Statistics show that 70% of the frontliners fighting the COVID-19 pandemic and working on its prevention were nurses with only 13% of them having the experience to do so. They have to provide care for the patients without spreading the virus to others and themselves. Working long irregular hours and continuously taking care of emergency patients and not being able to cope only results in burnout. (Chen et al., 2022). They work very hard and try to adapt but the limited resources prove to be a huge challenge to them and increase their work pressure. They are at risk of getting post-traumatic stress, anxiety, insomnia, and other mental illnesses. Without proper help from the organization and without proper resources to preserve their mental health, their health and wellbeing will be affected. (Dimino et al., 2020). Hence, it is very important for the nurses to be in good health physically and mentally to win the fight against this covid 19 pandemic (Chen et al., 2022).

## 2.4 Nursing Leaders

The healthcare field is very challenging with high, but complex demands. However, successfully recruiting competent individuals for the job and keeping them stay long term is a difficult task. Countries have been continuously trying to enhance their healthcare sector by developing patient care systems and improving management. Not everybody is competent enough to take leadership roles in nursing as it requires one to be rational, have the ability to be influential and work under pressure, have good communication as well as problem solving skills. They lead the nurses in making decisions related to patient care following the guidelines and successfully implementing them. A nursing manager with good leadership skills should be able to improve the performance of the nurses, facilitate their development, provide job satisfaction, and reduce the turnover. (Wang, Batmunkh, Samdandash, Divaakhuu & Wong, 2022).

Leadership essentially consists of three components: leading yourself, others, and the organization (Roe et al., 2022). Studies have showed that during crisis management, role of the leaders are very essential especially in healthcare sector and good leadership is to have adequate decision- making skills, knowing to include cognitive diversity, and knowing the

importance of teamwork and information sharing. Cognitive diversity creates extra room for creativity as well as alternatives for the next course of action during uncertainties. Adequate decision-making skills, good teamwork and effective communication have a significant effect on the work performance of the employees and brings a sense of satisfaction and safety to them. (Jankelová, Joniakova, Blstakova, Skorkova & Prochazkova, 2021).

Roe et al. (2022) recommends the importance of different perceptions and using the right leadership approach by finding out the needs of the nurses based on their roles for it to be effective. The needs of the nurses should be recognized and balanced with the needs of the patients by providing them with additional resources and education. When dealing with unfamiliar situations and units, the nurses need education and support to gain the knowledge and skills required for effective patient care. The nurses need to be equipped with protective equipment, resources as well as kept updated with changing protocols. They need to be adequately staffed. In addition to this, emotional support should be provided to the staff.

#### 2.4.1 Role of nursing leaders during the pandemic

Covid-19 pandemic is a global threat to the healthcare systems (Sihvola et al., 2022). During the pandemic, the role of the leaders is not only to manage the organization and combat the uncertainties, but also to take care of the wellbeing of the frontline nurses and to prevent burnout and the shortage of staff (Dimino et al., 2020). The quality of care provided to the patients is to be ensured by the leaders even during the pandemic. The leaders should have the confidence to lead others even during the crisis, motivate and guide them accordingly and possess problem-solving skills to do so. To provide a working environment which is both safe and supportive, there should be open communication between the nurses and the leaders. The nurses should be provided with the necessary and updated information regarding their work along with them being heard to promote resilience among them. The leaders should have empathy and respect towards the nurses, cooperate with them, promote genuine connections, and maintain the supply of necessary personal protective equipment required for taking care of COVID patients. (Sihvola et al., 2022).

Similarly, nurses are to be encouraged to share their experiences by the leaders and any signs of exhaustion, burnout, or stress in them should be observed (Sihvola et al., 2022). Nursing leaders are responsible for making strategies to help and support the suffering staff caused by the high workload of the nurses and patient acuity and implementing them accordingly. Listening is an important skill required by the leaders to make a connection with the staff, know their feelings and concerns and provide them with necessary resources. This makes a difference in this difficult time and makes the nurses feel cared for and their hard work recognized. (Heuston, Grove, Harne-Britner & Fox, 2021). Leaders are required to be prepared to face unexpected changes and refrain from making empty promises to the staffs (Sihvola et al., 2022).

Jankelová et al. (2021) after doing a questionnaire survey with 216 managers of healthcare facilities in Slovakia during COVID-19 pandemic provided the following implications for successful leadership during the crisis: To provide a safe working environment for the healthcare professionals with safe conditions and minimum stress and to have competence in the management with the focus on teamwork, information sharing as well as providing support and encouragement to the employees.

According to Adams and Walls (2020), leaders could help to reduce anxiety in frontline nurses by having an open communication about the virus, its transmission, and useful protocols to avoid its transmission at home such as the removal of clothes and shoes immediately after arriving home, washing them, and taking a shower, guidance on disinfection of surfaces at home and products effective in doing so. Self-care as well as time off to decompress should be prioritized to promote their wellbeing.

Dimino et al. (2020) recommends the nursing leader to establish a team which foresees the initiatives being taken to ensure the well-being of the frontline nurses, have regular communication with the staffs to show appreciation, provide support to the staffs by offering therapies and giving opportunities to meet with psychologists, understand that the less experienced nurses are more vulnerable and in need of support. Likewise, the leaders should be provided with the necessary training to strengthen their leadership skills required for supporting the staff and maintaining a positive and supportive work environment.

### 3. Aim, Purpose and Research Questions

The aim of this master thesis is to increase knowledge and understanding of the impacts of COVID-19 pandemic on the work-life balance of nurses working as frontliners.

The purpose is to provide deeper insight on the challenges faced by frontline nurses during COVID-19 pandemic and to find possible actions to promote their health and wellbeing.

Research questions:

- What are the challenges faced by frontline nurses to maintain work-life balance during COVID-19 pandemic?
- How can a leader take the challenges into account in their leadership?

### 4. Methodology

This thesis uses qualitative research method to answer the research questions. Qualitative research can be described as an approach open to interpretation in case of data collection as well as analysis and related to the views and experience of the people living in the social world. It consists of its own method for data collection and data analysis. It collects data through words, description or visual form and analyzes them using interpretative methods of analysis. (Pope & Mays, 2020).

Qualitative research aims to understand social phenomena regarding how people provide meanings to them. It explores its nature instead of just accepting commonly provided explanations by society. Qualitative research method also helps to understand peoples' views and opinions hence, making it possible to research about certain areas of social life where quantitative research method is not applicable. (Pope & Mays, 2020).

Qualitative research gives the advantage of studying people in their natural settings as well as applying more than one method of data collection in the research. Using a combination of



different data collection methods helps to deliver a deeper insight on the topic. (Pope & Mays, 2020). This thesis is done by using two different data collection methods: systematic literature review and interviews. The collected data is then analyzed by using inductive content analysis. This chapter contains the description of these methods.

## 4.1 Systematic Literature Review

The systematic literature review has been defined by the Cochrane Collaboration “as a review of a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant research, and to collect and analyze data from the studies that are included in the review” (Moja, Moschetti, Liberati, Gensini & Gusinu, 2007, p. 140). The steps followed in systematic literature review are in order and they are connected structurally. The steps are then executed in a way that prevents unintended bias, gives room for peer review, and gives more reliable conclusions. (Holly, Salmond & Saimbert, 2011). It is a transparent process which includes searching for relevant literature on the computer, defining inclusion and exclusion criteria for the selection of the articles, suitable methodology for their quality assessment, summarization of the evidence found, discussion, limitations, and suggestions/ recommendations for future researchers on the topic. Systematic literature review is performed with rigor, transparency, and sophistication. (Koretz & Lipman, 2017).

A systematic literature review helps to answer the research questions by collecting all the relevant data from the available studies and then analyzing them after reviewing (Ahn & Kang, 2018). The aim of the systematic literature review is to answer the research question by putting evidence together. For this, all relevant primary research which answers the research question is identified, critical appraisal is done, and the findings are synthesized. It might lead to the production of a new finding when combining different data or the collection of different evidence and its exploration. (Pollock & Berge, 2018). Systematic literature reviews also help to discover and reveal the gaps in knowledge which can be utilized for future research (Gopalakrishnan & Ganeshkumar, 2013).

The methodology used in systematic literature review is clear, detailed, and duplicatable. It also provides a detailed description of the objective of the review, and the materials used. As a result, bias is limited, conclusions drawn are more reliable, information flow to involved parties such as researchers or healthcare professionals is fast along with the implementation of the findings leading to the accuracy of the results. (Gopalakrishnan & Ganeshkumar, 2013).

It is very important for the quality of the studies to be evaluated as well as the use of proper methodology when doing systematic literature review to produce powerful results. Otherwise, it can lead to biased results and inaccurate outcomes. (Ahn & Kang, 2018). Previously, “systematic literature review” terminology referred to the collection and analysis of data from only quantitative studies which caused confusion regarding its terminology. However, in this modern age all kinds of data irrespective of being from qualitative, quantitative, or mixed studies are systematically collected and analyzed. (Pollock & Berge, 2018).

#### 4.1.1 Data Collection

Databases such as Academic search elite, Cinahl with full text and Pubmed were used, and an advanced search was conducted using keywords “work-life balance or work-family balance” AND “nurse or nursing” AND “pandemic or covid-19 or coronavirus”. The search was limited with the year of publication being from 2020 to 2023 as COVID-19 pandemic started in the year 2020. Only peer-reviewed articles written in English language were chosen for the study which were relevant to the research questions.

Table 1 below shows the inclusion and exclusion criteria for the selected articles for systematic literature review.

*Table 1: Inclusion-Exclusion criteria for systematic literature review*

<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
Peer reviewed articles	Not peer reviewed articles
Articles in English	Articles in other languages than English
Articles published between 2020-2023	Articles published before 2020
Articles relevant to the research questions	Articles irrelevant to the research questions

Searching the literature is one of the key components of systematic literature review as it not only notifies about the results but is also a base for providing the data needed for the analysis. It is also a prerequisite for other steps in systematic review such as screening, extraction of the data etc. (Rethlefsen et al., 2021). The systematic review studies should be carried out objectively like the primary studies, hence there is a guideline for conducting and reporting them which is known as the Preferred Reporting Items for Systematic Reviews and Meta-Analyses, PRISMA (Parums, 2021).

The PRISMA statement and guidelines were first published back in 2009 but are updated with time. The latest one is known as PRISMA 2020, and it was published in 2021 replacing PRISMA 2009. It also consists of a flow diagram and a checklist of 27 items. (Parums, 2021). PRISMA 2020 flow diagram below in figure 1 shows the data collection process for this systematic literature review which includes different processes such as identification, screening and included. A total of 12 scientific articles were chosen for this systematic literature review (see overview of the articles in Appendix 1).

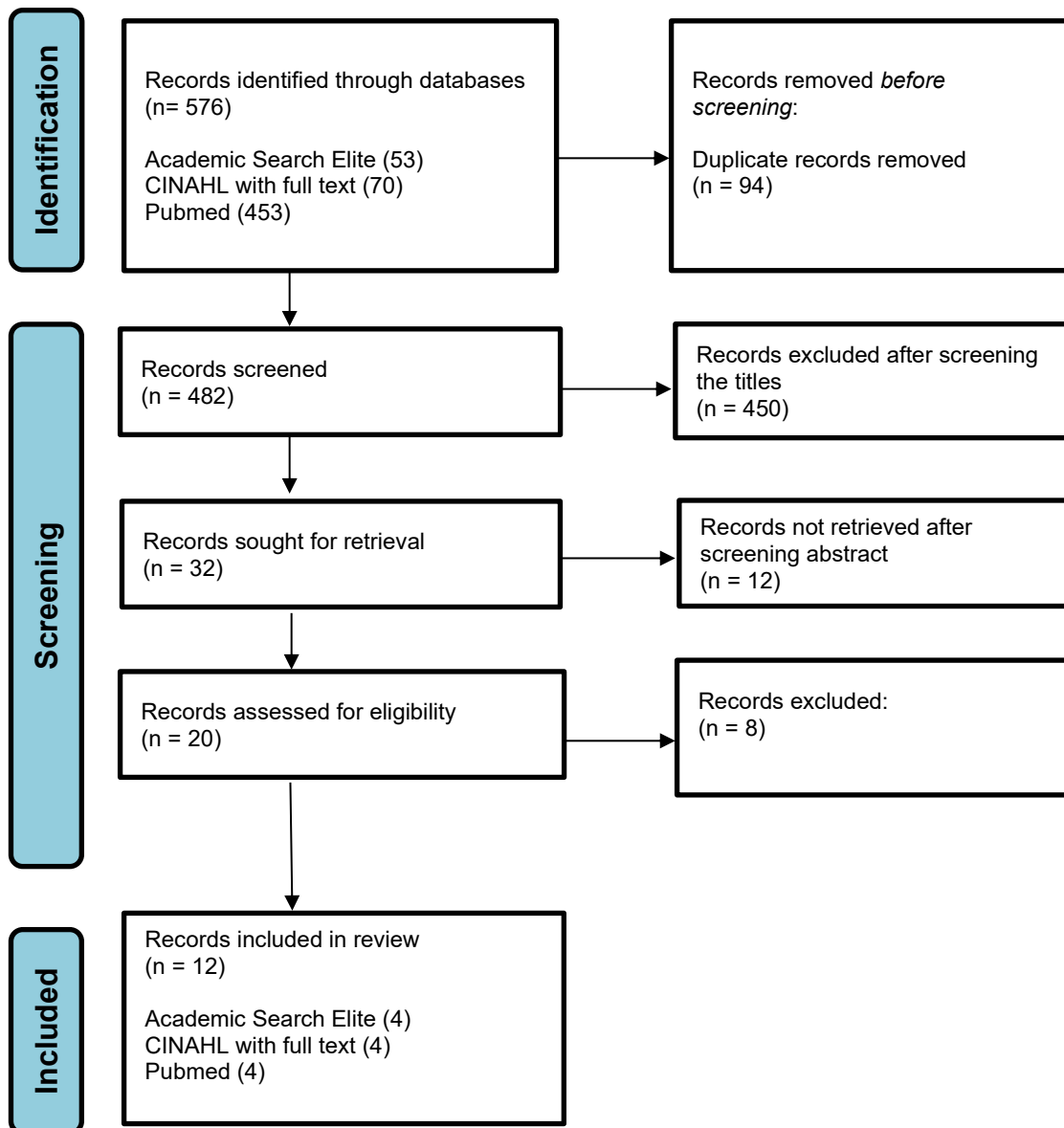


Figure 1: PRISMA 2020 flow diagram

#### 4.1.2 Data Analysis

Content analysis is a systematic and objective method of analyzing visual, verbal, or written documents and putting them in categories or themes to enhance understanding of the data. It can be used for both qualitative as well as quantitative data. Qualitative content analysis is commonly used in nursing studies (Elo & Kyngäs, 2008). It is one of the many methods available

for data analysis at present. For the content analysis to be successful, the requirement is the breakdown of data into concepts that explain the research or study with the help of categories or themes. The research question plays an important role in determining what needs to be analyzed. The creation of concepts occurs in the process of abstraction which is only partly describable as it also somewhat depends on the perception and intuition of the researcher making it difficult to explain to others. However, reporting the process of the creation of the results is essential in terms of validity. (Elo et al., 2014).

Content analysis consists of two different approaches- inductive and deductive approaches with 3 main phases: preparation, organizing and reporting (Elo & Kyngäs, 2008). An inductive approach was chosen for this systematic literature review. In case of inductive approach, in preparing phase, relevant data is collected for analysis, understood and the unit is also selected for analysis. In organizing phase, open coding is done, and categories and themes are created with abstraction. Lastly, in reporting phase, the reports are presented with the help of categories and themes answering the research question. (Elo et al., 2014).

Content analysis was used for the data analysis with an inductive approach which involved open coding and then creating themes by categorizing them. The data obtained from the chosen articles were read repeatedly and codes were derived from their results. The codes were then divided into subcategories and themes were produced.

Table 2 below shows the inductive content analysis process of the codes generated from the chosen 12 articles for systematic literature review.

Table 2: Inductive content analysis (Systematic Literature Review)

<b>Codes</b>	<b>Categories</b>	<b>Themes</b>
Fatigue Exhaustion	Physical issues	Health and wellbeing
Burn out Anxiety High job stress Depression Insomnia PTSD Emotional exhaustion Death of patients	Psychological issues	
Neglecting personal life Lack of social support	Social issues	
Coronaphobia Fear of transmitting the virus Exposure to covid-19	Fear	
Guilt of not spending time with family Guilt of burdening the spouse	Guilt	Sense of abandonment
Self-isolation Temporary accommodation	Isolation	
Turn over intention Role conflict Job withdrawal	Low job satisfaction	Working conditions
Staff shortage Insufficient PPE supplies Inadequate training Threat of contamination	Insufficient training and resources	

Need of supportive resources Ethical dilemmas		
Increased workload Working hours Increase in responsibilities	High work pressure	
Uncertain work schedule Bringing work concerns home Creating boundary with family Focusing more on work life	Impact in family life	Lack of boundaries between work and home
New home cleaning routines Mimicing hospital protocols at home	Copying mechanism	
Lack of organizational support Workplace communication Uncertainty Lack of managerial support Role of the managers Poor quality of work life	Poor management	Inadequate leadership
Feeling unsupported Lack of compensation	Lack of appreciation	
Self-care Mental health support Institutional resources Peer support Institutional support Psychological counselling	Interventions	

## 4.2 Interviews

One of the most common methods of data collection while conducting qualitative research is interviews. Several important studies have used qualitative interviews as a foundation of their research irrespective of the fields. (Edwards & Holland, 2013). Interviews can be one to one, focus group or narrative with the main purpose of finding out the feelings and experiences of the participants. Interviews can be of different types such as structured, unstructured, or semi-structured. (Holloway & Wheeler, 2010).

**Structured interviews:** Structured interviews are mainly used in quantitative studies including surveys. It usually consists of questionnaires which contain questions to be asked in the same specific order and way for everyone participating in the interviews. It provides an opportunity to gain the required information from a large number of participants. (Edwards & Holland, 2013). It provides comparable answers which can be measured. But despite having some advantages of using structured interviews, it lacks the opportunity of obtaining new information through dialogues in human conversations. It just provides the passive views and opinions of the participants, which were answered following the cultural norms and not the social upbringing. (Brinkmann, 2013). Hence, it lacks flexibility (Edwards & Holland, 2013).

**Unstructured interviews:** With the research topic and the aim of research in mind, the researcher interviews the participants without having the list of questions prepared. The goal here is to let the participants talk freely about the research topic using their own ideas and views. Usually, a single question is used to start the interview and the researcher might have a note of important areas as a reminder. (Edwards & Holland, 2013). Unstructured interviews are usually used to find out the life stories or experiences of the participants. It is very important for the researcher/ interviewer in unstructured interviews to listen to the participants without interrupting them unnecessarily. It is however allowed to ask them occasionally to clarify their story. (Brinkmann, 2013).

**Semi-Structured Interviews:** Dialogues are used to produce knowledge on the research topic with the researcher/ interviewer having the liberty to follow up on important angles and leads



in the conversation. The interviewer has the ability to become visible as a participant rather than being hidden and to guide the interview focusing on important areas unlike in unstructured interviews. (Brinkmann, 2013). Semi-structured interviews contain a guide to cover all the necessary areas, however, the sequence of the questions asked might differ from one participant to another depending on their responses to the questions (Holloway & Wheeler, 2010). It gives them flexibility on the order and sequence of the questions asked depending on the response of the participants. It also gives the participants freedom to give their opinions on their own terms. Semi-structured interviews provide room for comparison about the research topic. (Edwards & Holland, 2013).

Audio recording devices are usually used during qualitative interviews. Recording allows the interviewer to fully focus on the participant, listen to them and ask follow-up questions. Unlike taking notes, this avoids unnecessary distractions during the interview and the interviewer is able to maintain eye contact throughout it. Recording the interview also gives the advantage of recording their metaphors and expressed emotions and their verbatim quotes can be used when writing the research. (Edwards & Holland, 2013).

Ethical approval is usually required by most institutions to conduct the interviews for the research and the participants should be fully made aware of the aim of the research including possible benefits or risks of participating. Informed consent usually written consent is acquired from the participants before the interviews for ethical reasons. The participants are then made aware of their right of being able to withdraw from the interview at any point without any justification, their right to anonymity and confidentiality and the information of the interviewer is given in case of questions in the future. Permission is also asked from the participant for the interview to be recorded. (Edwards & Holland, 2013).

#### 4.2.1 Data Collection and Sampling

Data was collected by conducting one-to-one and semi-structured interviews with the selected participants. Recruiting companies have gained a lot of popularity in the healthcare sector

since the pandemic started as they have been providing nurses all over the country to fight the shortage of nurses. They also have a large number of nurses ranging from hundreds to thousands. Hence, instead of choosing nurses from a certain workplace or a ward, the author decided to choose the participants for the interview from one of the recruiting companies in the healthcare sector. The chosen recruiting company was “Kultaiset Hoitajat Oy” which has about 3000 nurses. Research permission was first gained from the founder and CEO of the recruiting company as shown in Appendix 2. A semi-structured interview guide was then prepared based on the research questions (Appendix 3).

The participants were selected through purposive sampling. Purposive sampling is a non-random and non-probability method of sampling. It is usually done in cases where, choosing participants randomly is not practical or effective. (Gideon, 2012; Tongco, 2007). Purposive sampling is used by researchers when they are aware of the traits of the target population and look for those who possess them. Hence, those people need to meet certain criteria to be included in the sample. In an ideal situation, the sample is selected randomly after identifying the people possessing those traits. (Gideon, 2012). It is very important to avoid bias during the selection of the sample to ensure reliability (Tongco, 2007).

After selecting the possible participants of the interview through purposive sampling, they were contacted through email and a written consent form was sent to them as shown in Appendix 4. After the participants gave the written consent for the interview, they were asked about a suitable date, time, and method for conducting their interviews. During the interview, after the initial introduction, the participants were once again asked for their oral consent as well as permission to record their interviews. They were also made aware of their ethical rights. The interviews were then conducted following the interview guide where the participants were allowed to lead the interview. A total of six nurses participated in the interviews and the participation was voluntary.

Table 3 shows the inclusion and exclusion criteria for the participants of the interviews.

*Table 3: Inclusion-Exclusion criteria for interviews*

<b>Inclusion criteria</b>	<b>Exclusion criteria</b>
Graduated nurses	Nursing students
Nurses who worked as frontliners during the pandemic	Nurses who didn't work as frontliners during the pandemic
Nurses working under the chosen recruiting company "Kultaiset Hoitajat Oy",	Nurses who are not working under the chosen recruiting company "Kultaiset Hoitajat Oy",
Nurses who speak English	Nurses who do not speak English
Nurses who gave written consent for the interview	Nurses who did not give their written consent for the interview.

#### 4.2.2 Data Analysis

The recorded interview data was first transcribed using Microsoft Word where the speech was converted into texts. After this, the author listened to the recorded data multiple times and compared it to the transcribed texts to make sure they are correctly transcribed. Content analysis was used to analyze the interview data as well with an inductive approach. The transcribed texts were read multiple times and codes were produced. The codes were then divided into categories finally leading to the production of themes.

Table 4 below shows the inductive content analysis process of the codes generated from the interview data.

Table 4: Inductive content analysis (Interviews)

<b>CODES</b>	<b>CATEGORIES</b>	<b>THEMES</b>	
Clear guidelines only in some workplaces	Uncertainty at work	Guidelines and resources at workplace	
New rules and regulations			
Constant changes in guidelines			
Lack of PPE			
Virtual meetings	Covid prevention strategies		
Putting PPE			
Frequent hand disinfection			
Strict rules at work			
High risk of getting covid	Fear of the unknown	Coronaphobia	
Not knowing what to expect			
Unpredictable			
Scared			
Scary experience			
Immediate shower after work	Personal hygiene measures		
Disposing work clothes			
Washing hands regularly			
Negative impact on social life	Social life		Impact in social life
Social distancing			
Felt responsible for everybody's health			
Personal life was affected			

Staying mostly indoors after work	Isolation	
Scared of transmitting the virus to loved ones		
Shortage of nurses	Less nurses	Heavy workload
Nurses on sick leaves		
Nurses testing positive for covid		
Thoughts about quitting	Work pressure	
Increase in patient to nurse ratio		
Time consuming		
Fatigue	Physical health	Strain in physical and mental health
Tired		
Exhausted		
Lack of energy at home		
Stressful	Mental health	
Anxiety		
Very challenging		
Mentally draining		
Feeling helpless		
Feeling of appreciation	Motivation and support	
Bonuses		
Got offered meals once or twice		
Support from leaders	Needs and requirements	
Guidance		
Help in maintaining work-life balance		
Extra nurses on the shift		

Using strengths of nurses		
Capable leaders		

### 4.3 Ethical Considerations

Ethics is very important in research to prevent any kind of potential misconduct during the research process whether it is related to the methodology or the presentation of the findings. Human rights and dignity are the foundation of research ethics, and the ethics should assess if the methods used are fit for the research, analysis of the data is adequate, and the results are accurately represented. (Correia, 2023). Ethics is related to morality and ethical guidelines help the researchers to consider as well as face the ethical challenges that come up in the research process. Although the guidelines do not offer advice on the ways of dealing with specific situations during the research process, they guide the researcher on confidentiality and other issues which might lead to misconduct in the research. (Wiles, 2012). Ethical considerations which were taken into account when conducting this research is further discussed in the chapter of discussion.

## 5. Theoretical Framework

The framework used in this thesis is the Job Demands-Resources theory. The Job-Demands Resources theory implies that the health of the workers as well as their motivation are results of health impairment and motivational processes. This theory states that all work environments can be classified by applying the following characteristics of a job: job demands and resources. (Demerouti & Bakker, 2022). In a nutshell, this theory describes the impact of these characteristics on the job performance of the workers via their wellbeing (Bakker, Demerouti & Sanz-Vergel, 2023). Job demands refer to the workload, stress, and pressure that workers are under while working, including work-life imbalance, which affects them not only physically but also mentally and emotionally. On the other hand, job resources refer to the

factors that aid workers in their self-growth by coping with the job demands. Examples of this include organizational support, good relationships with co-workers, feedback about their performances etc. (Demerouti & Bakker, 2022).

The relationship between job demands and resources is very crucial and for the jobs to be ideal, the job demands which are put on the workers should be reasonable along with the provision of necessary and enough resources to handle these demands. The higher the number of available resources, the less straining the job demands are. (Demerouti & Bakker, 2022). Personal resources are considered equally important as job resources according to this theory as they share a mutual relationship with each other, and personal resources also lessen the effects of job demands on the health and well-being of the workers. Examples of personal resources include self-esteem, being optimistic, having confidence and the ability to deal with difficult situations etc. This suggests the increase of job resources for workers with the increase in their personal resources and the other way round. The workers having more personal resources have reported to have more opportunities at work, gotten feedback on their performance as well as had growth in their careers. (Bakker et al., 2023).

This theory especially comes into play in a critical situation such as COVID-19 pandemic where everybody has been compelled to take measures for their safety whether it is a leader taking measures on organizational level or individuals on personal or family level. Hence, it is crucial to find the determining factors which affect the wellbeing of the workers as well as the survival of the organization. It has been demonstrated by the pandemic that the outcomes can be predicted by the interaction of demands with resources of various life domains. (Demerouti & Bakker, 2022). This theory also examines the influence of leaders on their workers. Transformational leadership has been found to bring positivity in the working environment as well as increase the performance of the workers by keeping the job demands low and resources high. In fact, leaders can also be considered as one of the job resources as they help the workers overcome obstacles and deal with their job demands. (Bakker et al., 2023).

Researchers can utilize this theory as a framework to identify the potential causes of poor health and decreased motivation of workers during the pandemic by paying attention towards their activities, social relationships, working environments as well as the way of doing things

in the organization. The next step is to understand the relevance and favourability of demands and resources in that particular work environment. Job demands if high and poorly designed, lead to the impairment of health causing health issues such as anxiety, exhaustion, depression etc. On the other hand, job resources lead to the motivation of the workers and boost their productivity. Hence, the combination of high job demands with low resources causes an enormous increase in the levels of fatigue and pessimism in the workers. (Demerouti & Bakker, 2022).

## 6. Findings

The findings are divided into two different parts. The first part of the findings will present the results from the systematic literature review and the second part of the findings will present the results from the interviews.

### 6.1 Findings of systematic literature review

Analysis of the chosen 12 articles using inductive content analysis resulted in the following five themes: Health and wellbeing, Sense of abandonment, Working conditions, Lack of boundaries between work and home and Inadequate leadership.

#### **Health and wellbeing**

Nursing is already a stressful job and working as a frontliner in the pandemic has not been easy. It has affected them physically, psychologically, and socially (Yayla & Eskici İlgin, 2021). The pandemic caused a shortage of nurses which then heavily increased the workload, working hours and responsibilities of the remaining nurses. This caused fatigue, exhaustion, and burnout in the nurses. (Jarrar et al., 2023). Most nurses also had fear of COVID-19 because of not having enough information regarding it, lack of enough resources such as personal protective equipment and uncertainty regarding the virus (Ahorsu, Lin, Marznaki & Pakpour,



2022). It was also very stressful for them to deal with a huge number of patient deaths under their care. This situation affected them mentally and caused stress, frustration, depression even PTSD, eventually affecting their work performance and quality of work life. (Heesakkers, Zegers, van Mol & van den Boogaard, 2023). On the other hand, they couldn't even focus on their personal lives due to ongoing job stress and burnout. Coping and adjusting to this new work environment with the risk of potentially getting infected as well as infecting their loved ones has been very challenging. They also lacked social support due to stigmatization regarding their job. (Sahay & Wei, 2021; Marsden, Robertson & Porter, 2022).

*“Nurses and midwives endured societal stigma, being regarded as COVID-19 vectors” (Marsden et al., 2022, p. 17).*

*“This indicates that fear of COVID-19 indirectly influences the mental health of emergency nurses through job stress, burnout or both” (Ahorsu et al., 2022, p. 1151).*

### **Sense of abandonment**

Being a frontliner during the pandemic came with the risk of potentially getting infected with the virus and the possibility of its transmission to their homes (Marsden et al., 2022). This raised concerns from their family members and friends who in turn kept their distance to protect themselves. Nurses who were already under stress and pressure from their work couldn't even relax with family and friends outside of their work in their personal time, which only led to their isolation. Many healthcare professionals by their own choice also decided to stay away from their families to protect them from the virus and arranged different accommodation options. (Kovner et al., 2021). Due to this, they also felt guilt towards the family members by not being able to spend time with them, having to avoid them and and guilt towards their spouse by burdening them with extra responsibilities, for example childcare (Sahay & Wei, 2021). Therefore, this stigmatization, getting isolated from social relationships as well as voluntary distancing created sense of abandonment and became one of the challenges in maintaining work-life balance (Marsden et al., 2022; Kovner et al., 2021; Sahay & Wei, 2021).

*“They described physical barriers and self-isolating from family to prevent transmission from work to their loved ones” (Marsden et al., 2022, p. 18).*

*“This daunting task is complicated further by concerns not only about personal risk but also worry about infecting family members and others in their social network” (Kovner et al., 2021, p. 750).*

### **Working conditions**

Working conditions have played a huge role in the disruption of work-life balance of frontline nurses during the pandemic. Frontline nurses had to work overtime with heavy workload and additional responsibilities. Work schedules were also uncertain and irregular. (Sperling, 2021). There was shortage in the number of nurses due to sick leaves or quarantine. Many of the nurses also belonged to the risk groups and therefore being unable to work as frontliners. (Marsden et al., 2022). The nurses faced anxiety and frustration due to the uncertainty related to the virus and lack of knowledge on how to treat the patients (Bitencourt et al., 2022). Adequate training was not provided to the nurses working as frontliners even though they lacked the knowledge, skills, and experience to do so. There was limited personal protective equipment to protect themselves from the virus, the risk of contamination was huge, guidelines were insufficient and there was minimum to no support from the organization. (Sperling, 2021). Due to this, they experienced mental health problems (Heesakkers et al., 2023). They were not able to provide high quality care to the patients or meet their expectations. This resulted in ethical dilemmas and job stress, eventually leading to low job satisfaction and high turnover intentions. (Hwang, 2022; Sperling, 2021).

*“Nurses who worked fourteen hours reported higher anxiety, depression, fatigue and sleepiness than those working eight hours or less” (Jarrar et al., 2023, p. 127).*

*“Nurses’ heavy workload during the pandemic may negatively affect their work–life balance” (Yayla & Eskici İlgin, 2021, p. 7).*

### **Lack of boundaries between work and home**

As very little was known about the virus, there was a continuous flow of information from work to home by the nurses as well as trying to mimic the hospital protocols at home. Trying to explain the medical protocols as well as trying to adapt them at home only confused the family members and led to frustration. On the other hand, the nurses were sharing these frustrations and their worries about their personal lives with their coworkers. Many also felt fear of infecting family members but also guilt over not being able to spend their time with them and putting a burden on their spouses with family responsibilities and childcare. Likewise, they would bring work concerns home and discuss the situations which were stressful to them at work. They couldn't stop thinking about their patients and whether they would make another day or not, hence causing disruption in work and home boundaries. (Sahay & Wei, 2021). On one hand, the nurses seemed to have focused more on their work life compared to their personal life during the pandemic (Yayla & Eskici İlgin, 2021). But on the other hand, disruption of work-life balance caused due to job stress also led to job withdrawals in order to preserve their personal resources (Liu, Yuan, Ji & Song, 2022).

*“From pre-COVID-19 to during COVID19 surges, the incidence of CRNAs experiencing conflict between work and personal responsibilities increased by 143%” (Lea, Doherty, Reede & Mahoney, 2022, p. 145).*

*“Despite the fact that this moment highlights and appreciates the profession, nursing professionals are overloaded and exhausted by the COVID-19 pandemic, with repercussions on professional and personal life” (Bitencourt et al., 2022).*

### **Inadequate leadership**

Communication within the team and guidelines from the organization are very important for the nurses during the time of pandemic in order to provide good quality care to the patients meanwhile also protecting themselves from contamination. However, they were found to be lacking during the pandemic. (Marsden et al., 2022). The frontline nurses were not provided with adequate information or training required for the job, causing confusion and frustration

(Sperling, 2022). The infection control processes were inconsistent, and resources as well as facilities were lacking along with the training to use them (Marsden et al., 2022). The nurses felt unsupported and were not acknowledged for their hard work. They had to work irregular hours and overtime without proper compensation, they were understaffed, and their vacation days were also canceled. (Hwang, 2022; Marsden et al., 2022). This led to several health issues such as burnout, fatigue, and mental health issues in the nurses (Heesakkers et al., 2023).

*“The increased quarantine measures led to an increased workload for nurses, and the lack of compensation led to high job stress and, therefore, poor quality of work life” (Hwang, 2022, p. 10).*

Hence, the role of the leaders is essential during the pandemic. Many felt a sense of relief when they were listened to by their managers and were provided with necessary support as well as resources including personal protective equipment. This was found to decrease frustration, anxiety as well as burnout in the nurses and increase job satisfaction. (Lea et al., 2022). However, they lacked motivation and team spirit and felt a sense of powerlessness if they weren't listened to or had any influence in the working environment. There is also a need for interventions to support mental health of the frontline nurses to prevent burnout, and mental health problems in order to decrease turnover intentions as well as to provide high quality care to the patients. (Heesakkers et al., 2023; Liu et al., 2022).

*“Our research suggests that employers and health-managers do not employ strategies for promoting work conditions and allowing a better fit between nurses' personal needs and their work demands in times of pandemics” (Sperling, 2021, p. 12).*

*“Second, managers should pay more attention to nurses' work stress caused by the COVID-19 pandemic, monitor the level of psychological distress regularly, invite professionals to conduct psychological counseling and teach nurses skills to deal with stress” (Liu et al., 2022, p. 7).*

## 6.2 Findings of interviews

A total of six nurses participated in the research interview. The interviews were transcribed on 30 pages. Each of the interviews lasted an average of 25 minutes. Three of the participants were male nurses and three were female nurses. All of them had experience working as a frontliner during the pandemic. The mean age of the nurses was 34 years, and they had a working experience of 6 years in average as a nurse in Finland. As the nurses were working through a recruiting company, they had worked in multiple workplaces during the pandemic with short contracts. Hence, their experience consists of working as a frontliner in many different workplaces in the capital area of Finland during the pandemic. All interview participants were fluent in English language.

The analysis of the interview data led to the production of six themes: Coronaphobia, Strain in physical and mental health, Impact in social life, Heavy workload, Guidelines and resources at workplace and Organizational factors.

### **Coronaphobia**

The participants exhibited fear of the virus which was fairly unknown to the world. They did not know what to expect and described their experience working as a frontliner as scary. They were aware of having a high risk of getting infected at work. They tried their best to follow the hygiene protocols at home too, which they learned at work. From constantly taking care of hand hygiene and disinfecting surfaces at home to avoiding public transport, they tried different strategies to protect themselves. Some of the participants also distanced themselves from others in fear of getting the virus.

*“Just the fact that we didn't know what was going to come from working and taking care of people during the pandemic, yeah. I mean it was a scary experience not knowing what to expect. Of course, it affected my personal life.”*

*“In the beginning, when the client became sick with COVID, I felt like I needed to quit because I didn't know what was COVID and the impacts of COVID”*

*“Of course, we have to wash and take a shower after work. You have to be more precautious in leaving your clothes. You don't just throw them away. You have to take them and dispose them or put them in the right place so that they don't contaminate the environment or the home area where you live.”*

### **Strain in physical and mental health**

Working during the pandemic, especially as a frontliner taking care of COVID patients, was not an easy task. The participants reported having physical as well as mental problems due to their role as a frontline nurse in the pandemic. On one hand, not knowing what to expect at work, constantly changing guidelines, pressure from the patients and the leaders as well as feeling helpless for not being able to help the dying patients led to mental problems in the participants such as stress and anxiety. On the other hand, high workload, pressure and working irregular hours due to the shortage of nurses at work led to fatigue and exhaustion.

*“Yes, the work was very hard physically and psychologically. It took our strength and energy. When I returned home, I had no more energy for anything, and I just wanted to go to bed and sleep.”*

*“Mentally it was draining as well because you wouldn't know exactly what to expect at work. You don't know what you're facing every day.”*

*“I felt helpless, you know, because you know that you're doing everything you can, but this person is not going to make it and then most of the time, you're right.”*

*“You know, because when you have patients that are having difficulties with breathing, and they are sick. Of course, the empathetic side of the nurse comes out and can bring stress and pressure.”*

## Impact in social life

The social life of the participants was impacted negatively due to their role as a frontliner during the pandemic. They were scared of getting the virus from work and transmitting it to their loved ones. The wives of two of the participants were also pregnant during the pandemic making this experience even scarier. Hence, they strictly followed the hand hygiene protocols and some of them even opted for voluntary isolation to prevent others from getting the virus. Getting COVID from work and having to self-quarantine was another challenge they faced. One of the participants even felt responsible for protecting everybody's health.

*"I would feel like, well, if I go home, I might spread the virus because you won't know whether you have it or you don't. It was just like trying to isolate and trying to stay in to avoid spreading or catching the virus."*

*"I pay extra attention just to protect myself and of course protect my family. So, when I get back from work immediately, I go to shower and clean my clothes and luckily also, I didn't really use public transport during those times. I use my personal car so it's a way to avoid so much contact with people in the public places."*

*"I got a message from work that there was an exposure. And so, I needed to go and get tested and the very next day when I went to get tested, I felt a bit of a sore throat. And then when I got tested, it came back positive. The hardest part was staying home for 10 days. That was hard."*

*"It was difficult for me. All of a sudden, social life disappeared but I tried to live with the change."*

## Heavy workload

All participants agreed that their workload heavily increased during the pandemic. The main cause of this was the shortage of nurses. Sick leaves of nurses were one of the reasons for the shortage of nurses. Many of them got sick with COVID and had to quarantine themselves which

decreased the number of nurses in the shift, increasing workload for the rest. One of the participants also mentioned that their workplace also cut down the number of nurses, increasing the work pressure for the rest. Similarly, the participants also mentioned that following different guidelines and hygiene protocols as well as the use of PPE was time consuming and increased their workload.

*“The workload increased in the sense that you are taking care of patients who are COVID positive. You need to put the PPEs. Well, there are a lot of things that you have to do before you meet the patient that you were not doing before.”*

*“On the other side, the workload increased in terms of the patient to nurse ratio in the sense that there were a lot of sick absenteeism due to sickness from colleagues. So that means we had to improvise. If you were supposed to take care of six patients, you end up taking 9 because two of the staff members have called in sick, they have tested positive. That had a huge impact in terms of the workload.”*

*“Pandemic increased the workload. I especially remember when I did homecare, many nurses were actually on sick leave. So then of course, if someone doesn't come for the shift, then those ones who are in the shift they had to take the extra clients.”*

*“Yeah, I think in the beginning the workload was manageable and then at some point when they tried to cut down on the nurses, the workload increased. And also, when they were trying to minimize the time especially for the break.”*

### **Guidelines and resources at workplace**

The guidelines and personal protective equipment also played an important role in the work life of the participants. During the pandemic, the guidelines were changing constantly, which affected the nurses mentally because they did not know what to expect. This made the work experience scary and stressful. They were unable to plan their work shift beforehand because the guidelines were changing constantly. Hence, they had to learn and get acquainted with the new information and guidelines. Some workplaces provided the nurses with updated



information on a regular basis while in others, the participants had to be self-dependent and learn by themselves. Similarly, some workplaces had a good supply of PPE to protect the nurses while others were lacking, especially during the beginning of the pandemic. The work experience in the workplaces with proper supply of PPEs and updated guidelines were described as positive by the participants.

*“It was draining in a way. Especially you know, you go to work every day, you are finding new rules, new regulations governing the pandemic. So, a lot of changes were happening, and it was something that wasn't predictable.”*

*“But now when you come to work, you need to be observant of the new regulations that have been passed from the Minister of Health Department. So, those changes made it impossible for you to even plan your day.”*

*“First of all, it was scary in the sense that the COVID pandemic was unprecedented. So, we did not know what to expect. Information was changing. It was stressful because you have to adjust to new precautionary measures you have and you have to adjust to new rules of hygiene, new rules of taking care of people and new rules of educating people.”*

*“There was quite a lot of new information, keeping a distance from colleagues, eating alone, losing social life, wearing a mask during working hours which was very difficult!! Also, frequent hand disinfection.”*

### **Organizational factors**

Most of the participants mentioned having good leaders at their workplaces during the pandemic and agreed with the fact that it helped them to maintain their work-life balance. They were happy when they felt supported and appreciated at work. One of the participants mentioned getting a meal card once or twice during the pandemic as a token of appreciation which was not much but the participant was happy to be noticed for their hard work. One other participant mentioned that during a hard time like COVID pandemic, some bonuses

would have been nice to get as appreciation. The participants understood that not everything was under the control of the leaders as they were also waiting for the information to be passed to them from their employers but having the support of their leaders gave them power to push through the pandemic. They also mentioned some of the qualities they wanted in their leaders such as being capable and supportive, passing updated information to the nurses, open communication as well as using the strengths of nurses at work.

*“Sometimes they were supportive. Sometimes they would even offer you meals. You go to the restaurant with these cards and eat for free. But it was just, I think once or twice.”*

*“You can't use one brush to paint everyone. People react differently to different situations, and you have to look at the strengths of every person you have in your team and use their strengths to help the situation so. If somebody is good at dealing with emergencies, then you don't expect everyone else in the team to be as good.”*

*“I would prefer a leader who knows how to do things according to the rules and listens to employees and handles/solves their problems.”*

*“From the leader, I expect to be guided, give information that will help us to understand what is going on and how we're supposed to carry our duties.”*

*“I think like they could have done something better like paying some bonuses.”*

## 7. Discussion

The aim of this thesis was to increase the understanding of the impacts of COVID-19 pandemic and change attitude towards the work-life balance of nurses working as frontliners. The discussion part is divided into two parts. The first part of discussion is about the results and the second part of discussion is about the methods used in the thesis.

## 7.1 Discussion of results

The results of both systematic literature review and interviews were similar to each other and indicated that the challenges they faced to maintain their work-life balance working as frontliners during the pandemic were mainly physical and mental health issues, social exclusion and feeling of abandonment, fear of COVID, working resources and guidelines, heavy workload as well as organizational factors such as inadequate leadership. Figure 2 below shows the findings of both systematic literature review and interviews.

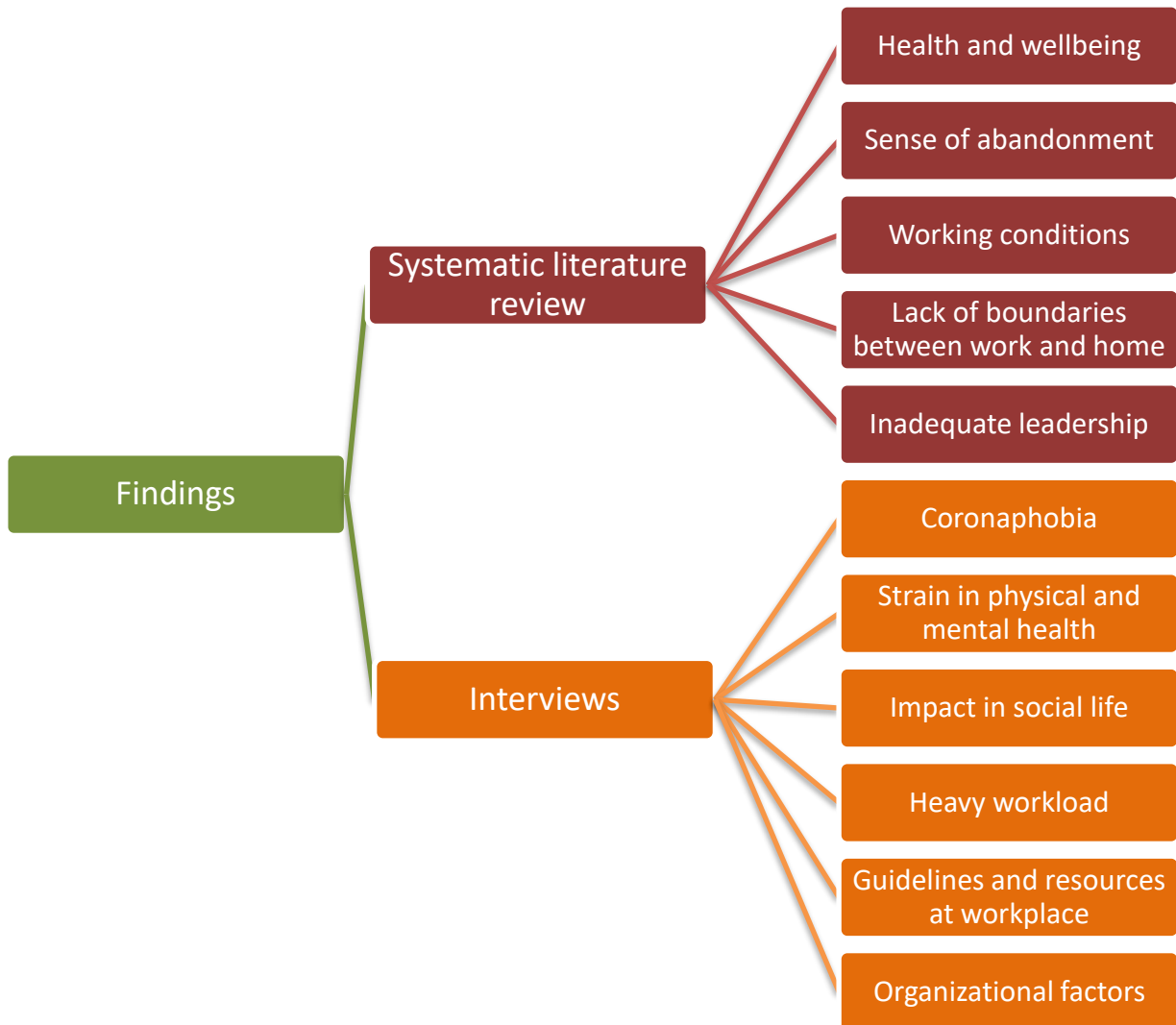


Figure 2: Findings of systematic literature review and interviews

The frontline nurses were found to be stressed, exhausted, and overworked. They also struggled with mental health issues such as anxiety, depression and PTSD which resulted from fear of COVID, insufficient resources and guidelines at work. They were stigmatized and excluded socially due to their close proximity with the COVID patients as there was a possible risk of transmission of the virus to them. There was also shortage of nurses during the pandemic as the nurses who belonged to the risk groups did not work as frontliners to protect their own health and the nurses who were working as frontliners were often in sick leaves due to getting infected with COVID and having to be in quarantine.

The findings of this thesis were found to be similar to the previously conducted studies on frontline nurses during the pandemic. According to Shen et al. (2020), frontline nurses working in ICU in China faced mental health challenges such as anxiety, depression, and even suicidal thoughts due to heavy workload, stress, exhaustion as well as countless death of their patients. They also feared about the possible transmission of the virus to their families. Similarly, Güney Yılmaz et al. (2021) found out that the occupational balance of healthcare professionals has been disrupted during the pandemic as they spent more time at work and less time with their families and its effects on their health and wellbeing.

The role of the leaders was found to be important in helping the nurses maintain their work-life balance as the support and feeling of appreciation from the leaders and the organization was very important to the nurses along with keeping them up to date with the changing guidelines as well as providing them with necessary resources and equipment. The role of the leaders in supporting the struggling nurses during the pandemic has also been pointed out by Greenberg et al. (2020) to preserve the mental health of the nurses. Unfortunately, the frontline nurses were not given proper guidelines and also did not have sufficient personal protective equipment to protect themselves from getting infected while providing care to the COVID patients. Communication was also lacking within the organization as well as the support from the leaders. These factors influenced the quality of care provided to the patients and overall job satisfaction of frontline nurses. Dimino et al. (2020) also recommended steps to be taken by leaders such as participating in leadership training to strengthen their leadership skills, providing support to the nurses and making them feel appreciated, providing resources needed as well as mental health services.

Job Demands-Resources theory was used as a theoretical framework for this thesis. During the pandemic, the job demands were high, but job resources were low which resulted in the above-mentioned challenges in maintaining the work-life balance of the frontline nurses. Job demands during the pandemic were heavy workload, high work pressure, irregular working hours etc. whereas job resources were receiving support from the leaders, feeling of appreciation, provision of PPEs and guidelines etc. Personal resources which have a mutual relationship with job resources are self-esteem, self-confidence, optimism etc. which were also low in the frontline nurses during the pandemic. As the theory implies, the workplace is only ideal if the job demands were to be low and resources high. Hence, these characteristics of job led to the impairment of health of the frontline nurses along with affecting their motivation causing low job satisfaction and high turnover intentions. This theory also considers the leaders as resources as they have an influence on their workers and can have either positive or negative effects on them.

## 7.2 Discussion of methods

Systematic literature review and interviews were used as data collection methods. Although two different methods were used, they produced similar findings. Twelve scientific articles were chosen for the systematic literature review and six nurses participated in the interviews. The chosen scientific articles addressed the issue on a global level as those studies were conducted in many different countries such as Australia, Netherlands, China, Turkey, USA etc. whereas the participants of the interviews, despite being from different cultural backgrounds, were all from Finland and their experience came from working as frontline nurses in Finland.

Ethical considerations were also followed when conducting the research. To conduct the interviews, research permission was taken from the employer of the participants as shown in appendix 2 and then informed consent was taken from the participants before the interview as shown in appendix 4. The informed consent form gave clear information about the thesis topic along with its aim and research questions. Their participation in the interviews was voluntary and they were allowed to withdraw at any point without having to justify their

actions. They were also asked for oral consent at the beginning of the interview to participate along with permission to record it. Their identities have been kept confidential and no identifying data have been used in this thesis.

According to Elo et al. (2014), trustworthiness of qualitative research is often assessed by evaluation criteria such as credibility, dependability, conformability, transferability, and authenticity. For credibility, the author believed that the sample size of 12 scientific articles for systematic literature review and 6 participants for the interviews were appropriate sample sizes, as the research is a combination of two different data collection methods, but the sample size could have been bigger than this. The participants of the interviews were properly observed and interacted with during the interviews (Connelly, 2016) and the data was also read repeatedly to ensure its proper interpretation (Elo et al., 2014). Dependability refers to the consistency and reliability of the findings meaning the data should be stable in the course of time and under various circumstances (Elo et al., 2014). The findings of this thesis have been similar to the previous studies done on the topic. The author has tried their best to prevent bias and truly represent the results gained from both data collection methods to ensure conformability. For this purpose, direct quotations have been used from the chosen articles for systematic literature review as well as the interviewees. As the pandemic has not only impacted frontline nurses but the whole population, the author believes that the findings of this thesis can also be transferred to other settings especially the role of the leaders in helping their employees to maintain work-life balance. The author has also tried their best to ensure authenticity of the findings by paying special attention to the data analysis process.

## 8. Conclusion

COVID-19 pandemic has brought a lot of changes and has resulted in the deaths of millions of people all around the world. Working as a frontline nurse during the pandemic has been very challenging and it has also affected their work- life balance. This thesis attempted to find the challenges faced by frontline nurses during the pandemic to maintain their work-life balance and the role of the leaders in helping them to maintain their work-life balance. The results

produced from systematic literature review as well as semi-structured interviews were very similar to each other.

The main challenges faced by the frontline nurses during the pandemic were related to their overall health and wellbeing as the pandemic affected them physically, mentally as well as socially. They experienced fatigue and exhaustion due to the working conditions such as shortage of nurses, working overtime as well as irregular hours. Similarly, they were mentally drained and stressed. Losing a lot of patients to COVID and not being able to help them led them to frustration and depression. On the same hand, they were also scared of the virus because they did not know what to expect and the possible impacts of the virus on their own health. Nurses were also stigmatized because of their job and people feared of possible transmission of the virus from the nurses. Hence, the nurses also had to face isolation. On the other hand, nurses themselves also arranged temporary accommodation to protect their family members and loved ones from possible transmission.

The frontline nurses also had heavy workload and work pressure due to the shortage of nurses caused by countless sick leaves and quarantine period. Many nurses also quit their jobs because of coronaphobia or because of belonging to high-risk groups to protect their own health. Adequate training was not provided to work with COVID patients and there was a lack of personal protective equipment. Due to this, the nurses could not provide high quality care to the patients which caused stress to them and eventually decreased their work satisfaction.

The nurses were also continuously trying to mimic the hospital protocols at home whether it is related to personal hygiene or the cleaning and disinfection at home. Some of them even opted to stay mostly indoors, cleaned the handles of doors and surfaces at home constantly and even avoided public transport. They also shared their work life and worries related to it with their family members. Even at home, they couldn't stop thinking and worrying about their patients who were in critical condition at work. Likewise, they also felt guilty for not being able to spend time with their family and loved ones as well as for possibly infecting them. This affected their personal life.

Systematic literature review as well as the interview data showed that the leaders played an important role in helping the nurses maintain their work-life balance. Open communication

with the nurses, provision of updated COVID guidelines as well as personal protective equipment, adequate training related to the care of COVID patients, and the use of PPE were the requirements of nurses from their leaders in order to provide good quality care to the patients and to maintain their work-life balance. Similarly, the nurses also craved support and appreciation from the leaders which motivated them in pushing through the pandemic. However, they were found to be lacking during the pandemic. Unfortunately, the frontline nurses did not get support, adequate training or proper guidelines from the leaders which affected their work-life balance. The participants of the interview who had capable and supporting leaders at their workplace mentioned having less to no impact on their mental health and overall positive experience at workplace. However, the participants who did not have a supporting leader and was not given necessary guidelines on protecting themselves and taking care of COVID patients reported coronaphobia, mental health issues as well as difficulty in maintaining work-life balance.

Hence, it was found that the nurses faced different challenges during the pandemic working as a frontliner which also affected their work-life balance, and the leaders played an important role influencing their work-life balance. The nurses were in need of a capable leader who understands and supports them during difficult times and provides necessary help to them. The nurses did not feel appreciated for their work. Therefore, the leader should be able to recognize their hard work and make them feel appreciated. They also wanted proper guidelines and enough resources to do their job. As there was shortage of nurses during the pandemic resulting in physical and mental problems in the nurses, it is also very important to address such issues and develop strategies to prevent this in the future. The leaders should also prioritize the health and wellbeing of the nurses and provide occupational health services as necessary and raise awareness about mental health issues.



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## Appendix 1: Articles Overview

<b>Year and Title</b>	<b>Aim</b>	<b>Target group</b>	<b>Method</b>	<b>Result</b>
(2022) Factors Affecting the Quality of Work Life of Nurses at Tertiary General Hospitals in the Context of the COVID-19 Pandemic	To identify factors affecting work stress, turnover intention, mindfulness, and quality of work life in nurses working in tertiary general hospitals	Nurses with clinical experience of more than 6 months working in tertiary general hospitals	Questionnaires distributed through an online google survey. SPSS/WIN 26.0 program was used for data analysis	Work satisfaction, job stress and turnover intention were identified as factors which affects the quality of work life
(2022) Stressors, manifestations, and course of COVID-19 related distress among public sector nurses and midwives during the COVID-19 pandemic first year in Tasmania, Australia	To describe the prevalence and severity of anxiety, depression, post-traumatic stress disorder (PTSD) and insomnia and to examine their associations with stressors within the work, home and social environment, among nurses and midwives.	Public sector nurses and midwives	Longitudinal, mixed methods online survey was used for data collection consisting of several psychological tests. Data was analyzed by using logistic regression and use of themes	Psychological distress was found in the participants caused mainly by stress from home and family as well as poor clinical team support

<p>(2022)</p> <p>The association between fear of COVID-19 and mental health: The mediating roles of burnout and job stress among emergency nursing staff</p>	<p>To examine the mediation roles of burnout and job stress in the association between fear of COVID-19 and mental health among emergency nurses</p>	<p>Emergency nurses. Most of the participants were females and married</p>	<p>Cross-sectional survey</p>	<p>Fear of COVID-19 was found to be directly and indirectly related to the mental health of the nurses as well as mediators. Mediators were also found to be directly related to the mental health of the nurses.</p>
<p>(2023)</p> <p>The Impact of the Working Hours Among Malaysian Nurses on Their Ill-Being, Intention to Leave, and the Perceived Quality of Care: A Cross-Sectional Study During the COVID-19 Pandemic</p>	<p>To explore the effect of working duration on nurses and their ill-being (ie, anxiety, depression, fatigue, and sleepiness), intention to leave, and the quality of nursing care</p>	<p>Nurses working at Malacca General Hospital in Malaysia</p>	<p>Cross-sectional study with questionnaire survey</p>	<p>The number of working hours of the nurses was found to be significantly related to their ill being, quality of care provided to the patients as well as their intention to leave.</p>
<p>(2023)</p> <p>Work-Family Balance and Managing Spillover Effects Communicatively during COVID-19: Nurses' Perspectives.</p>	<p>To find how work and family boundaries impact nurses working directly with COVID-19 patients</p>	<p>Recruitment of nurses using snowball sampling</p>	<p>Semi-structured interviews and thematic analysis</p>	<p>Boundaries between work life and family life was found to be blurred due to anxiety and fear of contagiousness</p>

<p>(2021) Nurses' challenges, concerns and unfair requirements during the COVID-19 outbreak</p>	<p>To examine concerns, threats, and attitudes relating to care provision during the COVID-19 outbreak among nurses in Israel.</p>	<p>Registered nurses along with fourth-year nursing students from Israel</p>	<p>53-item questionnaire which also consisted of four open-ended questions</p>	<p>Nurses were scared of contracting the virus. Their other concerns included working conditions, dilemmas regarding the care of patients, relationships with colleagues as well as uncertainty regarding the future</p>
<p>(2022) Relationship between risk perception of COVID-19 and job withdrawal among Chinese nurses: The effect of work–family conflict and job autonomy</p>	<p>To examine the mediating role of work–family conflict and the moderating role of job autonomy on the association between risk perception of COVID-19 and job withdrawal among Chinese nurses during the initial disease outbreak.</p>	<p>Chinese nurses working in 11 different COVID-19 designated hospitals selected by convenience sampling</p>	<p>A two-wave study survey was conducted from March through April 2020.</p>	<p>Job withdrawal of nurses was influenced by risk perception of COVID-19 because of work-life conflict. Job autonomy amplified this relation.</p>
<p>(2022)</p>	<p>To examine the relationship</p>	<p>CRNAs practicing in</p>	<p>Electronic survey was used to</p>	<p>The main predictor of</p>

<p>Predictors of Burnout, Job Satisfaction, and Turnover Among CRNAs During COVID-19 Surging</p>	<p>between demographic factors, job characteristics, relations between Certified Registered Nurse Anesthetists (CRNAs) and administration, and conflict between work and personal responsibilities using structural equation modeling to determine levels of burnout, job satisfaction, and turnover intention among CRNAs during COVID-19 surges.</p>	<p>Massachusetts and Texas</p>	<p>collect data from the nurses. 3 different instruments were used as data collection tools which were JDS, OBI and CRNA organizational climate questionnaires.</p>	<p>burnout in CRNA was found to be their prioritization of work life over personal life. Burnout levels were also found to be related to job satisfaction of CRNAs and their turnover intention.</p>
<p>(2021) The relationship of nurses' psychological well-being with their coronaphobia and work-life balance during the COVID-19 pandemic: A</p>	<p>To determine the relationship of nurses' psychological well-being with their coronaphobia and work-life balance during the COVID-19 pandemic.</p>	<p>Nurses who were working in a Health Application and Research Center located in Turkey.</p>	<p>Google forms were used for collection of data. The forms used were: - Sociodemographic Characteristics Form - COVID-19 Phobia Scale</p>	<p>Coronaphobia in nurses ranged from mild to moderate levels and their psychological wellbeing was found to be mostly</p>

cross-sectional study.			- Work–Life Balance Scale - Psychological Well-Being Scale.	affected by neglect of life which was accompanied by coronaphobia and work-life balance.
(2022) Creating spaces for care for nurses working in the pandemic in light of the nursing processes	To make a dialog about the nursing professionals' perception regarding how they cope with COVID-19 and the repercussions on their practice and personal life.	Nurses with working experience of minimum one year in hospitals	Participatory action research carried out through culture circle. Snowball sampling method was used.	It was recognized by the nurses that despite the appreciation gained by their profession due to their role in the pandemic, there is no denying that it has been exhausting, they have been overloaded and their personal and professional lives have been negatively affected.
(2021) The psychosocial impact on frontline nurses of	To investigate the personal and contextual factors	Nurses working at NYU Langone Health	95-item internet based survey was used to collect	Depression and anxiety in nurses were found to be

<p>caring for patients with COVID-19 during the first wave of the pandemic in New York City</p>	<p>associated with the psychological functioning of nurses responding to COVID in the New York City area.</p>	<p>System which consisted of 4 different hospitals in New York City</p>	<p>cross-sectional data</p>	<p>related to their level of care for patients with COVID as well as their work-home conflict. Support from work colleagues as well as family and friends and adequate training to use PPE were the factors aiding them in continuing to care for COVID patients.</p>
<p>(2023) Mental well-being of intensive care unit nurses after the second surge of the COVID-19 pandemic: A cross-sectional and longitudinal study.</p>	<p>Mental well-being of intensive care unit nurses after the second surge of the COVID-19 pandemic: A cross-sectional and longitudinal study.</p>	<p>Dutch nurses working in intensive care unit</p>	<p>Online survey</p>	<p>Compared to the data after the first surge of COVID-19, it was reported that the symptoms of mental health in the nurses was still high and work-related fatigue was found to be noticeably worse. The only factors that appeared to be related to lower</p>

				symptoms were self-confidence, availability of holidays upon request of nurses and their good work-life balance.
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## Appendix 2: Research Permission

Hi!

My name is Aishwarya Gauli, and I am a master's degree student at Novia University of Applied Sciences. I am currently writing a thesis about the work-life balance of frontline nurses during the pandemic. The aim of this master thesis is to increase knowledge and understanding of the impacts of COVID-19 pandemic on the work-life balance of nurses working as frontliners.

My research questions are as follows:

- What are the challenges faced by frontline nurses to maintain work-life balance during COVID-19 pandemic?
- How can a leader take the challenges into account in their leadership?

Hence, for this research purpose, I would like to interview about 5-8 nurses working under your company "Kultaiset Hoitajat Oy" about the challenges they faced during the pandemic working as a frontliner and the role of the nursing leaders in helping them to fight the challenges and maintain their work-life balance. The interviews will be conducted through TEAMS. Participation in the interviews will be voluntary and the participants will have the right to discontinue their participation at any time without justifying their actions. The interviews will be recorded and then analyzed. The ethical principles will be followed and the information regarding the participants will be anonymous. The recorded data will be treated with confidentiality and then later discarded after the completion of my thesis. The thesis will be published in Theseus database.

I am hereby seeking your permission to go forward with the interviews.

Thank you for your time and consideration. Hope to hear from you soon.

Best regards,  
Aishwarya Gauli  
Novia University of Applied Sciences



## Appendix 3: Semi-structured Interview Guide

1. Please tell me about yourself (gender, age, education, year of experience as a nurse, year of working in this workplace)
2. How did you feel working as a frontliner during the pandemic?
3. Were there any significant changes in the way of working at your workplace after the pandemic started?
4. Did your workload increase?
  - a. If yes, how did it affect you?
5. How was the work-pressure?
  - a. Was there a shortage of nurses or equipment?
6. What kind of Covid-19 infection prevention guidelines did your workplace provide during the pandemic?
  - a. Were the guidelines about Covid-19 clear?
7. Did you face any mental challenges due to your role as a frontliner in the pandemic?
8. Did your role as a frontliner in the pandemic affect your personal life?
  - a. If yes, how?
9. How did you balance your personal life and work life during the pandemic?
10. Did you feel supported and appreciated by your leader at your workplace?
  - a. If yes, in what way?
11. What were your expectations from your leaders?
12. Is there anything that you would want to add?

Thank you!

## Appendix 4: Informed Consent Form

# Informed Consent Form

Dear Sir/Madam,

My name is Aishwarya Gauli and I am a master's degree student of healthcare and social services at Novia University of Applied Sciences. I am currently writing my master's thesis and the topic of my thesis is work-life balance of frontline nurses during the pandemic.

I am sending this informed consent form to ask for your written consent to participate in an interview with me regarding my thesis topic which will probably last about 20-30 minutes. I also wish to record the interview session for analysis purposes. The participation in the interview is voluntary, and you have the right to withdraw at any point without having to provide justification. Please read the information below about my thesis and choose one of the options at the end of the consent form.

**Aim of the thesis:**  
To increase knowledge and understanding of the impacts of COVID-19 pandemic on the work-life balance of nurses working as frontliners.

**Research questions:**  
- What are the challenges faced by frontline nurses to maintain work-life balance during COVID-19 pandemic?  
- How can a leader take the challenges into account in their leadership?

**Anonymity and Confidentiality**  
The information regarding the participants will be anonymous. Personal identifying information will not be asked during the interview. The recorded data will be treated with confidentiality, and will be accessed by me and my supervisor. The recorded interview will be used solely for this research and will be stored until the thesis will be presented and accepted. All the material will be then destroyed. You can access the thesis in <https://www.theseus.fi/>.

Thank you for your time and consideration. Hope to hear from you soon.

Best regards,  
Aishwarya Gauli, email: [aishwarya.gauli@edu.novia.fi](mailto:aishwarya.gauli@edu.novia.fi)  
Novia University of Applied Sciences  
Supervisor: Rika Levy-Malmberg, email: [rika.levy-malmberg@novia.fi](mailto:rika.levy-malmberg@novia.fi)

**\* Required**

1. Please confirm one of the following: \*

I do not agree to participate in the interview

I agree to participate in the interview and give permission for the interview to be recorded

Submit

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