



Work life balance of female pilots with children in Finland

Kata Koskinen

Haaga-Helia University of Applied Sciences

Bachelor of Business Administration, Aviation Business

Thesis

2024

Abstract

Author Kata Koskinen
Degree Bachelor of Business Administration, Aviation Business
Thesis Title Work life balance of female pilots with children in Finland
Number of pages and appendix pages 47 + 4
<p>The purpose of this paper is to clarify the position of Finnish women in aviation and find out how to make the industry more attractive to them in terms of both work and family life. The aviation sector continues to exhibit an absence of equilibrium in gender representation, indicating a persistent lack of gender diversity. The proportion of female pilots among all pilots is less than six percent worldwide (2021). In Finland, we still remain considerably beneath this number.</p> <p>The commissioner of the thesis is The Ninety Nines Finnish Section. The Ninety Nines Finnish Section is a subdivision of the international organization The Ninety Nines. The Ninety-Nines Finnish Section has seventy-seven members in 2024.</p> <p>Both written and electronic literature, articles and research were used for the theoretical framework. Similar studies from other countries, albeit on a slightly different topic, were used to compare the results. For this study, four semi-structured interviews were conducted, in which female pilots working in two Finnish airlines were interviewed. Material-based content analysis was used to analyse the answers.</p> <p>Based on the results, findings and development proposals were created. Most of the recommendations were related to managing one's own life through rosters, days off and vacations published by the employer. Even moderately easy to implement improvements could affect the well-being of employees. Savings measures and the pursuit of profit may override occupational health and well-being at work and the truth that employees are the company's most important asset.</p> <p>None of the interviewees had experienced inequality or gender-related problems. Everyone had a support network in place for childcare and work-life balance was realized to some extent. According to interview participants, maintaining a full-time workload was deemed burdensome for a woman balancing familial responsibilities.</p>
Key words female pilot, well-being, work life balance, family life, gender equality

Table of contents

1	Introduction and objective of the study.....	1
2	Female pilots with children.....	5
3	Work life balance.....	7
3.1	Resources and work strain.....	9
3.2	Physical, social, and mental needs.....	10
3.3	The needs of the child.....	11
3.4	Working environment.....	12
3.5	Shift work and time management.....	14
3.6	The importance of leadership.....	15
3.7	Recovery from the work.....	16
3.8	Balancing work and family life.....	17
3.9	Values and attitudes.....	18
4	Research methodology.....	20
4.1	Qualitative research.....	20
4.2	Interviews.....	20
4.3	Data collection and content analysis.....	22
4.4	Confidentiality, reliability, and validity.....	36
5	Findings and recommendations.....	38
6	Conclusion.....	41
	References.....	43
	Appendices.....	48
	Appendix 1. Interview questions in English.....	48
	Appendix 2. Interview questions in Finnish.....	50

1 Introduction and objective of the study

The purpose of this study is to clarify the position of women in aviation and consider how to make the industry more attractive to women. The research focuses on how to make the work-life balance satisfactory in terms of family life as well. In the study, female pilots working in Finnish airlines who have minor children are interviewed. At the end of the study, in addition to the reflection, there are recommendations that would improve the smoothness of combining everyday life with work.

The commissioner of the thesis is The Ninety Nines Finnish Section. The Ninety Nines Finnish Section is a subdivision of the international organization The Ninety Nines. The name of the association describes the number of female pilots who decided to promote the role of women as pilots by founding the association. The organization includes thousands of women from forty-four countries, all of whom have or have had a pilot's license. The headquarters of the association, founded in 1929, is located on Amelia Earhart Drive in Oklahoma. Their mission is to promote the advancement of aviation through education, scholarships and mutual support while honouring the unique history and sharing the passion for flight. (99 Inspiring Women Pilots Since 1929 2023.) The Finnish section was founded in 1969 and currently (2024) has seventy-seven members (The Ninety-Nines Finnish Section - kansainvälisten naislentäjien yhdistyksen Suomen osasto 2024). As a commissioner, the association supports the progress of the research, assists in the search for suitable interviewees, and possibly publishes the results and the findings of the study.

Over recent years, the aviation industry has confronted a succession of challenges, with workforce shortages emerging as one of the most significant. After the Covid-19 pandemic, many airlines reduced their operations and gave up some of their aircraft. Pilots were laid off, dismissed and many retired, some prematurely. With the revival of air traffic and the increase in aircraft orders, the reality of the global pilot shortage has been exposed. According to the 2022 Oliver Wyman forecast, 80,000 more pilots worldwide will be needed in 2032. (THE AIRLINE PILOT SHORTAGE WILL GET WORSE 2022.) Aircraft manufacturer Boeing, on the other hand, predicts that 804,000 new pilots, of which 645,000 for commercial traffic, will be needed by the end of 2038. The need is greatest in Asia and North America is second (Forbes 2020). Even in Finland, after a break of several years, both Finnair and Nordic Regional Airlines are recruiting a substantial number of new pilots.

Gradually, the airlines are waking up to the fact that a pool of talented women is an untapped potential and could help solve the pilot shortage and increase today's social mandates. Only 5.26 percent of all pilots (2020) are women, and 1.42 percent of them are captains (2020). In the Nordic countries, the number is even lower. As presented below in image 1, the most advanced country in employing female pilots is India with 12.4 percent. According to Oliver Wyman's 2020 survey for airlines, 84 percent of respondents stated that they find it either challenging or particularly challenging to recruit and retain female pilots. (Murray, Cornwall, Poitras, Rye & Green 2020, 11.)

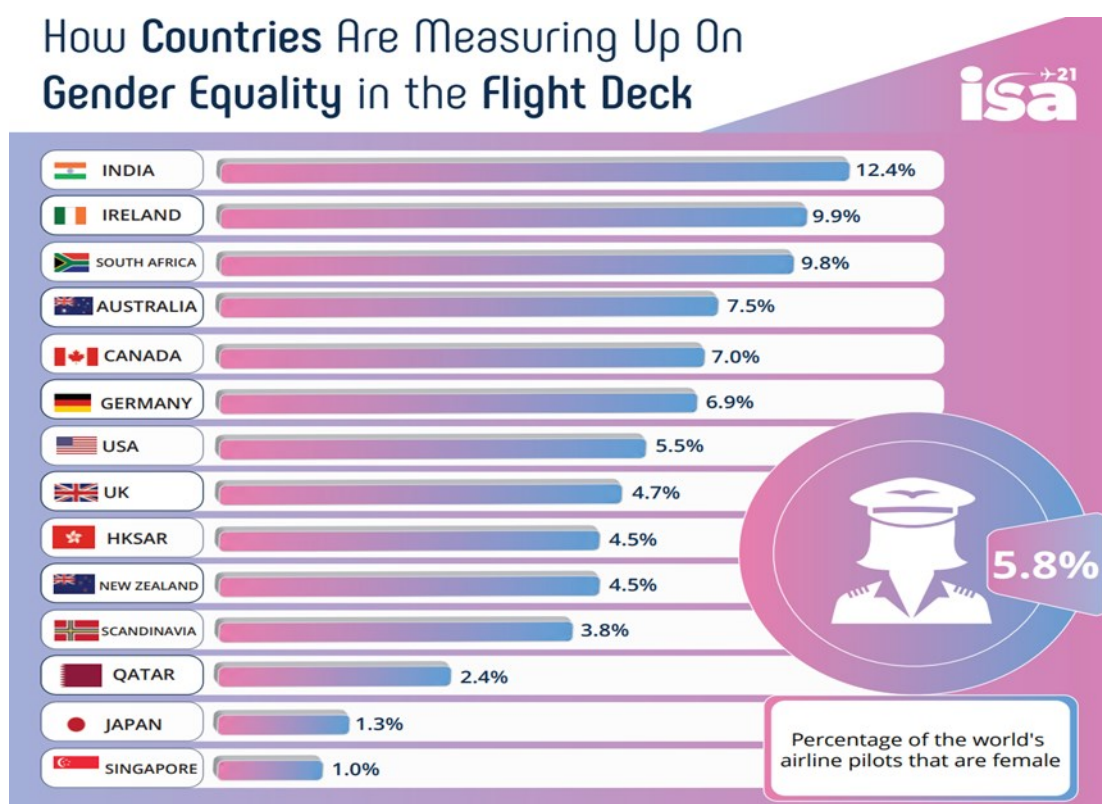


Image 1. Gender equality by countries (International Society of Women Airline Pilots 2021.)

Although there is gender-independent salary and promotion according to seniority among pilots, there are several reasons why women do not apply to become pilots. Traditionally, the career of a pilot has been dominated by men and people have applied for it directly from flight school, from the air force or after a military career. Potential women should be reached in time, already at the stage when they are considering their educational orientation. The limited recruitment career pipeline is perceived as the biggest challenge. The diverse needs of women from men are not considered

comprehensively enough. For example, the pioneer Air India offers its employees the possibility of day-care for children, secure locations, and non-flying maternity work options. The conception of a "boys club" is buried in minds of many but female mentors could act as messengers instead and spread the word. (Murray & al. 2020, 11.)

Women who are already working as pilots have proven that discrimination and bias are the biggest obstacles to continuing in the career (IFALPA 2021). "Men are assumed to be able to do their job well until they prove they cannot. Women are assumed not to be able to do it until they prove they can," states Cheryl Pitzer, a captain at FedEx. Although times are gradually changing for the better, female pilots must perform little better than average to prove they can do it and their performances are evaluated more critically. (LaGrave 2018.)

According to a study published by the University Aviation Association, which included both men and women, it was revealed that most pilots are satisfied with salary and other non-monetary benefits, promotion opportunities and professional growth, job challenges, work-life balance, and management practises. However female pilots were concerned about sexual harassment and gender bias. They also reported feeling uncomfortable reporting their concerns to management. Among others these findings indicate that a major obstacle facing women in aviation is working surrounded by male-dominated culture. (Stevenson, Cuevas, Rivera, Kirkpatrick, Aguiar & Albelo 2021.)

The world's largest aviation and aerospace university Embry-Riddle published research that lists barriers to recruitment and retention of female pilots. According to the study, the four factors that negatively affect women recruitment are the cost estimate, the existence of the good boy network, the perceived impact on family life and the high school counsellor. The top three negatively influencing factors on retention of women in aviation were, in order of priority, existence of the good boy network, costs of training and education and family life impact. (Lutte & Morrison 2022.)

This paper focuses on work-life balance, or in other words, family life impact, which is affected by all the previously mentioned factors. The purpose is to find out which factors affect female pilots in Finland and to create findings and recommendations based on the study.

After getting familiar with the theory and previous studies, four semi-structured interviews followed. The interview questions were based on the theory part and were carried out remotely during the summer of 2023. Material-based content analysis was used to interpret the answers. Direct quotes from the answers of the interviewees were

collected in the tables in sub paragraph 4.3. The quotations were divided into abbreviated gratuities and subcategories, based on which the results were outlined. The effort was made to compare the answers with the theory part and draw conclusions and make findings based on that. Finally, similarities and differences with previous studies were investigated and development proposals were created.

The thesis adheres to the conventional structure of a research report, comprising both theoretical and empirical components. Commencing with an abstract, which furnishes a synopsis of the study, the theoretical segment initiates with an introduction and proceeds to a comprehensive literature review. The literature review demonstrates why the research question is significant by critically examining relevant theories and various sources of information related to the topic. It highlights the author's expertise and proficiency in the field by showing ability to critically evaluate and synthesize existing knowledge. Subsequently, the empirical section of the thesis outlines the research methodology, including the specific approach and techniques utilized for gathering data. Following this, it provides a concise overview of the findings derived from the empirical research process, which includes the analysis of the collected data. A summary concludes the study.

2 Female pilots with children

Women differ from men in one very real and often unmentioned fact that rarely complements life plans by becoming a pilot, namely having children. Is it possible to be a pilot and a mother at the same time? You often hear it said that a female-dominated profession, flight attendants, can do it and they are flying also. They do indeed do similar challenging shift work, but pilots have stricter requirements. Pilots have a longer and more difficult path to get a job and keep a job. Although both pilots and flight attendants take care of the safety and security of the aircraft and passengers, pilots must also go through recurrent and other trainings and line checks throughout their career, including intensive simulator sessions and challenges encountered in real flying. (Jones 2020.)

Globally there are still very few women working as pilots compared to men, making it one of the most male-dominated professions. To ensure flights are as safe, efficient, and reliable as possible, it's recognized that the aviation sector needs to attract top talent. This means expanding the group of people considered for pilot positions. However, obstacles arise due to societal expectations, stereotypes, and beliefs about gender roles. There is a perception that men are naturally better suited for the job, reinforcing traditional masculine ideals in the aviation industry. Previous research highlighted various gender-related challenges women encounter at every stage of becoming pilots, from initial interest to training and qualification. These challenges include gender-based stressors like harassment, which are often reinforced by the culture within aviation organizations. Efforts to address gender disparities have seen limited success, indicating that broader societal change is needed alongside changes within the aviation industry. Society tends to assign gender roles that favour men, making it harder for women to excel in aviation. The dominant idea of masculinity acts as a barrier to achieving gender equality, diversity, and inclusion in the aviation world. Aviation culture tends to perpetuate stereotypes about women's abilities as pilots and often disregards their family and personal responsibilities, which are viewed as traditionally feminine and incompatible with industry values. In essence, women bring diversity and challenge the uniformity of the piloting culture. (Gorlin & Bridges 2021.)

Women, especially those working in long-haul airlines or any flying job with extended periods away from home, struggle with managing work-life balance due to societal perceptions about their caregiving roles. Balancing work and personal life and organisational scheduling practices become even more challenging for women, as they often withstand the most of caring for family members and household tasks. This pressure

intensifies for women once they become mothers, further complicating their ability to maintain a healthy work-life balance. (Gorlin & Bridges 2021.)

The Equality Act entered into force in Finland in 1987, which promotes equality between men and women and prohibits discrimination based on, for example, pregnancy, childbirth, parenthood, and family care obligations (Finlex 2023). Despite the law, a long absence from work, for example maternity leave, brings several challenges to the female pilot. In flight work, recency is essential, for example a pilot must perform a certain number of take-offs and landings within a certain time to legally transport passengers. Trainings and qualifications also expire if they are not renewed regularly. Cosmic radiation affecting pilots is measured, and a pregnant woman may be grounded from flight work earlier, either because of this or for other pregnancy-related reasons. Moreover, there are challenges regarding breastfeeding. For a woman to be able to fly and breastfeed, the employer should plan the work shifts to be sufficiently short and end at the home base and arrange facilities for nursing or pumping milk during the flight, between the flights or in its premises, if the pilot has chosen to work on ground. (LaGrave 2018.) In 2022, a family leave reform came into effect in Finland, aiming to enhance equality in the workplace and for parents, while better accommodating diverse family structures. Additionally, the number of parental leave days increases, and the flexibility in utilizing these days is enhanced. (Sosiaali- ja terveystieteiden ministeriö 2022.)

Despite the challenges, family policies are not exclusive to the aviation industry and should not be seen as prohibitive. This study focuses on the balance of work and family life as a whole and how employees are appreciated and taken care of among Finnish airlines. Female pilot with children refers to a woman of any marital status with one or more dependent children. The number of female pilots in Finland is below the world average. There are two major companies, Finnair, and Nordic Regional Airlines, one of them the percentage of female pilots is five (2023) and in the other one less than three (2023). Furthermore, when creating interview questions, topics to discuss are, for example how the various needs of women, such as dedicated support system, flexible schedules, parental leave, and career progression are carried out in Finland.

3 Work life balance

As a concept, work life balance is extensive and covers the various features and elements of work, health, safety, and well-being when examined simultaneously. In other words, work must be meaningful and flexible in a safe and health-promoting environment and working community that supports the career. Modern science mainly relies on views, where certain information is sought, and subjective observations may be considered unreliable. However, work life balance is centred on a conscious individual who experiences things in his or her own way. Consequently, the definitions describing work life balance have been changing several times within a relatively brief period of time, and no universally accepted definition has been created. The definition should optimally be able to cover the experiences of people involved in working life. (Juuti & Salmi 2014, 32-37.)

In a satisfactory job, the employee can fulfil the requirements of her job properly in the time she has available. Moreover, a good working life includes appreciation and support from both colleagues and supervisors. Thus, the work is purposeful, and the employee can use the work to build her identity and develop. Meaningfulness of work, feeling of control, appreciation and social support promote well-being and prevent excessive workload or negative feelings towards work. Work that is perceived as meaningful offers challenges, develops competence, and gives pleasure through successes. Of course, excellent work produces results for the company, but it is more important that the employee wants to be committed to her work and that the work creates a sense of relevance and acceptance. (Juuti & Salmi 2014, 37-38.)

In the book "Work goes happy" (Salonen, Lehtinen, Helajärvi, Sahimaa, Hautala, Viljamaa, Huitti, Huotilainen, Remes, Routarinne & Dunderfelt 2022) work life balance is compared to a puzzle. We are all a small part of a social whole, where we as individuals depend on each other. The work we do becomes meaningful when it is connected like the pieces of a puzzle with the work done by others. You cannot build a functioning society alone, but you need the varied expertise of different people from several industries. In an ideal situation, working life offers an opportunity for meaningful work that is stable, worth doing, pays an adequate salary and working conditions, management and framework are in order. Our concept of a decent work life balance should not only be guided by our own personal interests or the interests of our own interest group, but everyone should have a place as a part of the working life puzzle and thus as a developer of working life. (Salonen & al. 2022, 76-78.)

It is likely that organizations that offer meaningful and relevant work will attract the best talent and will be successful in the future. There are several theories about the sources of the meaning of work, and one of them, presented in image 2, that is still applied today is the thousand-year-old Japanese ikigai philosophy. Indirectly translated, ikigai means meaningfulness and the experience of purpose. The four main factors of ikigai are: things I am good at, things I love, things the world around us needs, and things for which I am paid. Not all areas of ikigai need to be fulfilled in working life, but for example hobbies, family and other relationships complement the whole just as they complement work life balance. (Salonen & al. 2022, 84-85.)

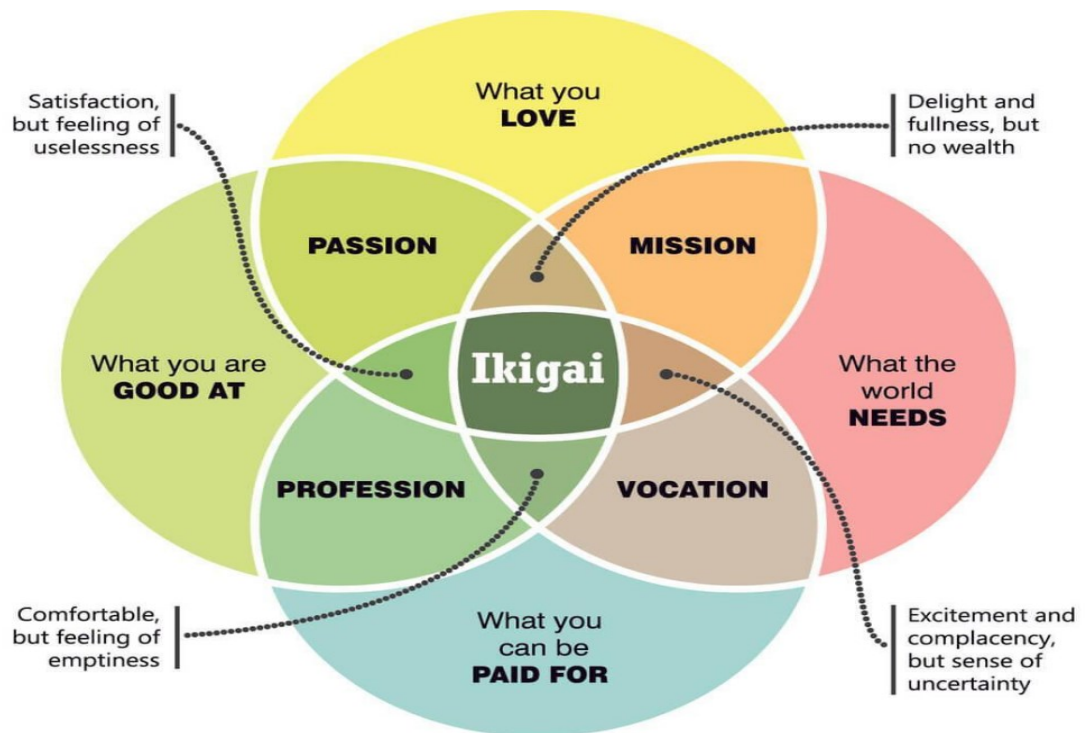


Image 2. A Japanese concept meaning “a reason for being” (Masgo 2020.)

In this study, work life balance is examined from nine different perspectives. These include work resources and work strain, the physical, social, and emotional needs of the female pilot, the needs of the child, work environment, shift work and time management, the importance of leadership, balancing work and family, and values and attitudes. The above-mentioned subject areas are covered in the following chapters and the aim is to examine them more in depth during the interviews.

3.1 Resources and work strain

Working conditions both threaten and promote work-life balance. Every job has resource and work strain or load factors. Recognizing these promotes well-being at work when the balance of the factors is appropriate. Resource factors inspire, encourage, and promote the achievement of work goals, while load factors hinder work performance by burdening and reducing motivation. Well-being at work is about the compatibility of people and the work itself. The content, rewardingness, demandingness and versatility of the work can be counted as resources when they are in balance with the employee's interests and abilities. In addition, strengths include possibility to make choices and affect the content of work, clarity of work roles and goals, and flexibility of working hours. Dedication to work arises when work is connected our interests. Moreover, job satisfaction increases as our skills increase, and continuous learning at work promotes motivation and enables self-realization. Experiencing oneself as useful and appreciated is satisfying. (Luukkala 2011, 19, 26.)

In recent years, work life researchers have focused on the phenomena called work engagement. Work engagement means a positive emotional and motivational state of mind at work. Work is appealing when the following characteristics are met activity, dedication, and concentration. In a concept of work engagement, activity reflects that work is not done because of salary, but instead work offers challenges, in which our resources are activated, and we feel positive energy. We experience dedication when our personal values are sufficiently alike those of our employer. By devoting ourselves to work, we can genuinely appreciate the product or service that the organization produces, and it might create empowering feeling of pride and work is done with pleasure. Concentration appears as successful completion of tasks and employee being in a flow mindset where time flies and working feels effortless. (Luukkala 2011, 38-39.)

Just a few decades ago, work was often mainly physically challenging but nowadays more social and mental skills are required. Workload or work strain is defined as a situation where high work demands are combined with low salary and lack of decision making in the workplace. (Juuti & Salmi 2014, 43-63.) In 1979 sociologist Robert Karasek created a job demand control model as presented in image 3, which is one of the best-known models regarding workload. The four field describes the workload in relation to the resources obtained from the work. The boundaries of the four fields do not exclude each other and often there are features from all areas included in the work. Height of strain means workload and requirements such as availability, time pressure,

demandingness, and pace of work. Decision Latitude reflects the employee's freedom to organize work and the number of resources obtained from work. Combination of the strain and the decision latitude may lead to psychological or physical stress. As the demands of work increase, so does the motivation to learn. (Mulder 2017.) The pilot job could be placed in between active and high strain job where job demands are high and certain regulations are strictly followed, but decisions are made independently in the cockpit.

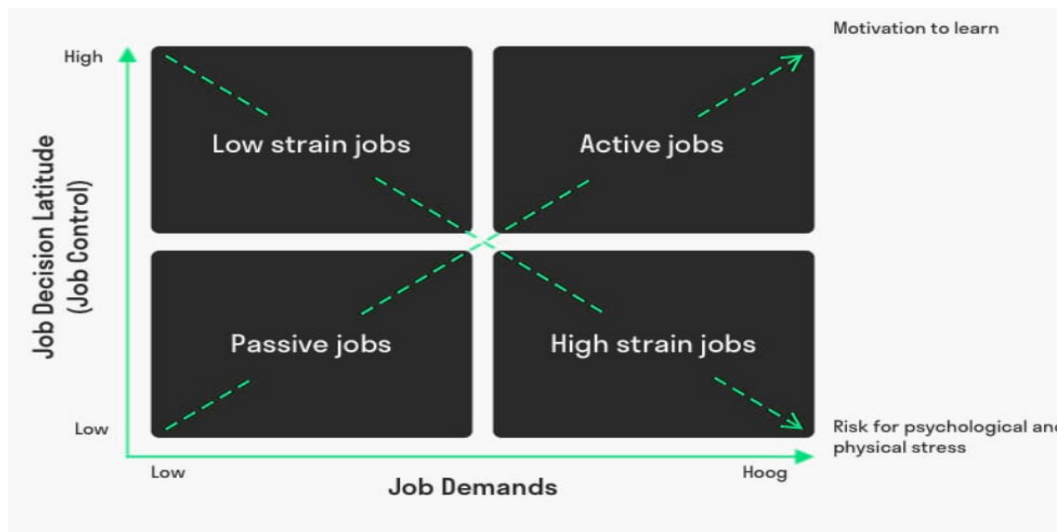


Image 3. Job Demand Control Model by Karasek (Mulder 2017.)

3.2 Physical, social, and mental needs

Combining family and career can be a difficult decision, as women still take care of family and children more than men. According to a study commissioned by Suomen Ekonomit in 2018, women feel that family leave weakens their career and salary development. Few men, on the other hand, hesitate to accept a promotion, even if there is a new-born child at home. The answers revealed that although the employer promotes family leave, more than half of the women's career development slowed down when they stayed at home. Before the child is born, common illusion is that the responsibility for the child is divided equally, but after the child is born, the mother takes on greater responsibility for the home and children. (Kuistiala 2019.)

On top of the success of the company, a dignified employer considers that physical, social, and mental needs and values of the employee are fulfilled. This is also defined as the triangle of health by WHO, The World Health Organization. Physical needs are

related to overall safety and protection from workplace hazards. The work environment and the tasks performed at work must be planned in such a way that they do not pose a danger. In flight related work, anticipation contributes to physical safety. Eventually, besides of the immediate physical threat, work strain is in balance without being overburdened. To support our physical body and its systems it important to nurture our diet and nutrition, exercise, sleep habits, and overall lifestyle choices. Social wellbeing is related to our sense of satisfaction, acceptance, contentment, and appreciation. It involves our relationships with others, our ability to cope with difficult emotions, and our overall outlook on life. Work that offers challenges and promotes our learning curve is emotionally rewarding. Mental needs are our cognitive functioning and ability to manage stress, anxiety, and other mental states. (Luukkala 2011, 21-22.)

3.3 The needs of the child

According to Manka & Manka (2023, 105), in addition to work, well-being covering the whole life is called life satisfaction or happiness. For mothers, one of the most important or the most important source of well-being and happiness is the well-being of the child and the fulfilment of child's needs.

A child's basic needs are the same as for adults discussed in the previous chapter: physical, social, and emotional well-being. Child's physical needs, such as shelter, nutrition and health care can be guaranteed without the mother being present. On the other hand, social and emotional needs of a child are more sensitively affected when the mother is away, possibly multiple day repeatedly. By securing the child's basic needs, we do our best to give the child a stable, caring, and safe childhood and a foundation for success in the future. The emotional needs of affection, attention and empathy lead towards a healthier life and development. Furthermore, the child deserves unconditional love, emotion coaching and acceptance by parents to support and help the child to form healthy social bonds. Daily routines, positive discipline, fair amount of responsibility and good role models support cognitive development, understanding of boundaries, and collaborative problem solving. However, the primary need of the child is a secure attachment to their parent or caregiver that guarantees resiliency as well as better physical and mental health. The feeling of secure attachment of a child is the most important during the first three years of life when the most brain development occurs. (Flatley 2023.)

According to specialist in child psychiatry and physician of medicine Jari Sinkkonen (2021) attachment theory is about how the child structures the world around him or her and its dangers. A helpless child relies on the presence and availability of its caregiver. The interaction experiences build up the child's internalized models, psychological structures, which gradually begin to guide his or her actions and reactions. At first, one attachment relationship is the strongest of all, and it is often directed at the mother. Later there will be more attachment relationships, but in the mind of a small child, there are not many. Children have both temperamental and genetic differences, so it is impossible to define how long a child can be separated from their guardian.

It is difficult for a small child to perceive time and understand that even though the parent is at work, she will return. At the age of three, it is already easier for a child to be separated from the mother, because he or she can recall the image of the mother in his or her mind and get comfort from it. The child needs support during separation from the mother. The mother should tell the child that she is going on a work assignment, even if the child cannot speak yet. The actual going to work should also be done in such a way that the child experiences it. A child's longing can be eased by a photo of the mother, a safe object, or a reminder of the mother's existence, for example through a phone call or video call. When the mother returns home, the child may show loneliness and frustration by fussing or opposing the mother. (Mannerheimin Lastensuojeluliitto 2023.) Sanchez Cuevas (2018) lists symptoms related to absence of the mother such as distancing, protesting, fear of rejection and anxiety. Pöyhönen & Livingston (2023, 140) use a term security gap or lack of security (*suom. turvavaje*) according to which a child needs physical security in addition to emotional security. Fear, anxiety, and tension can be related to the lack of security and the reactions caused by it can be clinging, crying, freezing, or hiding the face.

3.4 Working environment

The working environment covers both the physical environment and the people in the work community. The physical environment refers to working conditions inside of an aircraft, which differs significantly from traditional office environment. The airplane is pressurized in such a way that staying inside the airplane during the cruise phase of the flight corresponds approximately to an altitude of 2400 meters above sea level. The air pressure changes during the divergent phases of the flight and the air humidity is about 10 percent. Airplanes are noisy, including from the inside. Depending on the type

of aircraft and the location inside the plane, the noise level can reach approximately 85 decibels. Fortunately, most of the headsets used in cockpit are of the noise cancelling type. Dirt, rubbish, smoking, and electronics in the plane increase the risk of fire. The temperature is often difficult to keep comfortable and may vary from freezing cold to extremely hot. Furthermore, the pilot's workspace is restrictive, the seat adjustment options can be limited, and the flight may be bumpy due to turbulence. Working in the cockpit puts more strain on the human body due to, among other things, dry air, pressure fluctuations and cosmic radiation. The sedentary work of a pilot is unusual in that you may not always be able to get up from the chair, even if you feel it is necessary. (Ketola 2022.)

In a good working community, people are fair, equal and participate in decision-making. Moreover, people act to achieve the agreed goals and try to help each other. Every member of the work community should understand that cooperation starts with the individual itself and every individual is responsible for his or her own attitude. Open and unrestricted communication supports cooperation and prevents workplace bullying and interpersonal conflicts. (Simula 2013, 286-287.) Today's organizations use fast-moving virtual communication. This kind of communication is emotionless and simplistic, which might lead to an emotionally poor work community. An overemphasized maximization of financial return easily leads to higher demands, results, and a cycle of overachievement. Success in career may require sacrifices in terms of time, family life and personal relationships. To be in balance with well-being and happiness, the work environment should be dominated by a humane culture where humanity is at the centre. Instead of a result- and performance-oriented work culture, humanity supports wellbeing. (Juuti & Salmi 2014, 110-113.)

In the cockpit of an airplane, sometimes it can be crucial to act quickly and make decisions immediately. In addition to personalities, the atmosphere in the cockpit is influenced by the management style of the commander. The strength of the authority is called Trans Cockpit Gradient, TAG, which can be anything between gentle and sharp. A too steep TAG means that the commander acts completely ignoring the first officer's support. The other extreme is where the atmosphere is very relaxed, but when the situation demands it and when faced with a difficult decision, it is hard to find someone to take responsibility. (Vapaavuori & Sorsa. 2005, 130-132).

3.5 Shift work and time management

There are plenty of instructions for balancing shift work and free time, depending on whether it is three-shift work, night work, evening work, or either fast or slow shift rotation. Health disadvantages caused by shift work include, among others, disruption of the circadian rhythm, insomnia, fatigue, disruption of family life, risk of accidents, coronary artery disease, type II diabetes and breast cancer. Organizing time with a partner and children promotes well-being. A common calendar for the whole family can be helpful, which can be used to agree on time together. Talking about problems and trying to find solutions together may help in demanding situations. You can easily distance yourself from your family if you must be away a lot because of work. Support and understanding from both the supervisor and family members is important. In an ideal situation, you can participate in the planning of work shifts in such a way that you also have time and energy for family and friends. People of different ages and in different life situations may have dissimilar needs. (Härmä, Kandolin, Sallinen, Laitinen & Hakola 2011.)

According to an analysis carried out in Indonesia regarding work-life balance and job satisfaction (Dimas, Handrio, Rifki, Ahmad 2022), the aspect that scored the lowest was time management. Due to the irregularity of the work, there is not enough time together with the family. Those who performed best in time management also performed better in their work-related tasks. In the same analysis, it was revealed that job satisfaction is increased by the employer's commitment to enhance work-life balance, for example in the form of shift planning.

There are numerous guidelines and advice to minimize the disadvantages of shift work. Our vital functions follow a circadian rhythm, which is affected by light and our biological clock. Only light eating at night, avoiding caffeine and alcohol, taking a nap before night work and scheduling sports at least two hours before going to bed will help our sleep and our ability to cope with the shift work. (Härmä & al. 2011.) In flight work, however, the shifts are more irregular than regular shift work. Sometimes the flights are during the day, sometimes at night, sometimes there are several days of work in a row and the length of the shift varies from couple of hours to multiple days. The work may take the pilots to another time zone, which hinders both physical well-being and possibly contact, such as video calls, with children. Shifts rarely follow any regular pattern. Moreover, the pilots are on standby, which means that they must leave for work within a certain time frame if requested. It can be difficult for the child to understand why the

mother went to work unexpectedly, because it might not be possible to prepare the child for it. All of this creates a vast number of challenges in family life, but on top of that, flight work also includes unpredictability. The aircraft may have a technical problem that delays the flight, the weather at the destination may be under minimum required to land, a passenger may have a medical emergency onboard or one of the pilots may get injured, just to name few of the possible causes that change the duration of the time away from home. The pilot cannot really be sure at what time exactly, or sometimes even on what day, the shift ends, and the pilot gets back home to her children. Besides the health disadvantages caused by shift work, the irregularity of flight work and constant changes significantly weaken work life balance, time management and family life planning.

3.6 The importance of leadership

In 2018, Meaningful work Finland and Oikotie Ltd. conducted a survey of 1,500 Finns on how their supervisors and managers could make work more meaningful and relevant. From the answers, five factors were collected that support the most important and meaningful leadership. These included caring, which is shown by giving sufficient time, listening, and showing interest towards employees. The second was equipping, with appropriate work tools and environment, a reasonable salary and the basic needs that are in order. The third was authorization, which refers to sufficient freedom for employees to perform their own work effectively. The fourth point was directing, where the supervisor advises on goals and leads by example how to reach them. The fifth crucial factor was continuous communication so that the purpose, goals, and directions of the organization are clear without forgetting the fact why the work is being done. (Salonen & al. 2022, 88-89.)

Even in the last millennium, authoritarian leadership was valued and perceived as accepted by the employees. Fortunately, leadership is developing and nowadays the leader's more human behaviour is valued, and empathic leadership is one of the rising trends. Managing people means the ability to understand what situation the work community and its members are in, what is important to them, how they are doing, how they perceive common goals and what they expect from management. (Sivonen 2022, 133.) For women, and in this study especially for female pilots, a leader who promotes work well-being is cooperative, intuitive, understanding, and empathetic. Women often take care of children more than men, which can cause absences from work or the need

to rearrange work shifts. In an ideal situation, the manager understands the challenges of motherhood and women do not find themselves in an unequal position, even though they take care of their children. With a good manager, it is possible to discuss even sensitive topics related to motherhood or femininity. A leader who supports work-life balance understands the work-family concept and supports it. In a Pakistani study of women in the aviation industry, the meaning of organizational support was investigated. It turned out that the leader's promises should be accurate and reliable, especially if they concern work-family balance. As the manager's support increases, work-related stress decreases. (Aijaz, Shahab, Khan, Nawab 2020, 176.)

3.7 Recovery from the work

The World Economic Forum has listed future working life in demand-skills of 2025. These include active learning and its strategies, complex problem-solving, critical analysis and thinking, creativity, originality, analytical thinking and innovation, proactivity, resilience, stress-tolerance, leadership, social influence and versatile management of technology, and programming. To succeed in constantly changing working life and cope with the above-mentioned goals, it is worth investing in your own well-being and recovery from the work. (Salonen & al. 2022, 165-166.) Everyone creates their own ways to recover from work. However, there are thoughts and methods that are generally found to work and promote well-being. Work can cause stress or other factors that burden the body, from which recovery takes place in free time. The right amount of stress is an asset, but in excess it becomes harmful. Excessive stress can lead to sickness, pain, weakened immunity or sleep deprivation, among others. Breathing exercises, enough sleep, sports and social support and interaction help to relieve stress and other overload. (Salonen & al. 2022, 166-171.)

The research-based article "Recovery Practices to Foster Resilience & Prevent Burn-out" (Center for Creative Leadership. 2020) lists five ways to recover from work, as shown in image 4. As discussed earlier, adequate sleep is a necessity. Physical activity boosts energy, stamina, state of mind, performance, and productivity. Mental and social recovery refers to taking your mind off work and replacing it with the presence of important people, surrounded by care and reciprocity. Positive emotions and gratitude increase energy by overcoming negativity, cultivating more positive relationship with yourself and the people around you. (Center for Creative Leadership. 2020.) Inadequate recovery can lead to a deterioration in work performance, and lead to errors in a

pilot's challenging work. Recovery from a pilot's work is no different compared to other occupations, except that recovery may take more time and effort, considering the extensive irregularity of the work.



Image 4. Five recovery practises (Center for Creative Leadership 2020.)

3.8 Balancing work and family life

Combining work and family successfully promotes well-being both home and at work and it also reduces stress and other psychosocial burden. Working time and work shift arrangements benefits the balance of work and family life, by taking personal wishes into account and increasing supervisors' awareness. The goal is to distribute the family leave more evenly between fathers and mothers. In Finland, mothers use almost 90 percent of all parental leave compensated with earnings-related daily allowance. Financial benefits and a day care system for young children are being developed in Finland so that families have alternative ways to care of children. (Sosiaali- ja terveystieteiden ministeriö 2022.) If the parents work unregular hours, as pilots do, there is an option for day care in the evenings and during the nights (Finlex 2018).

The 2020 family barometer examined which factors make it difficult to reconcile family and work in Finland. According to the women, demanding or exhausting work had the greatest impact, followed by long working days and variable or hard-to-predict work shifts. The same study looked at which factors facilitate work-family balance. The most crucial factor was suitable working hours. The support given by other people, i.e., colleagues, supervisors and loved ones, was perceived as the next most important. It is gratifying that, according to the same survey, 90 percent of working Finnish parents of families with children feel that combining work and family is currently balanced very well or well. (Sorsa & Rotkirch 2020.)

According to the study “The Impacts of Work-Life Balance in Airline Industry” (Amiruddin, Monil 2022) balance between home and work environment is the most crucial step towards healthy work life balance. Moreover, the study stated that employer-provided benefits like childcare assistance and flexible work hours enhance both family life and job satisfaction. When employees achieve a good balance between their work and personal life, it benefits both them and the organization by lowering turnover rates. This balance allows employees to use flexible work hours to manage responsibilities outside of work, such as family, hobbies, and education, instead of solely focusing on their job.

In addition to outsourcing the child's day care, many households use home delivery of groceries, cleaning services or gardener services. The purpose is that the house works itself and there is more time for the family. (Tuuri 2018.) Parents may be blamed for not spending enough time with their children because they are too committed to work (Sinkkonen 2012). In a pilot's job, family weekends are not the norm, as days off can be during the week. Also, not all pilots can take a holiday during Christmas or during a skiing holiday, so the pilot-mother sometimes must be away at Christmas, the child's birthday party, or the graduation ceremony. Finding the right balance is a sum of multiple factors since the opportunities to organize working hours for family reasons is fairly limited in pilot's work.

3.9 Values and attitudes

According to American Psychotherapist Morin (2019), women are often too self-critical, and they create harmful thought patterns. She mentions these as, for example, the pursuit of perfection, self-blame, belittling one's own abilities, constant comparison with others, overanalysing things, and impostor syndrome. Morin urges women to consider how they should treat themselves and let go of limiting thought patterns. By demanding the impossible from yourself and being dissatisfied, living a balanced life is difficult.

The goals that lead to a more balanced life are defined by adopted values and attitudes. By becoming aware of and adopting important values, you are led towards your own and your loved ones' well-being and the common good. When difficulties are faced, they should not be allowed to paralyze you but should be turned from threats into opportunities. It is liberating to be able to talk about your own feelings. Both physical and psychological well-being are improved by listening to and processing feelings. At the same time, a more positive way of thinking may need to be adopted because

thoughts create mental images, which in turn control emotions. Social support and interaction are important to all of us. Complete self-management is not possible for anyone, especially for a woman with a family who travels for work. By nurturing important human relationships, a state of balance is created where differences are accepted, support is given, and if necessary, space is provided. (Juuti & Salmi 2014, 230–231.)

American research about gender-related pilot behaviour supports the theory that there are indeed differences in perceptions of female pilots based on gender. Male pilots tend to see female pilots more negatively than female pilots do. Factors like age, experience, or having chances to fly with female pilots did not change how negative these views were. Even though women have been involved in flying for over one hundred years, there is still a certain level of distrust towards female pilots. Although these findings are discouraging, it shows where we further work needs to be done. Even though society's views on women have improved and laws against discrimination exist, male pilots still hold onto negative feelings towards female pilots. This is crucial because it affects flight safety. If the crew members do not trust each other's skills and judgment, they cannot work well together as a team, which could compromise safety. (Reynolds, Milut, Hirschheimer, Cox, Milenkovic, Xu 2011.)

4 Research methodology

The research methodology approach selected for this study is qualitative.

4.1 Qualitative research

Data collected through qualitative research are context-specific and therefore need to be carefully reported in relation to the context in which they were collected. To find a solution to the problem, various phases are needed, such as: specification of the problem, identification of causes, acquisition of information, production and specification of solutions, evaluation of interventions, choice of intervention form and approval of intervention. Finding and demarcating a problem is essential to finding a solution. The analysis of qualitative data focuses on qualitative information on phenomena. The information does not have to be in numerical form. Qualitative analysis structures the characteristics, significance, and quality of the research subject. The analysis can be carried out in several different ways, but aspects related to the environment and background of the object, the purpose and meanings of the object, expression and language are common. (Ojasalo, Moilanen & Ritalahti 2014, 37.)

Qualitative research was chosen as the approach to the research. A quantitative study would have been impossible because there are remarkably few female pilots in Finland, less than five percent of the total number of pilots. Qualitative research aims to explain and understand the phenomenon by answering the question: "What is this about?". The phenomenon under scrutiny, as well as the variables influencing it, remain incompletely understood. Qualitative research aims to gain a holistic understanding of the phenomenon. The focus is on the perspective of the persons being studied and their views on their work-life balance. (Kananen 2019, 25-26.)

4.2 Interviews

The material collected through the interviews is used to solve the research problem and research questions. The research problem turns into a research question. The formulation of the questions affects what kind of answers are obtained. The questions have a default value or an expected value for the answers. The goal is to understand the phenomenon itself, which is why the material guides the research and qualitative

research adapts flexibly during the process. Nothing can be known for sure in advance. (Kananen 2014, 36, 41.)

Interviews are not the easiest way to collect data, but distinct types of interviews are the most used data collection method in qualitative research. The advantage is that people can be selected as interviewees who meet the presented criteria and who are known to have knowledge and experience on the topic in question. Therefore, the sample is expedient and discretionary. An interview could be described as a conversation with a predetermined goal. Since the interview is interactive, the participants always influence each other. The interviewer can either repeat the question or clarify it. Planning and preparations for the interview must be carefully designed to get answers for actual problem and relevant topics. Interview should be precisely planned and conducted, and the interviewer should have a clear idea of which types of questions should be avoided. The questions asked should be open, and by no means suggestive. Care should be taken to plan the interview type and appropriate environment. There are several types of interviews, such as unstructured, semi structured, structured, narratives and focus group. After deciding the type of interview, comes preparation and scheduling, then execution and review. One should practise how to conduct an interview and how to behave to encourage interviewee to talk and stay in the subject while maintaining positive atmosphere. (Kananen 2017, 94.)

Structured and semi-structured interviews differ from each other in that in a structured one, ready-made answer options are given, while in a semi-structured one, there are no answer options. The advantage of a semi-structured interview is that something might appear that the researcher did not consider beforehand, and the interviewer can, if necessary, ask for more details. A semi-structured interview is somewhat more informal and in it the answers to key issues from the point of view of the research are obtained in the interviewee's own words. During the interview, the interviewer interprets the interpretations made by the interviewee, in which case the collected material is the subjective, first-hand understanding of things, phenomena and events of the persons being interviewed. The interview material is therefore situational, so its content cannot be exaggeratedly generalized. (Puusa & Juuti 2020, 103, 111-112.)

I asked female pilots who have a child or children to be interviewed because they have knowledge and experience about work-life balance. There were four interviewees and they represented two Finnish airlines. The interviews were carried out in June and July 2023 using Teams remote connection. During the interviews, we kept the cameras on,

so gestures and facial expressions could affect the understanding of the answer. The interviews were conducted in Finnish and the interview questions in both English and Finnish can be found as appendices at the end of the thesis. The duration of the interviews was between 37 and 70 minutes. The interviewees were named as A, B, C and D to preserve anonymity. Table 1 below shows the demographic factors of the interviewees.

Table 1. Background information of the interviewees

Interviewees	Date of interview	Age	Residency	Family type	Number of children + Age
Respondent A	20 Jun 2023	33	Tuusula	nuclear family	2 children, age 2 and 5
Respondent B	28 Jun 2023	39	Tuusula	nuclear family	1 child, age 5
Respondent C	9 Jul 2023	52	Lahti	blended family	3 children, age 6, 15 and 22
Respondent D	10 Jul 2023	42	Espoo	single	1 child, age 9

I decided not to deliver the interview questions to the interviewees in advance. This is because they would not be required to spend more time on this project, but also because advance knowledge could limit, direct, or even change the thoughts of the subjects in advance and thus affect the answers in an undesirable way.

4.3 Data collection and content analysis

The methods used in problem solving need data to support them. Information is needed to find understanding, sources of information, how information is obtained, and which analysis methods are used to analyse the information to solve the problem. (Kananen 2014, 51.)

I chose content analysis to process the material, because it can be identified as the basic analysis method of qualitative research. I started by transcribing the interviews into text and grouping the themes that emerged. Using my notes, I structured the material and researched what was said about each theme. My purpose was to outline views supporting a certain theme. As follows the qualitative material was divided and grouped according to different topics.

The most common content analysis method is material-oriented or inductive content analysis. The collected data is summarized to examine the meanings, connections and consequences generated by the research question. Differences and similarities from the data are sorted out using content analysis. In the inductive content analysis, the interviewees were asked questions related to the research question and the aim is to

eliminate irrelevant data. In other words, the transcribed interview material is reduced. The next step is grouping the data, i.e., clustering, where differences and similarities are combined into groups or subcategories. Data is clustered because individual expressions are included in general concepts, properties, or traits. In the last step, the essential and selected information separated from the original data is used to form theoretical concepts. This phase is called abstraction, i.e., conceptualization. By continuing to abstract the data, the final category, or result, is formed. The results are used to create conclusions. In inductive content analysis, interpretation and conclusions are made by moving towards a more conceptual view of the phenomenon under study. The categories formed based on the classification generate results, and in the conclusions, an effort is made to understand what the issues mean to the interviewees. (Tuomi, Sa-
rajärvi 2009, 108-113.) Image 5 presents the progress of inductive content analysis.

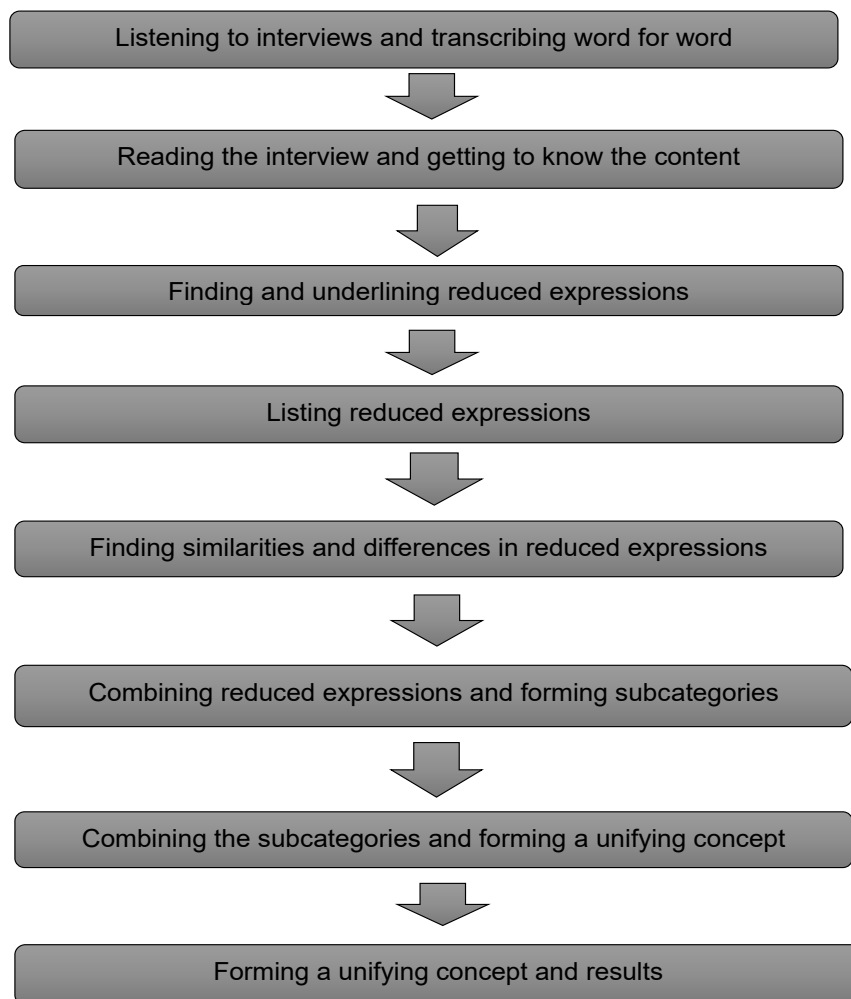


Image 5. Distinct phases of inductive content analysis (Miles, Huberman 2014.)

The first five questions of the interviews clarified the background information of the interviewees as well as basic information about the work and work scheduling. The children of the interviewees were between the ages of one and twenty-two, and four of them were in kindergarten. One of the interviewees used a 24-hour daycare and two used a daycare that is open during normal hours. In addition to the daycare, the interviewees were helped by their spouse, ex-spouse, and close relatives in childcare. All interviewees lived in southern Finland. Interviewees had several years, between seven and twenty-seven, of experience in aviation work and thus had a comprehensive understanding of the challenges and advantages of the chosen career. One of the interviewees was on maternity leave, one was working at 80 percent, one at 75 percent and one had a full roster. However, she was also applying for part-time work, where one week every month is unpaid leave. One of the interviewees usually had the longest absence from home for three days, while for the others it was five days. Naturally, there are deviations, because in aviation, changes are common. All the interviewees were to some extent dissatisfied with the division of work and free time and the planning of the roster and the timing of its publication (see 3.1).

Interview questions 6,7 and 8 consider how work life balance is affected by workload, absence from work for family reasons, work engagement, possible discrimination, and level of motivation. Later the table 2 shown below is created from the answers to these questions.

It can be noticed that all the interviewees felt the work to some extent heavy. This is reflected in the fact that everyone works or wishes to work part-time. However, during the work, the responsibility for the children has been transferred to someone else and the mother transforms into a female pilot. Work offers balance to family life. When the airplane door closes, pilots are out of reach and focus on work and merge into the work environment. The respondents A, C and D said that they experience a positive working environment and team spirit (see 3.4). The interviewees had in common that they experience work engagement, high motivation and that they find the work meaningful as described in sub paragraph 3.1.

Absences from work due to family reasons were not perceived to have negative effects. Returning to work has been made uncomplicated and the absence had neither effect on seniority nor salary. The respondents found returning to work pleasant. Unlike according to the study *Women's Perceptions of the Aviation Workplace* (Stevenson et al. 2021) where women were concerned about sexual harassment and gender bias in

the workplace, In Finland none of the interviewees had experienced discrimination based on age, gender, or family. Among the respondents, C and D brought up the well-being of the personnel. All rules and regulations are followed, and in theory, everything is well organized. In practice, however, it is forgotten that your employees are the company's most important asset (see 3.4). They mentioned that, for example, crew food and occupational health care could be significantly improved (see 3.2).

Table 2. Analysis of interview questions 6,7 and 8.

Research question: How work life balance is affected by workload, absence from work for family reasons, work engagement, possible discrimination, and level of motivation?

Original expression	Reduced expression	Sub-category	Category = Results
"Maternity leave does not affect seniority."	Absence from work due to family reasons does not affect negatively. Possibilities to work part time are available.	Family leave related matters are generally well organized in Finland.	Part-time work is a good option for female pilots with children. There are several lightened work options available. Motivation and salary mainly increase work engagement.
"I wanted to go back to work soon after maternity leave."			
"After maternity leave, you can return to the same salary category, where you would be without maternity leave."			
"The employer offers opportunities to reduce workload."	Workload can be too much, but there are options to reduce it.		
"According to my work shifts, the activities of the whole family must be planned."			
"I was able to return to work at fifty percent."			
"I enjoy going to work every time."			
"Work supports balance in family life."			
"I wouldn't be able to handle a full roster in this situation."	Feeling of work engagement is common. Work has both negative and positive effects on family life.	life management and work engagement	
"I'm always happy to go to work, even though I find it burdensome, especially because of the time difference."			
"Social life suffers from irregularity and lack of sleep."			

<p>"I definitely feel work engagement, because otherwise I wouldn't agree to shift work."</p>			
<p>"Life is hectic, but at work you can just stare out the window for a moment."</p>	<p>Employees feel mainly motivated.</p>		
<p>"The salary doesn't compensate for the bad nights' sleep and the irregularity of life."</p>			
<p>"A reward for work motivates, but a good working community is more important."</p>		<p>Salary and team spirit are important.</p>	
<p>"A good salary allows you to work less."</p>			
<p>"Salary motivates."</p>			

One of the big challenges in the pilot's work is long and irregular absences that children might find difficult to understand (see 3.3). Interview question number 9 ponders the effects of a longer separation from a parent on children and remedies for missing someone. Later on, the table 3 presents the answers to the question.

The interviews revealed that, naturally, all mothers were missing their child in their absence and vice versa. The most common way to stay connected with children is video and voice calls and audio messages. The interviewees B and D used the phone to read the bedtime stories. The pictures of loved ones are also easily accessible on the phone. The attitude towards the calls was similar to all interviewees; They may either reduce or increase the feeling of missing (see 3.3).

Longer absences are balanced by off days during the week, when time can be dedicated to a child. Respondent C and D told that their children are used to live in two different homes. Responsibility for children must be shared in accordance with the prevailing situation and cannot always be planned in advance. The reliable support network allows the mother to work as a pilot as discussed in sub paragraph 3.8. The interviewees reported that the worst thing is to bother others and ask others to change their plans to get work and childcare arranged.

Table. 3 Refers to interview question 9.

Research question: How a child experiences separation from his mother during the work trip and how to ease separation anxiety?

Original expression	Reduced expression	Sub-category	Category = Results
"The child has his own mobile phone, and he can facetime his mother whenever he wants."	The mother needs to know that the child is fine. The news of the day is exchanged on both sides. Today's technology has made interaction easier.	independent decision	Voice and video calls and audio messages are the most common way to stay connected with children. Calls have both longing increasing and alleviating effects. The child's ability to understand and process time and absence varies according to his age and character.
"We make video calls, but sometimes they make the child sad and cause her to cry."		It can be easier for a child not to call and concentrate on other things.	
"The daily calls make the child miss the mother more."			
"The child is not willing to call her mother who is at work."			
"The phone's video connection is important for both the child and the mother."		to be present even when you are away	
"I try to be involved in the child's everyday life, for example by reading a bedtime story via Facecam."			
"The child sends audio messages about his day."			
"The child experiences separation in many different ways."	The mother's absence often influences the child's behaviour.	distinct stages of the child's maturity and different personality	
"The length of absence does not correlate with the amount of missing."			
"The child's nature is such that she does not miss."			
"More frequent absences are reflected in the child's behaviour as attention-seeking and through not desired behaviour."		disruptive behaviour caused by missing the mother	
"If I'm gone for several nights, the children misbehave when I return."			

"By arranging enough meaningful things to do, the longing will stay away."		distraction	
"The child has a picture of his mother with him, and pictures are also sent on the phone."	A child's needs, habits and perception of time vary.	different routines	
"The child is used to living in two homes since she was a baby."			
"A small child has no sense of time, so a longer absence is easier to implement."			
"My husband works remotely and is mainly responsible for childcare."			

Interview questions number 10 and 11 explore cockpit of the aircraft as a work environment and the effects of shift work and being on standby on well-being. Table number 4 is created based on these questions.

In sub paragraph 3.4, the pilot's work environment and its effects on occupational well-being are described. Based on that and according to respondents, it can be concluded that the cockpit of an airplane is a challenging work environment. The cockpit may exhibit elevated levels of noise and constrained spatial conditions, accompanied by ergonomically unsuitable seating arrangements and potentially blinding sunlight. Furthermore, vibrations, reduced oxygen levels, and fluctuations in air pressure contribute unfavourably to comfort levels. The type of aircraft in which you work, and to that extent the size of the cockpit and the avionics and the technology of the aircraft, affect well-being. Respondent C found her current aircraft type to be a significantly more spacious and comfortable to work than her previous aircraft types. Other respondents also mentioned variations between diverse types of aircraft. A working day spent on an airplane is physically and often also mentally tough. According to respondent C and D trans-cockpit-authority gradient, TAG, is gentle, which affects positively on atmosphere in the cockpit. Respondent D mentioned that the employer has provided back supports for the cockpit as well as gymnastic rubber bands and dumbbells (see 3.4). Moreover, the physiotherapist has prepared exercise programme for the pilots, which can be performed in the cockpit seat. Later, in table six, we will delve into ways to recover from the workday and promote well-being.

All the respondents are on standby sometimes. The amount and duration of standby varies, respondents C and D mentioned that there may not even be standby every month. During the standby period, the workplace must be reached within 90-120 minutes. Therefore, respondents A, B and D said that they consider standby like a normal duty and that day care must be booked for the child in any case. The attitude towards shift work is a positive and conscious choice of the interviewees. Interviewee D stated that she enjoys the variability of shift work and working at contrasting times of the day. Interviewee C, on the other hand, described shift work as a way of living. Contrary to common belief and as mentioned in sub paragraph 3.5, shift work also has positive aspects.

Table 4. Analysis of interview questions 10 and 11.

Research question: What are the mental and physical effects of working irregular hours in the aircraft and being on standby?

Original expression	Reduced expression	Sub-category	Category = Results
"The noise in the cockpit is tiring."	Cockpit is often experienced in a physically challenging work environment, but there are ways to improve well-being at work.	noise	Mental and physical effects of shift work and standby are conscious. There are several contributing factors, but these challenges are worth coping.
"You have to get up and move every hour."		limited space	
"The brightness forces to wear sunglasses."		sunlight	
"The employer provides exercise rubber bands and instructions for exercises."		the employer takes into account occupational well-being	
"The employer provides back supports for the seats"		improved environment	
"The cockpit is spacious, the air quality is good, and the noise level is low."		physical disadvantages	
"The cockpit seat is not ergonomic."			
"The change in air pressure, vibration and noise are physically hard on the body."			
"Noise has a negative effect on well-being after the flight."			
"Trans-cockpit-authority gradient, TAG is dynamic."	In an ideal situation, the trans-cockpit-authority gradient is gentle.	cooperation works and is standardized	
"Standard procedures are followed in the cockpit."			
"Pilots are heterogeneous."			
"It's mentally refreshing to meet new colleagues and get to know them."			

"Even though the industry is male dominated, this job is the most equal I have been in."	Equality is respected and discrimination is not experienced.		
"You often have to go to work from standby, and the child must have daycare pre-arranged."	Being on standby and shift work add challenges to family life, but that fact has already been accepted in the beginning of the career.	standby and shift work shapes your entire life	
"Standby is not evenly distributed. Sometimes there is a month when there is no standby at all."			
"I enjoy the variety brought by shift work, even though it is tough."			
"Shift work is a personal choice and a matter of attitude."			
"The child may spend several days in round-the-clock day care."			

Next, the importance of leadership for well-being was investigated and presented in table 5. Satisfaction with leadership on flights was common among the respondents. Interviewees B and C are commanders themselves and that way team leaders during the flights. Respondent B pointed out that the quality of leadership varies a lot and that others shirk responsibility. She said that a communicative leader succeeds best as stated in sub paragraph 3.6. Respondent D described her close supervisor as a good listener and that answers are provided when needed. Respondent C on the other hand valued the most her own opportunity to create step marks on flights and thus lead her own unit in the best possible direction. Respondent C's description of her job fits perfectly into the Karasek Job Demand Control Model as presented in sub paragraph 3.1 and image 3.

The upper-level managers were criticized quite heavily. According to respondent D, the top management does not understand flight work, the commenting is strange, and the communication is sometimes substandard. She feels that pilots are treated just as a number and an expense item that management does not appreciate them. She also pointed out that employees would be significantly more productive if they were seen as individuals and people who really invest in their work. Respondent C brought up the fact that all management focuses increasingly on productivity, even at the expense of personnel. She summarized that everything that happens outside the plane is upsetting and everything that happens inside the plane is the most rewarding. In sub paragraph

3.6, the five most crucial factors of successful leadership according to the Oikotie survey are listed.

It was positive that all respondents felt that they were noticed and understood as mothers by the management. Employers were ready to be flexible with the needs of families with children. Respondent A wished that there would be more women in the management of the company.

Table 5. Analysis of interview question 12.

Research question: How does good leadership affect well-being at work?

Original expression	Reduced expression	Sub-category	Category = Results
"I consider leadership skills very important, and my line manager is really good."	During flights, good management is common, which improves work well-being. On the other hand, at the level of the highest management, pilots are not appreciated enough.	the importance of leadership skills and open interaction	The perception of management and the meaning of leadership is reflected in work well-being. In flights, one of the captain's responsibilities is to lead by example.
"In-flight management is good."			
"The company strives to make as much profit as possible but forgets the value of personnel as the most valuable asset."			
"It seems that the top management only considers pilots as numbers and an expense."			
"The biggest challenge is communication between employees and managers."			
"Well-being at work is enhanced by a communicative and responsible supervisor, although there are also those who shirk responsibility."	Open dialogue and communication are the most valued features of successful leadership.		
"The quality of management and communication are of great importance."			
"I consider good management to be very important because it creates the framework for the working day and its success."			
"My supervisor was supportive of the news of my pregnancy."	In general, pregnancy and the needs of a family with children are well considered.		
"The employer takes into account the different needs of families with children."			

The following topic was stress and recovery from work as presented in table 6. All the respondents consider their own well-being important and have created their own mechanisms to recover from work strain and stress (see 3.7 and image 4.). Own well-being reflects on well-being of the family. Respondent B stated that, stress is reduced by a reasonable amount of work. Respondent A thought that sleep is the most important means of recovery and that a morning-shift roster suits her best. Respondent A also said that she enjoys the fact that she can be unreachable during flights and that this job does not follow her home. Similarly, respondent D values sleep. According to her it is essential to sleep and recover first and only after that you can do other activities. In addition to sleeping, factors that increase well-being were mentioned as sports, outdoor activities, and fresh air, being surrounded by nature, and turning the circadian rhythm back from the different time zone. Having worked in aviation for a long time, the respondents also knew what suits their body and mind best. The aim is to plan rest and free time according to work shifts, so that there is enough time. Sometimes this leads to having to prioritize one's own and the family's well-being.

Table 6. Analysis of interview question 13.

Research question: How to recover from work and avoid negative stress?

Original expression	Reduced expression	Sub-category	Category = Results
"I try to sleep as well as possible."	Sufficient sleep and a proper sleep rhythm are essential for well-being.	Sleep and rest recharge the resources of the body and mind. During sleep, the body recovers from stress, the functioning of the nervous system is balanced, and resistance is strengthened.	Physical well-being consists of the effects of nutrition, exercise, and sleep, as well as the physical operating environment and its healthfulness and pleasantness.
"My husband takes care of the night awakenings, so I can sleep uninterrupted."			
"I reserve time on the calendar for sleeping and recovering from the time difference."			
"I'm trying to regain the normal circadian rhythm as soon as possible."			
"By monitoring my heart rate, I choose either rest or active sports."	By listening to your body, you know what is best for your well-being	an asset of positivity	
"At the destination I rest and relax, and I don't go sightseeing."			
"I value sleep, nutrition and exercise."			
"As a morning person, I feel better if I can do morning shifts."	Pleasant arrangements and activities increase well-being and reduce stress.		
"I go outside and enjoy nature."			

"I recover by going out, exercising and gardening."			
"A pleasant work schedule reduces stress."			

The last three interview questions were the most important in clarifying the research questions of this paper and how to promote combining both work and family life balance. The last question also asked if the interviewee wanted to add anything relevant. Table 7 has been compiled from these questions.

Respondent A started by saying that the balance between work and family life is being realized, especially with the new family leave reform (see page 6). In it, both parents take responsibility for childcare, so that neither of them must leave working life for a long time. She values equality in parenting. At the beginning of her career, respondent A questioned her ability to cope in a male-dominated field. Now she knows that by putting pressure on performance, the stress will only increase. There is nothing in the cockpit that would be influenced by gender. She also openly tells that she was away from flying for family reasons. Respondent A points out that work-life balance would be increased by opportunities to influence more and that more off day wishes would be fulfilled. She adds that the number of female pilots should increase in order to better achieve equity and equality.

Respondent B describes the reconciliation of work and family life as a constant arrangement and filling in a common calendar among the whole family (see 3.5). In her opinion, the balance is partially achieved. She also thinks that the roster planning is weak. She explains that it is possible to request four off days per month and quite often the wish is granted. Albeit it is less common for the whole family to participate together in the spring and Christmas celebration of the kindergarten or relatives' birthdays. Respondent B's husband is a pilot in the same company and fortunately they have often been granted summer vacations at the same time. On the other hand, respondent B has heard it said that flight work is not suitable for women with families. This has been encountered in the fact that the needs of women who have children have been refused to be considered when planning resources, planning rosters, and granting holidays. She would hope that well-being would be increased, for example, by planning the roster either only for morning shifts or only for evening shifts. She lists the reduction of absences of several days, to plan family activities further, and the possibility of doing longer period only morning shifts as the most significant work-life balance enhancers.

Respondent C begins by mentioning that work should not dominate life in terms of time use. However, this is how it is, and it has had to be accepted and adapted to. The irregularity of the work is not the problem, but the fact that the rosters are published at the last minute and that requests for days off are not implemented. She says that five days off a month can be requested, and if even three of them were fulfilled, the work-life balance would improve. Respondent C feels that she is lucky because her family and nearby are flexible and able to adapt to the time-consuming challenges brought by flight work. Nevertheless, she finds her work burdensome and in order to maintain her health and well-being, she has applied for part-time work. Respondent C remembers that she received positive and encouraging feedback and acceptance since the very beginning of her career, which has created strong professional self-esteem and professional pride (see 3.4).

According to respondent D, the work-life balance is relatively good. The most significant support has been her mother, who has helped with the care of the child and thus enabled respondent D to work. Safe, familiar, and reliable childcare reduces stress. Respondent D also considers it important that the child's routines and daily rhythm are maintained, even when the mother is at work. Work-life balance is most disturbed by work shift planning and its irregularity. Even a child does not necessarily know his weekly schedule in advance, with whom he will spend the night and when. Respondent D regrets that wish for off days are rarely fulfilled. She tries to ask for days off when her mother or child has important plans, leaving only a few opportunities for her own plans. Shockingly, once after she commented the roster, the shift planner had stated that this is not a job for woman with family and that you yourself have made your choice. From this kind of attitude problem, it can be concluded that the roster planner has no practical experience with shift work and the challenges of shift work are underestimated. Respondent D wishes that the roster planners had experience with shift work and that they would understand the importance of not only special situations, but also basic everyday life, and would be able to experience empathy. She emphasizes that it is not important to know where you fly to during your shift, only which days are work and when you are free. A functioning off day system, which would take into account the even distribution of holidays, would make a huge difference. She also criticized the food served to the pilots on the plane. During long working hours, you may be offered food with poor nutritional value and a portion that is too small. In a way, pilots are at the mercy of their employees, what they get to eat, and the quality of the food should be invested in to increase well-being. Respondent D feels that as a woman in a male-dominated industry, she must perform better than average to be as good as men (see page 3 and

sub paragraph 3.9). However, she considers her workplace to be equal and says that she has received positive feedback.

Table 7. Analysis of interview questions 14, 15 and 16.

Research question: How to promote combining both work and family life balance?

Original expression	Reduced expression	Sub-category	Category = Results
"The family leave reform makes it easier for both parents to continue working."	The opportunity for both parents to participate in childcare more equally.	equality	The balance of work and family life is increased by the family leave reform, changing attitudes, children's well-being and, most significantly, the planning of the roster, vacations, and days off, and the timing of publication.
"Parenting equality is the most important of all."			
"Happy wife, happy life"			
"I don't want to get on board because there's a woman in the cockpit."	Female pilots are still subject to prejudices and lack of awareness of the job description of pilots	attitude problem, lack of knowledge	
"There is nothing in the cockpit that is influenced by gender."			
"More women should be hired as pilots, so that equality would be better realized."			
"Resource, vacation and work shift planning could improve well-being at work."	Scheduling that was published earlier and takes requests or wishes into account would enable better integration of work and family.	time and life management challenges	
"Better influence opportunities at work would improve work-life balance."			
"Roster planning and its harmonization would improve my well-being."			
"Rosters are published at the last minute."			
"Requests for off days are not being fulfilled."			
"Family friendliness should be taken into account in roster planning."			
"Roster planners should have their own experience with flight and shift work."			
"The lack of time and control over one's own life hinders well-being."			
"The work is tough and the possibility of applying for a part-time position would improve the balance of work life."			

"Using humanity and empathy when planning requested off days for mothers."			
"The balance between work and family life is achieved well because my mother is really committed to helping."	Children's well-being promotes mother's well-being.	The best interest of the child is the most important.	
"A safe and reliable care facility for children enables me to work."			
"Although my own weekly rhythm is very variable, the child's is regular."			
"It's hard to promise anything to a child, because so often you have to cancel because of work."			

4.4 Confidentiality, reliability, and validity

The confidentiality of qualitative research cannot be calculated or evaluated in the same way as in quantitative research. There is also no universal guideline for assessing the confidentiality of qualitative research. The most common confidentiality measures in scientific research are reliability and validity. Reliability means permanent results in such a way that if the study were repeated, the results would be the same. Validity, on the other hand, means that the things being investigated are correct and with sufficient accuracy. (Kananen 2014, 147.)

The subject of the study was work-life balance in Finland and the purpose was to find out how female pilots with children experience it. I belong to this same group, so the topic interests me. Thus, I had experience and prior knowledge of the subject of the research. The research did not significantly change my preconceptions, but it broadened my perspective. I find the subject of the research particularly important because there are fewer female pilots in Finland than the world average. If the research reveals areas for development, it might be possible to increase the number of female pilots by making the field more attractive to them.

The literature review, which is the theoretical basis of the research, was challenging to prepare, because there is not much literature or previous studies on the topic of the research. The scientific studies on the subject used as comparisons focused on American and Asian pilots. In the theory part, concepts and theory are reviewed, which have

been collected from variety of sources of different fields. It might have been more useful to write part of the theory after the interviews since the topic is unknown and little discussed. Moreover, the theory part would have been more coherent with the rest of the research.

The empirical part was the first study of this type for me. I also have neither experience in conducting interviews nor creating questions and that could have had an impact on the outcome. I familiarized myself with several ways to analyse the material I collected and tried to find a clear and easy-to-use method. Based on this, I chose to use material-oriented content analysis. The interviewees were informed that what they told would be used in the paper, but their names would not be mentioned. There were only four interviewees, but on the other hand, the total number of female pilots in Finland can be counted in the tens. Certainly, with a larger sample, the reliability of the results would have been better, but even with this sample, the similarity of the answers became apparent. The results were also consistent with previous studies. In comparison to other countries, Finland diverged in research findings, demonstrating successful implementation of workplace gender equality and a lack of reported gender-based harassment.

5 Findings and recommendations

According to the study 'Women's Perceptions of the Aviation Workplace' notably women reported high ratings for the survey item 'Having a flexible work schedule is important to me' (Stevenson et al. 2021). Consistently most of the findings and recommendations of this paper are related to work scheduling.

By the law, work schedules must be published no later than one week before the start of the work period. However, especially in a job that involves being away from home for several days and therefore significantly more arrangements of the rest of the life, it would be desirable to know the schedule earlier. All except one interviewee hoped for an improvement in the timing of publication of rosters. It is understandable that the airline cannot publish rosters for a year at a time, but to promote work-life balance, even a small improvement would make a difference.

The distribution of morning and evening shifts is one of the development proposals that is relatively easy to implement, at least in short-haul fleet. Every individual is unique thus morning shifts are more suitable for some and evening shifts for others, some have children in elementary school after kindergarten and 24-hour childcare have ended. If the employee so wishes, she could record her wishes in the shift planning system and efforts would be made to comply with them. To preserve the circadian rhythm and promote well-being, as explained on page 14, it would be more favourable to stay in the same rhythm for longer instead of constantly changing.

Rosters do not necessarily include a single whole weekend off in a month, which understandably weakens the work-life balance. When there are two or more days off, they are planned so that the evening shift precedes the days off and the morning shift follows the days off. By changing the previous and next shift to the opposite or continue with just the morning or evening shift would allow longer uninterrupted rest period.

The last finding regarding work shift planning focuses on holidays and off day requests. Three out of four respondents felt that the fulfilment of free requests has weakened significantly in recent years. Of the public holidays, only Christmas and Midsummer are free for everyone on a rotating system. The rest of the holidays are under the control of the shift planners and issued when the roster is published. It may take years until a holiday important to oneself or family members is free and can be planned well in advance. In sub paragraph 3.1, resources and workload and their appropriate balance are discussed, whereby work engagement develops and increases.

Respondents criticized the deterioration of the quality and quantity of food served on flights. The most likely reason for this is cost savings. As mentioned on page 30, savings accumulate at that moment, but in the longer term with a plan, health and well-being may be affected. Employees have limited opportunities to choose their meals on flights. Moreover, bringing own meals is complicated when departure is from a hotel abroad. The employer should value the importance of healthy diet, nutritious food and thus nurture the pilots' well-being.

Two of the interviewees brought up an interesting idea about daycare for children organized by the employer. Finnish airlines could adapt a model from other countries, like India, as described on page 3. Day care would be for the children of the company's employees and function flexibly according to work shifts. In this way, parents would not have to report to the 24-hour daycare for their work shifts weekly basis or drive to a daycare unit that is possibly further away. Even when considering entering the field, this change could increase the attractiveness of the pilot work for women. An example can also be found from other Finnish companies that offer daycare for employees' children, such as Fazer.

Contrary to what was revealed in two different studies conducted in America (compare pages 3 and 18), there is no strong boys' club atmosphere in Finland. Although the field is very male dominated, none of the respondents had experienced inequality due to gender or family life. In the interviews, the pleasant working atmosphere and colleagues who are easy to work with were praised (see Ikigai image 2, page 8). The Finnish family leave reform and attitude towards maternity leave were also complimented. The return to working life has been made uncomplicated and the position and seniority have been preserved (see table 2). Referring further to research (Lutte & Morrison 2022) in Finland it is possible to apply for state-sponsored flight training in addition to expensive private flight schools. Moreover, in Finland the employer usually takes care of education and training costs during the employment and when returning from maternity leave, thus the costs were not even mentioned during the interviews.

Finnish airlines could enhance recruitment of female pilots and increase awareness among potential applicants by promoting diversity and gender equality in recruitment materials and campaigns to attract female candidates. Some countries offer mentorship programs and networking opportunities for aspiring female pilots to provide guidance and support throughout their career journey ((Lutte & Morrison 2022). Potential candidates could be reached by collaborating with educational institutions to provide

information sessions and workshops specifically targeted at women interested in aviation careers and highlighting success stories of female pilots within the company to inspire and motivate potential applicants.

The findings and recommendations mentioned above have been created based on the responses from the interviews. Content analysis and tables two to seven supported these findings and provided the basis for creating development proposals.

6 Conclusion

For the aviation industry to thrive in the future, it needs a diverse workforce, including more women. Bringing women into aviation is not just about meeting workforce needs, but about reaping the benefits of having different perspectives. Until the industry tackles the barriers preventing women from succeeding, it will struggle to compete for talent and may struggle to survive and grow as future demands evolve.

Findings from this study highlighted areas for improvement to increase the retention of female pilots. Although recruitment is key to attracting more women to aviation careers, retaining women already working in the aviation industry is equally important. Based on the findings, recruiting appears to be more challenging in Finland since the percentage of female pilots is below average. Female pilots appreciate their profession and do not consider changing the career.

Female pilots with children often face unique challenges in achieving work-life balance due to the demanding nature of their profession and the responsibilities of parenting. Balancing the demands of flying with the needs of their family requires careful planning, flexibility, and support.

Firstly, the irregular and often unpredictable schedules of pilots can make it challenging for female pilots to maintain consistent family routines and spend quality time with their children. This can lead to feelings of guilt or stress as they strive to fulfil their professional duties while also being present for their families.

Additionally, the time spent away from home for work trips can be particularly challenging for female pilots with children. Being away from their children for extended periods can be emotionally draining, and it requires them to rely on support systems such as childcare providers, family members, or partners to help manage household responsibilities in their absence.

Furthermore, the physical and mental demands of flying can also take a toll on female pilots, especially when trying to balance these demands with the responsibilities of caring for their children. It is crucial for female pilots to prioritize self-care and seek out resources for managing stress and maintaining their well-being.

Overall, Finnish female pilots with children find ways to successfully navigate work-life balance by establishing clear boundaries between work and home life, communicating openly with their employers and families about their needs, and leveraging support

networks to help manage the demands of both their career and family responsibilities. Additionally, advancements in flexible scheduling and family-friendly policies within the aviation industry would contribute to making it easier for female pilots to achieve a healthy work-life balance.

In conclusion and suggestion for the future, it should be noted that women currently employed in airlines perceive their work-life balance as somewhat achieved. The primary challenge lies in inflexible scheduling and the inability to plan their lives in advance. Alongside retention efforts, there is a pressing need to attract new talent and promote the suitability of the aviation profession for women. It is crucial to prioritize addressing work-family balance issues and establishing supportive communities. By customizing recruitment and retention strategies to address the specific factors influencing women's career choices, it is possible to optimize resources to enhance female representation in the industry. Given that no such studies have been conducted within Finnish airlines, I propose further exploration of the topic or related areas for investigation.

References

99 Inspiring Women Pilots Since 1929 2023. URL: <https://www.ninety-nines.org/>. Accessed 3rd of May 2023.

Aijaz, M. Shahab, S. Khan, S. Nawab, E. 2020. Life of Females in Pakistani Aviation: Assessing the Relationship of Work-Family Conflict with Stress and Job Satisfaction. In International Journal of Business and Economic Affairs. pp. 170-183. URL: <https://ijbea.com/ojs/index.php/ijbea/article/view/180>. Accessed 16th of February 2024.

Amiruddin, T. Monil, M. 2022. The Impacts of Work-Life Balance in Airline Industry: A Proposed Conceptual Framework. In Proceedings of the International Conference on Technology and Innovation Management. pp. 343–353. Atlantis Press. URL: <https://www.atlantis-press.com/proceedings/ictim-22/publishing>. Accessed 12th of February 2024.

Bengtsson, M. 2016. How to plan and perform a qualitative study using content analysis. In NursingPlus Open, pp 8-14. Elsevier Ltd. URL: <https://www.sciencedirect.com/science/article/pii/S2352900816000029>. Accessed 14th of November 2023.

Center for Creative Leadership 2020. Recovery Practices to Foster Resilience & Prevent Burnout. URL: <https://www.ccl.org/articles/leading-effectively-articles/improve-performance-foster-resilience-prevent-burnout-recovery-practices/>. Accessed 17th of May 2023.

Dimas, H. Handrio, E. Rifki, A. Ahmad, M. 2022. Analysis of Work Life Balance and Job Satisfaction Flight Instructor: A case study of the Indonesian Aviation Academy Banyuwangi. In INCAVET (International Conference for Aviation Vocational Education and Training). Vol. 1 No. 1. Indonesian Aviation Academy of Banyuwangi. URL: <https://ejournal.icpa-banyuwangi.ac.id/index.php/incavet/article/view/32>. Accessed 12th of February 2024.

Finlex 2023. Laki naisten ja miesten välisestä tasa-arvosta. URL: <https://finlex.fi/fi/laki/ajantasa/1986/19860609?search%5Btype%5D=pika&search%5Bpika%5D=laki%20naisten%20ja%20miesten>. Accessed 10th of May 2023.

Finlex 2018. Varhaiskasvatustilaki. URL: <https://www.finlex.fi/fi/laki/alkup/2018/20180540#Pidm45843169616464>. Accessed 2nd of Jun 2023.

Flatley, K. 2023. The Basic Needs of a Child: 9 Essential Things Every Child Needs to Thrive. URL: <https://selfsufficientkids.com/basic-needs-of-a-child/>. Accessed 25th of May 2023.

Forbes 2020. How Our Daughters Can Solve The Pilot Shortage URL: <https://www.forbes.com/sites/oliverwyman/2020/03/06/how-our-daughters-can-solve-the-pilot-shortage/?sh=30fbdd2529a6>. Accessed 4th of May 2023.

Gorlin, I. Bridges, D. 2021. Aviation Culture: a 'Glass Sky' for Women Pilots - Literature Review. In International Journal of Aviation, Aeronautics, and Aerospace. Vol. 8 Iss.2. Embry-Riddle Aeronautical University. URL: <https://commons.erau.edu/ijaaa/vol8/iss2/13/>. Accessed 12th of March 2024.

Härmä, M. Kandolin, I. Sallinen, M. Laitinen, J. Hakola, T. 2011. Työterveyslaitos. Hyvinvointia vuorotyöhön. Työntekijän opas vuorotyön hallintaan. 10. painos. Printservice Oy. Helsinki.

Heilakka, R. Murray, G. 2022. THE AIRLINE PILOT SHORTAGE WILL GET WORSE. URL: <https://www.oliverwyman.com/our-expertise/insights/2022/jul/airline-pilot-shortage-will-get-worse.html>. Accessed 3rd of May 2023.

IFALPA 2021. Women in Aviation: Why Diversity, Equity, and Inclusion Matter. URL: <https://www.ifalpa.org/publications/library/women-in-aviation-why-diversity-equity-and-inclusion-matter--3496>. Accessed 5th of May 2023.

Jones, L. 2020. The real reason there are so few female pilots — and what airlines should do about it. URL: <https://thepointsguy.com/news/the-real-reason-there-are-so-few-female-pilots/>. Accessed 8th of May 2023.

Juuti, P. Salmi, P. 2014. Tunteet ja työ, uupumuksesta iloon. PS-kustannus. Jyväskylä.

Kananen, J. 2014. Laadullinen tutkimus opinnäytetyönä. Miten kirjoitan kvalitatiivisen opinnäytetyön vaihe vaiheelta. Jyväskylän ammattikorkeakoulu. Jyväskylä.

Kananen, J. 2017. Kehittämistutkimus interventiotutkimuksen muotona – opas opinnäytetyön ja pro gradun kirjoittajalle. Jyväskylän ammattikorkeakoulu.

Kananen, J. 2019. Opinnäytetyön ja pro gradun pikaopas. Jyväskylän ammattikorkeakoulu. Jyväskylä.

Ketola, K. 2022. Lentävän henkilöstön työterveyshuollon erityispiirteet. URL: https://www.ttl.fi/sites/default/files/2022-12/Pe%20mee-ting%2009%2012%202022_Kimmo%20Ketola.pdf. Accessed 30th of May 2023.

Kuistiala, A. 2019. Johtajanaiset. Alma Talent Oy. Helsinki.

LaGrave, K. 2018. Why There Aren't More Female Pilots. URL: <https://imdiversity.com/diversity-news/why-there-arent-more-female-pilots/>. Accessed 5th of May 2023.

Lutte, R. Morrison, S. 2022. "You'll Never Really Be One of Us": Women's Underrepresentation in the Aviation Workforce. In Journal of Aviation/Aerospace Education & Research, pp. 1-18. Embry-Riddle Aeronautical University. URL: <https://commons.erau.edu/jaaer/vol31/iss2/6/>. Accessed 29th of January 2024.

Luukkala, J. 2011. Jaksaa, jaksaa, jaksaa... -työhyvinvointitaitojen kirja. Kustannusosakeyhtiö Tammi. Hämeenlinna.

Manka, M. Manka, M. 2023. Työhyvinvointi. 3. painos. Otavan Kirjapaino Oy. Keuruu.

Mannerheimin Lastensuojeluliitto 2023. Pieni lapsi erossa vanhemmistaan. URL: <https://www.mll.fi/vanhemmille/vinkkeja-lapsiperheen-arkeen/pieni-lapsi-erossa-vanhemmistaan/>. Accessed 29th of May 2023.

Masgo, E. 2020. Redefining Purpose with Ikigai. URL: <https://management30.com/blog/redefining-purpose-with-ikigai/>. Accessed 15th of May 2023.

Miles, M. Huberman, A. 1994. Qualitative data analysis. 2nd Edition. Sage. California.

Morin, A. 2019. 13 Things Mentally Strong Women Don't Do. Yellow Kite. London.

Mulder, P. 2017. Job Demand Control Model by Robert Karasek. URL: <https://www.toolshero.com/human-resources/job-demand-control-model/>. Accessed 19th of May 2023.

Murray, G. Cornwall, T. Poitras, M. Rye, D. Green, J. 2020. THE PILOT DILEMMA - Engage, reward, recruit. Oliver Wyman – A Marsh & McLennan Company. URL: <https://www.oliverwyman.com/our-expertise/insights/2020/apr/the-pilot-dilemma.html>. Accessed 4th of May 2023.

Ojasalo, K. Moilanen, T. Ritalahti, J. 2014. Kehittämistyön menetelmät. Uudenlaista osaamista liiketoimintaan. 3. painos. Sanoma Pro. Helsinki.

Puusa, A. Juuti, P. 2020. Laadullisen tutkimuksen näkökulmat ja menetelmät. Gaudeamus Oy.

Pöyhönen, J. Livingston, H. 2023. Hyvän vanhemman salaisuus. Tuuma. Jyväskylä.

Reynolds, R. Milut, A. Hirschheimer, J. Cox, B. Milenkovic, B. Xu, W. 2011. Perceptions of Gender-Related Pilot Behavior. In 16th International Symposium on Aviation Psychology. pp 428-432. Wright State University CORE Scholar. URL: https://corescholar.libraries.wright.edu/cgi/viewcontent.cgi?article=1073&context=isap_2011. Accessed 16th of February 2024.

Salonen, A. Lehtinen, E. Helajärvi, H. Sahimaa, J. Hautala, J. Viljamaa, J. Huitti, M. Huotilainen, M. Remes, S. Routarinne, S. Dunderfelt, T. 2022. Work goes happy, Paremmän työelämän opas. Otavan Kirjapaino Oy. Keuruu.

Sanchez Cuevas, G. 2018. Äidin poissaolon vaikutus lapseen. URL: <https://miele-nihmeet.fi/aidin-poissaolon-vaikutus-lapseen/>. Accessed 29th of May 2023.

Simula, P. 2013. Käsikirja Ihmiselle. Into Kustannus Oy. Helsinki.

Sinkkonen, J. 2012. Mitä lapsi tarvitsee hyvään kasvuun. WSOY. Helsinki.

Sinkkonen, J. 2021. Lapsen varhaiset ihmissuhteet. URL: <https://www.terveyskirjasto.fi/pla00003>. Accessed 26th of May 2023.

Sivonen, O. 2022. Yrityskulttuurit murroksessa, inhimillinen työelämä ei rakennu pelkällä itseohjautuvuudella. Otavan Kirjapaino Oy. Keuruu.

Sorsa, T. Rotkirch, A. 2020. Työ ja perhe ne yhteen soppii? Vanhemmuuden ja työn yhteensovittaminen suomalaisissa lapsiperheissä. URL: <https://www.vaestoliitto.fi/uploads/2020/03/82d1c052-perhebarometri2020.pdf>. Accessed 2nd of June 2023.

Sosiaali- ja terveysministeriö 2022. Perhe-elämän ja työn yhteensovittaminen. URL: <https://stm.fi/perhe-elama-ja-tyo>. Accessed 2nd of June 2023.

Sosiaali- ja terveysministeriö 2022. Perhevapaaudistus tähtää molempien vanhempien perhevapaiden käyttöön. URL: <https://stm.fi/perhevapaaudistus>. Accessed 28th of March 2024.

Stevenson, L. Cuevas, H. Rivera, K. Kirkpatrick, K. Aguiar, M. Albelo, J. 2021. Women's Perceptions of the Aviation Workplace: An Exploratory Study. In Collegiate Aviation Review International, pp.42-63. University Aviation Association URL: <https://ojs.library.okstate.edu/osu/index.php/CARI/article/view/8211>. Accessed 29th of January 2024.

The International Society of Women Airline Pilots 2023. URL: <https://isa21.org/>. Accessed 3rd of May 2023.

The Ninety-Nines Finnish Section - kansainvälisten naislentäjien yhdistyksen Suomen osasto 2024. URL: <https://finnish99s.wixsite.com/finnish99s>. Accessed 3rd of March 2024.

Tuomi, J. Sarajärvi, A. 2009. Laadullinen tutkimus ja sisältöanalyysi. Kustannusosakeyhtiö Tammi. Helsinki.

Tuuri, A-M. 2018. Lapset vai työ. Uskallanko perustaa perheen? Minerva Kustannus Oy. Helsinki.

Uusitalo-Arola, L. 2019. Uuvuksissa. Otavan Kirjapaino Oy. Keuruu.

Vapaavuori, E. Sorsa, M. 2005. Lentävä ihminen. Ilmailufysiologian ja -psykologian perusteet ilmailulupakirjoja varten. Edita. Helsinki.

Velani, B. 2023. The Country with the Highest Number of Female Pilots. URL: <https://airwaysmag.com/country-highest-female-pilots/>. Accessed 8th of May 2023.

Appendices

Appendix 1. Interview questions in English

Interview questions

1. Background information (demographic factors)?
 - a. Your age?
 - b. Where do you live?
 - c. Family type?
 - d. Number of children and their age?
2. Do your children go to the school or day care?
3. In addition to you, who takes care of the children?
4. Do you work full time? For how long have you been flying?
5. What kind of roster do you have? Are you away multiple days consequently? Can you make requests or wishes regarding off days and holidays?
6. Have you had maternity or other family related leave? Did this affect your career?
7. What are your resources at work? Do you feel work engagement? How is your workload?
8. Do you feel that your physical, social, and mental needs are taken care of at work? Have you experienced discrimination?
9. How do the children experience the separation from you when you are at work? How do you keep in touch with them? Do you use other means to ease separation anxiety?
10. How do you feel about your work environment? Both physically and mentally?
11. How do you feel about shift work and how do you cope with it? Are you on call and how does it work in a family with children? Does the length of the shift change often?
12. Do you find good leadership important? How does this materialize in your workplace?

13. How do you recover from the work? What kind of methods do you use? Are you experiencing stress?

14. How do you balance work and family life? Which factors hinder or promote the balance of work and family life? Do you feel like it is successful?

15. Do you think of values or attitudes that promote or slow down work life balance and family life?

16. What would improve your work life balance? Is there anything you would like to add?

Thank you!

Appendix 2. Interview questions in Finnish

Haastattelukysymykset

1. Taustatietoja (demografiset tekijät):
 - a. Ikäsi?
 - b. Missä asut?
 - c. Perhetyyppi?
 - d. Lastesi määrä ja heidän ikänsä?
2. Käyvätkö lapsesi koulua tai ovatko he päiväkodissa?
3. Kuka huolehtii sinun lisäksi lapsistasi?
4. Työskenteletkö kokopäiväisesti? Kuinka kauan olet toiminut lentäjänä?
5. Millainen työvuorolista sinulla on? Oletko poissa useita päiviä peräkkäin? Voitko esittää pyyntöjä tai toiveita vapaapäivistäsi ja lomistasi?
6. Oletko ollut äitiys- tai muulla perhevapaalla? Miten tämä vaikutti uraasi?
7. Mikä motivoi työhösi (kuten palkkiot, työn sisältö, tavoitteiden saavuttaminen, palaute)? Tunnetko työnimua? Millainen on työmääräsi ja koetko työsi raskaaksi?
8. Tuntuuko sinusta, että fyysisistä, sosiaalisista ja henkisistä tarpeistasi huolehditaan töissä? Oletko kokenut syrjintää?
9. Miten lapsesi kokevat eron sinusta, kun olet töissä? Miten pidät heihin yhteyttä? Käytätkö muita keinoja erotusahdistuksen lievittämiseen?
10. Mitä koet työympäristöstäsi niin fyysisesti kuin henkisesti?
11. Mitä mieltä olet vuorotyöstä? Päivystätkö ja miten se toimii lapsiperheessä? Vaihtelee työvuorojesi pituus?
12. Miten tärkeänä pidät hyvää johtamista? Miten tämä toteutuu työpaikallasi?
13. Miten toivut työstäsi? Minkälaisia menetelmiä käytät? Onko sinulla stressiä?

14. Miten sovitat työn ja perhe-elämän yhteen? Mitkä tekijät estävät tai edistävät työn ja perhe-elämän tasapainoa? Tuntuuko siltä, että tasapaino toteutuu?

15. Tuleeko mieleesi arvoja tai asenteita, jotka edistävät tai hidastavat työhyvinvointia ja perhe-elämää?

16. Mikä parantaisi työelämäsi tasapainoa? Onko jotain, mitä haluaisit lisätä?

Kiitos!