



School of Health, Care and Social Welfare

OUTDOORS IN THE OFFICE?

A grounded theory study about the power of norms in the office working world

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ABSTRACT

New ways of working with a flexibilization in time and space are characteristics of today's office world, but at the same time stress-related health problems are on the rise. Nature contacts is shown to be a resource for health, and outdoor offices were invented to combine both flexible working and health resources at the workplace. As outdoor office work (OOW) is quite new and little is known about its usage, the aim of the study was to deepen our understanding about what circumstances lead to the consequence, that employees do not conduct office-related work tasks outdoors, even if they have access to outdoor spaces and green areas. Following research question was about to be answered by a grounded theory study: *What factors hinder office workers to conduct office-related tasks outdoors?* The data collection was conducted in 9 semi-structured online interviews and 3 phone calls with participants from Sweden, the Netherlands and Germany. The theoretical model was constructed through a process of coding and memo writing. The results show a theoretical model that entails one core category, *Norms*, and three main categories, *Personal Factors*, *Organizational Factors* and *Practical Issues*. The categories act interdependent, whereas existing norms have the most powerful impact. Work is perceived as something that should be conducted indoors at a desk, and as something that is stressful and can be inconvenient. The existing norms of how to conduct office work are influencing personal, organizational, and practical factors that lead to the consequence that employees do not conduct office work outdoors. The findings of the study provide useful knowledge for further research in the field of OOW, as well as for organizations that want to implement an outdoor office.

Keywords: Outdoor Office Work, Office Work, New Ways of Working, Norms, Grounded Theory

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1 INTRODUCTION

During the last decades, societal life in modern western societies underwent major changes due to the development of Information and Communication Technology (ICT) with an establishment of WIFI, mobile data and portable technical devices, leading to digitalization and globalization (Lee, 2015). The increased digitalization changed and influenced the way offices are designed and work is conducted. Workspaces are no longer stationary, but flexible office designs such as activity-based flexible offices (AF-O) are on the rise. At the same time enables the development of ICT employees to conduct work from wherever and whenever (Allvin, Aronsson, Hagström, Johansson & Lundberg, 2011; Bodin-Danielsson & Bodin, 2008). New Ways of Working (NWW) is a key term in the ongoing change in (office) working life and can be described as “business solutions for flexible workspaces enabled by digital network technologies” (Kingma, 2019, p. 383). Sixty percent of the employees in Sweden spend at least twenty-five percent of their working time in office environments (Arbetsmiljöverket, 2016). When considering that employees spend a significant amount of time their day working, the impact of the workplace and the workspace on employees becomes conceivable (Grawitch, Gottschalk, & Munz, 2006).

The current changes in working life can be named among others as higher work pace, higher connectedness, lack of physical activity, more time spend indoors and blurring boundaries between working and private life, making working life more flexible (Allvin et al., 2011; Gladwell & Brown, 2016; Wilke, Ashton, Elis, Biallas & Froböse, 2015). These changes challenge employees on different levels and consequences such as difficulties to detach from work during free time as well as an increase of stress-related illness, psychological and mental health problems, cardiovascular and musculoskeletal disorders can be observed (Allvin et al., 2011; Levanon, Gefen, Lerman, Givon & Ratzon, 2012; Siegrist, 2010; Wilke et al., 2015).

Sociologist Hartmut Rosa is trying to answer the question why we do not feel good, even if our modern world is as convenient as never before, with his theory of Acceleration and Alienation (Rosa, 2013). Acceleration takes place in various parts of life, such as technical acceleration, acceleration of social change, and acceleration in the speed of life. All forms of acceleration are visible in working life as communication is speeded up and space and time become less meaningful. Furthermore, social change accelerates in working life by higher job fluctuation and less strict norms. Simultaneously conducted working tasks reflect the acceleration of speed in working life. The three “subparts” of acceleration are interdependent, and Rosa (2013) provides a critical view on it: Due to acceleration, the relationship between oneself and the world is distorted.

One of the resources for good health and well-being is known as nature contact. Nature contact has positive effects on several aspects of life, such as improved cognitive function (Berman, Jonides & Kaplan, 2008), improved focus, better and quicker cognitive recovery (Berto, 2005), overall stress-reduction and overall improved wellbeing (Brown, Barton, Pretty & Gladwell,

2014; Hartig, Evans, Jamner, Davis & Gärling, 2003; Nisbet, Zelenski & Murphy, 2011; Twohig-Bennett & Jones, 2018). By looking for opportunities to make use of the current changes in office working life, the concept of “Outdoor Office Work” (OOW) gained interest among researchers and companies. In OOW, office-work related tasks such as focus work at the computer, meetings and teamwork can be conducted outdoors instead of indoors (Petersson Troije, Lisberg Jensen, Stenfors, Bodin-Danielsson, Hoff, Mårtensson & Toivanen, 2021). This innovative approach makes use of the positive benefits of nature contact to improve employee health and satisfaction. OOW can be seen as a sustainable office solution of the future, and it connects to 5 of the 17 United Nation’s Sustainable Development Goals (SDG) within the Agenda 2030 (goal 3, 8, 12, 13 & 17) (United Nations, 2015).

There is an interest in arranging OOW, even though the concept is still quite new. Yet, there are strong norms in working life influencing the perception how work should be conducted, and to change habits and norms seems to be difficult (Petersson Troije et al., 2021). It may not be sufficient to only provide an innovative way of working, employees need also to learn how to make use of it. Rodríguez Aboytes and Barth (2020, p. 993) refer to transformative learning as an approach that can “contribute to the design and implementation of educational interventions and assessments of learning towards sustainability”. Employees need to learn about it and reflectively discuss their own position within the learning process and towards the new concept.

While there are plenty of research findings regarding the general benefits of nature contact, only little is known about nature contact in an office-related context. Until now, the concept of OOW is quite new and rare. Therefore, researchers’ interest is high concerning the usage and not-usage of the available outdoor facilities.

1.1 Aim, Objectives, and Research Question

The research field of OOW itself is noticeably young, and little is known about why employees do not work outdoors, even if they have access to an outdoor office or a green space around. The aim of the study is to provide new knowledge and deepen the understanding about employees’ reasons and motives not to conduct office-related tasks outdoors. The knowledge will contribute to researchers’ understanding concerning the office-employees’ perception of work and their view on nature and the outdoors, as well as their perception of the possibility to conduct work outdoors. The study will contribute to the understanding about what circumstances lead to the consequence, that employees do not conduct office-related work tasks outdoors, even if they have access to outdoor spaces and green areas. This knowledge will benefit organizations and workplaces way of organizing work, as well as real estate companies that develop outdoor offices. By interviewing employees who work in offices on a regular basis and who have access to green spaces around, a theoretical model about the hindering reasons to conduct office-related activities outdoors will be created using Grounded Theory method. In this study, the following research question will to be answered:

What factors hinder office workers to conduct office-related tasks outdoors?

2 PREVIOUS RESEARCH

2.1 The Office as a workplace

2.1.1 *The development of office work*

The subject of flexible working is as actual as never before, but the concept is not as new as it seems as it firstly emerged already in the early 70's. At this time, the idea of flexible working was contrary to the traditional and conservative perception of office work and organizations were characterized by hierarchies and inflexible structures. The re-design of the IBM head office in 1970's was the starting point for coming innovative office designs in terms of activity-based flexible offices. The IBM office was designed with different working zones such as different desks and sitting areas, as well as quiet and total quiet areas (Van Meel, 2011). Also in other contexts, in a telecommuting project in an insurance company in Los Angeles (1973), and in an art installation about the "mobile office" by Hans Hollein in 1969, ideas about the concept of flexible working occurred already 50 years ago (Van Meel, 2011).

The evolution of office design underwent major changes between 1920 and 2020. After World War I, the use of cell-office designed for 1-3 persons increased which resulted in an increased need of space. Thus, the first innovative offices of this epoch were large open-space offices. A lot of office workers could work at the same space, which however resulted in a noisy and distractive workspace. Therefore, the design of the open space office changed over the years and as a result the concept of office landscape ("Bürolandschaft") developed in the 1950's as a new form of open-plan offices. It was unintendedly characterized by distraction and lower working quality due to noise and poor air quality. The concept of combi-offices was developed in the 70's and it aimed to combine the advantages of cell-office and landscape. The next evolutionary step in office development was the implementation of so-called flex-offices, which resulted from the technological development. Flex-offices are open-space offices in which employees do not have assigned seats anymore but are able to choose their workspace flexibly (Christansson & Eiserman, 1998). To summarize, the rise of activity-based flexible offices (AF-O) is the consequence of the development of ICT and the flexibilization of work. This office concept is characterized by two key features, by the absence of assigned workspaces for every employee, and by the division of the office space into different work zones. Employees decide where they want to conduct their work according to their work tasks. AF-Os usually include space for group meetings and interaction, regular desk work and focus work. The office provides only space for 75% of the workforce, as working from other places is part of the concept (Bodin-Danielsson & Bodin, 2008). AF-Os can support employee productivity as the change of workspaces can be perceived as stimulating, on the other hand can missing privacy and the lacking opportunity for personalization of the workspace be perceived as negative (Haapakangas, Hallman, Mathiassen & Jahncke, 2018).

2.1.2 Characteristics of office work

Nag (2019, p. 3) states that

“The office is a place that executes and manages a range of processes and functions of an enterprise, encompassing human resource management, customer service, database management, process mapping, purchasing, accounting, sales and marketing, payroll, records management, facility management, and the like”.

Within the different work tasks and areas of office work, Gensler (2012) identified four main work types commonly conducted in offices, namely focus, collaboration, learning and socializing, whereas focus work takes up most of the time and need. The four work types need specific type of work environments adjusted to their specific needs. Undistracted individual focus time is needed to efficiently conduct work tasks requiring high concentration and it is performed best in cell offices, silence, and an undistracted work atmosphere (Heerwagen, Kampschroer, Powell & Loftness, 2004). Collaboration between colleagues, superiors, work teams, different organizations and others is an essential part of reaching work and company goals. These work types require workspaces that are designed for collaboration, also meaning that employees have the possibility to interact and discuss with colleagues (Heerwagen et al., 2004). The possibility to decide themselves where, when, and how to conduct their work tasks can support collaborative work (Nag, 2019). AF-Os are a possible solution for the challenge to create workspace for the different work types. New Ways of Working (NWW) plays a significant role when it comes to enabling flexible work solutions. NWW can be described as “business solutions for flexible workspaces enabled by digital network technologies” (Kingma, 2019, p. 383). Due to the rapid development of ICT and the rise of knowledge-work (OECD, 1996), office-related work becomes increasingly flexible, and the modern office is less characterized as a place but as activities that are conducted to achieve a certain goal. Even if office work becomes more flexible, there are strong norms concerning how office work should be performed to be perceived as work, namely indoors in an office environment (Pettersson Troije et al., 2021).

2.1.3 The role of the physical work environment for employee health

Elsbach and Pratt (2007, pp. 181-182) define the physical work environment in organizational work settings such as offices as following:

“Physical environments in organizations include all of the material objects and stimuli (e.g., buildings, furnishings, equipment, and ambient conditions such as lighting and air quality) as well as the arrangements of those objects and stimuli (e.g., open-space office plans and flexible team workspaces) that people encounter and interact with in organizational life”.

The physical environment is the second biggest investment for many organizations, after the expenses for human resources (McCoy, 2005). On the mental and emotional level, the physical office environment can bring up both positive emotions as well as frustration and can therefore be a reason for inner conflicts concerning the environment (Monaghan & Ayoko, 2019). A crucial factor in this potential source of conflicts is the diversity in needs of people working at the same workspace. The physical work environment can therefore function as a suitable

context when it comes to the understanding of employee's characteristics and their needs (Elsbach & Pratt, 2007).

The type of office is one of the “material objects and their arrangement” that Elsbach and Pratt (2007) refer to. It correlates with employee sick leave and general employee health, whereas employee health and job satisfaction are measured highest in flexible offices and cell-offices; shared and open plan offices score low on these factors (Bodin-Danielsson & Bodin, 2008). Included into the “material objects and their arrangement” is the ergonomics of office furniture and working equipment, as is can, when designed and arranged inadequately, negatively impact the physical health of employees, leading to increased muscle tension, neck- and backpain and muscular-skeletal disbalance and disorders among others (Leyshon, Chalova, Gerson, Savtchenko, Zakrzewski, Howie & Shaw, 2010).

Elsbach and Pratt (2007, p. 181) refer to the “ambient conditions” such as lighting, air and noise within the physical environment of the office. They have a significant impact on employee health and performance. Bad air quality in offices in forms of stuffy or dry air and insufficient ventilation can lead to physical symptoms such as nose and eye irritations (Tähtinen, Remes, Karvala, Salmi, Lahtinen & Reijula, 2020). Furthermore, the lack of daylight exposure at the office is associated with lower overall vitality, overall poorer sleep quality and sleep disturbances, and the constraint of role-function due to physical problems (Boubekri, Cheung, Reid, Wang & Zee, 2014). Contrary to this do office employees with access to natural light tend to be more physically active and have longer sleep duration (Boubekri et al., 2014). The problem of noise exposure is often present in open-plan offices and the cognitive performance is high-noise office settings is lower than in low-noise settings Jahncke, Hygge, Halin, Green & Dimberg (2011).

The influence of different working environments and office types is undeniable. When organizations decide to change their working environment in terms of another office type, Ayoko and Ashkanasy (2020) highlight the need of not only adapting the physical environment but also the adaption of managerial approaches and techniques, as new dynamics within the workforce can occur.

2.2 New Ways of Working and Flexible Working

Blok, Groenesteijn, Schelvis and Vink (2012, p. 2605) describe the ongoing change and flexibilization due to and within New Ways of Working (NWW) on four different levels: the physical workspace, ICT technology, organization and management, and work culture. According to Allvin, et al. (2011) refers flexible working on the one hand to the increased flexibility concerning time and space, on the other hand it refers to a superior level in terms of higher job fluctuation, higher speed in competition, and a broader variety in forms of employment. This section will focus on NWW in terms of flexible working.

In general, the flexibilization of working life within NWW has both positive and negative effects on employees, depending on how flexible working is approached and conducted. Increased autonomy and flexibility in time and space on sides of the employee are positive effects of the

flexibilization of working life, and autonomy is seen as a resource for a healthy working life (Chevalier & Kalutza, 2015; Demerouti, Derks, Brummelhuis & Bakker, 2014). On sides of the employer is flexible working associated with reduced costs for office space and buildings, as well as higher organizational efficiency and time saving (Demerouti et al., 2014). A downside of NWW and flexible working is the risk of lack of detachment from work after working hours due to reachability and accessibility (Allvin et al, 2011; Demerouti et al., 2014; Mellner, Kecklund, Kompier, Sariaslan & Aronsson, 2016; Salanova, Llorens & Ventura, 2014). Furthermore, the high pace of communication and constant accessibility of information can lead to information overload and the feeling of being overwhelmed and overloaded, and the blending of occupational and private life can affect the quality of recovery (Demerouti et al., 2014).

Both the relevance and need for flexible work solutions can be observed on the level of the physical workspace and the office building. According to a report of Jones Lang LaSalle IP, Inc. (JLL, 2020), a leading firm that specializes in real estate and investment management, only 60-70% of all office spaces were used regularly. This statement shows the necessity to overthink current office space solutions and it is supported by the findings of Nag (2019), who lined out that employees spend around 7 hours a week in meetings and spend around 1/5 – 1/2 of their working time away from their desk. These numbers show that the office space solutions need to be adapted to the way how work actually is conducted. AF-Os are a possibility to react to this development, as this office type is designed to support flexible working, even outside of the office.

NWW is an enabler for flexible office solutions such as AF-Os. NWW implies an increased use of ICT and a flexibilization of work in terms of time and space, what leads to blurring boundaries within the office, and the office and other locations (Appel-Meulenbroek, 2016). Work is conducted from home, in cafés, bars, while commuting or in combination with a holiday, a so-called “workcation”, (Allvin et al., 2011; Yoshida, 2021). The emerging interest in outdoor offices is a further and continuing development of AF-Os. The office is extended to the outdoors and boundaries are opening.

Due to the need for physical distancing during the Covid-19 pandemic, the number of employees working from home increased rapidly (Sostero, Milasi, Hurley, Fernández-Marcías & Bisello, 2020). Therefore, the subject of NWW became even more relevant, as the number of people working flexibly increased all over the world. This development implies a substantial change for the world of working life, as traditional structures are opening. To outweigh the positive effects of NWW practices, employers and employees need to create and shape resources for healthy NWW practices.

2.3 Health challenges: work stress and mental health

Work stress and its negative consequences for employee health are a growing challenge (Försäkringskassan, 2016). Work stress influences both physical health, as it is connected to musculoskeletal disorders such as neck and back pain, as well as physiological disorders as cardiovascular diseases; and it has as well a negative effect on employees’ psychological health

in forms of for example depressive symptoms and anxiety states (Michie, 2002). Employee stress impacts employers negatively, too, as it leads to “increased absenteeism and turnover, reduced quantity and quality of work, reduced job satisfaction [...], [and] poor communication and increased conflict” (Michie, 2002). In this section the focus will lay on the psychological consequences of work stress.

In 2016, the Swedish Social Insurance Agency (*Försäkringskassan*) published a report on numbers concerning sickness absence due to mental ill-health. The rise of stress-related mental illness and sickness absence during the last 10 years is more than alarming. From 2010 to 2015 the numbers of sickness absence due to mental disorders in Sweden rose by 59% and since 2014 mental disorders are the most likely type of diagnoses in sickness absence. Adjustment disorders and reactions to severe stress are the most common diagnoses and were rising by 119% from 2010 to 2015.

The Swedish Social Insurance Agency (*Försäkringskassan*) outlined a broad range of risk factors for sickness absence due to mental disorders (*Försäkringskassan, 2020*). These risk factors can be named as female gender, age under 39 or over 50, social context and status, and work sector among others. A main factor within social life is the lack of balance between work and family/private life. Furthermore, the risk for mental disorders is influenced by the employee’s lifestyle. The psychosocial work environment is one of the main factors that explicitly impacts the psychological health status of employees. Overall, a main part of sickness absence has its origin in work-related stress as well as a dysfunctional organization and social work environment, whereas low job control combined with high job demands is one of the main resources of work stress (*Försäkringskassan, 2016; Försäkringskassan, 2020*).

Next to the conditions experienced at the workplace, the development towards NWW with its higher connectedness and higher work speed is a stress source in working life. Von Ameln and Wimmer (2016) address the blurring boundaries between occupational and private life and employees’ reachability associated with that in a critical way. The authors refer to a health report from a big German health insurance company from 2013: employees who are highly or very highly accessible during their free time show two times higher occurrence of mental illness, compared to those that are rarely or never accessible during their private time (*DAK-Gesundheit, 2013, p. 96*). Vieten, Wöhrmann and Michel (2022) line out that boundaryless working hours can impact employee recovery negatively. Sonnentag and Fritz (2007, referring to Meijman & Mulder 1998) describe recovery as “a process during which individual functional systems that have been called upon during a stressful experience return to their pre-stressor levels”. The need for recovery becomes a critical issue in contemporary working life, as increasing digitalisation is blurring the boundaries between work and private life, leading to diminishing recovery time and degraded relaxation (Allvin et al., 2011).

As the clear boundary between working time and private time diminishes, relaxing time becomes indistinct and rethinking work-recovery can be one way to deal with this challenge. OOW is hypothesized to provide recovery time during the workday as being outdoors in green environments is associated with quicker recovery from stress, as outlined in the next section.

2.4 Nature contact

2.4.1 Positive effects of nature contact

Research shows that nature contact has positive effects on almost every part of health and life. There are several theories that try to explain why nature contact is good for humans. According to the theory of Biophilia, our ancestors' wellbeing and survival was depending on a connection with nature, and therefore human beings are evolutionary "programmed" to interact with nature and to benefit from it (Wilson, 1984). The stress reduction theory lines out that nature contact "can lower pulse rates, reduce cortisol levels, and improve immune functioning", and that it therefore has a stress reducing effect (Capaldi, Passmore, Nisbet, Zelenski and Dopko 2015, p. 3). The attention restoration theory (ART) by Kaplan and Kaplan (1989) is the most relevant theory for the present thesis. The brain's cognitive function regarding attention can be differentiated between two distinct types of attention: directed attention, which is connected which is "used for executive functions and involves prolonged focus and effort" and involuntary attention, which is "effortless yet demanding" (Capaldi et al., 2015, p. 3). The brain's capacity for directed attention is limited and exceeding these capacities can lead to lower cognitive performance, mental fatigue, and lower well-being. Nature contact is a resource for restoring the directed attention capacities as it mostly stimulates involuntary attention, allowing directed attention to recover (Capaldi et al., 2015).

The positive effects of nature contact on physiological parameters are broadly examined. Fjeld, Veiersted, Sandvik, Riise and Levy (1998) evaluated the impact of "indoor nature" in forms of plants on employees and the results show that plants in the office reduce symptoms of coughing by 37%, reduce fatigue by 30%, and dry throat and itching skin by 23%, compared to employees in offices without plants. Furthermore, indirect nature contact in forms of outlook on nature scenery through a window improves the recovery of surgical patients: patients who have a view on natural surrounding do recover quicker and need less pain-relieving medicine than those who are viewing a brick wall (Ulrich, 1984). The positive effects are even stronger when time is spent outdoors. Spending time in nature reduces both experienced and physiologically measured stress parameters such as acute cortisol levels strongly, and besides increases stress recovery by up to 87% (Hansmann, Hug & Seeland, 2007; Hunter, Gillespie, & Chen, 2019; Pretty, Peacock, Sellens & Griffin, 2005; Ulrich, Simons, Losito, Fiorito, Miles & Zelson, 1991; van den Berg & Custers, 2011). At the same time, the stay in urban environments can increase stress experience (Ulrich et al., 1991). In addition, regular nature contact can reduce blood pressure, lower headache, reduce cardiovascular diseases, morbidity and mortality; reduce long-term sickness, obesity and risk of type 2 diabetes, improve pregnancy outcomes, and improve the immune system, as well as brain activity and endocrine function (Haluza, Schönbauer, & Cervinka, 2014; Hansmann, Hug, & Seeland, 2007; Richardson & Mitchell, 2010; Pretty et al., 2005; World Health Organization (WHO), 2016). Physical activity in natural environments maximizes this positive effect (Hansmann, Hug & Seeland, 2007; Pretty et al., 2005). Current research does not show a clear recommendation when it comes to the recommended time and dose of nature contact to achieve the best possible effect, but a study shows that a decrease of the stress hormone cortisol is the fastest and steepest after 20-30 minutes of nature contact, after that it continues to drop but less fast

(Hunter, Gillespie, & Chen, 2019). Another study showed that in neighborhoods where people spend at least 30 minutes a week in nature environments, the population prevalence of depression and high blood pressure reduces by 7% and 9%, and the more time spent in nature the better (Shanahan, Bush, Gaston, Lin, Dean, Barber and Fuller, 2016).

Nature contact has furthermore a major impact on the cognitive functions of the brain, both if nature contact takes place indirectly and if nature is experienced outdoors, whereas the effects are obviously higher outdoors. Plants in the office improve the cognitive performance of employees (Shibata & Suzuki, 2002). The main benefit for improved cognition is grounded in the ART. When being in contact with nature, the directed-attention mechanisms, responsible for example for problem solving, ignoring disturbing stimuli, etc., have the possibility to rest and recover (Berman, Jonides, & Kaplan, 2008; Berto 2005). This, in turn, improves cognitive performance as it improves directed attention capacities and as performance is best after full recovery (Tennessen & Cimprich, 1995). Furthermore, walking in green environments improves creative thinking and the brains creative capacities, and the effect of improved creative thinking is even prevalent after walking in nature (Oppezzo & Schwartz, 2014). Not only directed attention mechanisms and creative thinking are improved, but nature contact leads also to reduced mental fatigue and is therefore a resource for cognitive and mental health (Moore, Townsend, & Oldroyd, 2007).

Nature contact provides an extensive positive impact on psychological health and well-being. This effect is already measurable due to indirect nature contact in forms of plants or outlook into nature through windows, as mood, overall well-being and satisfaction can be improved (Han, 2009; Kaplan, 2001; Shibata & Suzuki, 2002). However, the positive effect is distinctly higher when nature contact is experienced outdoors. In general, nature contact is connected to improved well-being and improved mood, more positive emotions, and the reduction of experienced negative emotions (Capaldi et al., 2015; Nisbet, Zelenski, & Murphy, 2011). Furthermore, nature contact is a resource for mental health, as it significantly improves mental health both for persons suffering from mental ill-health such as depression or burnout, as well as for persons with a good mental health status (Capaldi et al., 2015; Shanahan et al., 2016; WHO, 2016). As nature contact is a resource for attention restoration, and mental fatigue is attributed to the exhaustion subscale of burnout (Thompson & Bruk-Lee, 2019), nature contact can function as a buffer when it comes to the prevention of burnout. The positive effect of nature contact can be improved by adding physical activity in forms of walks or exercise in green environments. Students participating in a walking seminar instead of a classical seated seminar experience a higher quality of the seminar and report an improved well-being after the seminar (Bälter, Hedin, Tobiasson & Toivanen, 2018), and office employees going on a lunch walk in green environments reported a better subjective mental health than those employees that were walking in urban environments (Brown, Barton, Pretty, & Gladwell, 2014). Furthermore, physical activity in green environments improves self-esteem, as participants of a study reported a higher self-esteem after exercising in green environments (Pretty et al., 2005). The research field of exercising in green environments is broad and the showed results represent only a small part of the existing knowledge about the positive effects of exercise in nature.

Direct and indirect nature contact have a positive effect on social relations and social behavior. For instance, students from Taiwan with indoor plants in the backside of the classroom experienced stronger feelings of comfort and friendliness, had significant fewer hours of sick leave, and got less punishment records due to misbehavior than students from the same school without plants in the classroom (Han, 2009). Regarding direct nature contact, studies show that people who participated in gardening projects around their community experience better social contacts, improved social interaction, better social group cohesion and better social support (Moore, Townsend and Oldroyd, 2007; Kingsley and Townsend, 2006). Later results are in line with the assumption that the more time during a week is spent in nature, the more social cohesion people experience (Shanahan et al., 2016).

2.4.2 Nature contact in the context of office work

The research concerning the benefits of nature contact in the setting of offices is quite recent, nevertheless, the current state of research clearly shows that nature is a job resource in the context of office work. Job resources are "physical, psychological, social, or organizational aspects of the job that are functional in achieving work goals, reduce job demands, and/or stimulate personal growth, learning, and development" (Bakker & Demerouti, 2007, p. 311). However, most of the research is focusing on nature contact at work either as a part of interior design in forms of plants, or on nature contact as an activity next to the regular work tasks. The concept of conducting work tasks outdoors is highlighted rarely. The positive effect of nature contact on direct attention restoration is a clear resource when it comes to the setting of office work, as direct attention is a prerequisite of any knowledge work. Largo-Wight, Chen, Dodd and Weiler (2011) investigated whether nature contact at work influences office employee stress and health. Outdoor nature contact shows a highly significant negative correlation with stress and health, but also indoor nature contact shows a significant positive effect on general health. Lottrup, Grahn and Stigsdotter (2013) support these results as their study shows that the physical and visual access to green outdoor areas at the workplace is positively related to decreased levels of stress and a positive workplace attitude.

Nature contact during breaks is a health resource for employees. When taking a daily 10-minute outdoor booster break by sitting in the nature, and mindfully observing nature elements, employees perceive to reduce stress better than when taking usual indoor breaks (Largo-Wight, Wlyudka, Merten, & Cuvelier, 2017). Moreover, regular lunch walks in green environments support employee well-being, as employees report a better subjective mental health than the ones walking in urban environments (Brown, Barton, Pretty, & Gladwell, 2014). Workplace strain outcomes such as "burnout, job dissatisfaction and depressive symptoms" are negatively related to nature contact: the more nature contact is experienced at the workplace, the lower is the reported workplace strain (Thompson & Bruk-Lee, 2019). Lottrup, Stigsdotter, Meilby and Corazon (2012) investigated what type of natural surrounding is perceived as most attractive for most activities for employees and the results show that the type of environment and how it's sensory perceived is influencing whether office employees make use of it during their workday or not. Environments perceived as "serene" showed the strongest influence on activities performed outside: having lunch, drinking coffee or similar, talking to colleagues, relaxing, and performing physical activity. The study showed a cluster

around social activities, meaning that employees who spend time outside for eating lunch, also spend time outside for drinking coffee or similar or for talking with colleagues (Lottrup et al., 2012).

Even if the positive effect of nature contact in office settings seems to be apparent, hindering factors to spend time outdoors during the workday seem to exist. The study of Hitchings (2010) focuses on the time during breaks and non-work-related activities, but not specifically on conducting work outdoors. A main reason that hinders employees to spend time outdoors during their workday is work habits and patterns, as office employees act in a construct of certain patterns and routines, leading to difficulties to break them and implement new habits (Hitchings, 2010). As usual everyday routines in the office do not include nature contact or spending time outdoors, employees tend to forget about the possibility to go outdoors and the outdoors itself (Hitchings, 2010).

Furthermore, existing norms concerning office working life and social constructs play a role when it comes to hindering reasons to go outside. The common working mentality promotes the idea of an indoor society, excluding all external disruptions (cold, warmth, darkness, light, ...) to increase performance and to make employees able to save their energy for their work performance; the idea to spend time outside during a workday is contrary to this. Employees experience therefor often a feeling of “needing to be inside” to fulfill their role of a proper office worker (Hitchings, 2009). The role of being an office worker implies also that not all types of natural surroundings are suitable for office workers, as it for example would not be perceived as appropriate to sit down in the grass in formal contexts but making use of well-designed coffee tables in the park would be (Hitchings, 2009). Furthermore, the power of social structures is not to be underestimated as employees report hesitations and tentativeness concerning going outside as they are concerned about what colleagues might think of them. The social setting is a powerful driver when it comes to habits, norms and routines at the workplace (Hitchings, 2009).

Lottrup et al. (2012) spotted that the main impediment for office workers to go outside during their workday is the argument of being “too busy” and that, in turn, employees who did not experience impediments showed to have 2,8 times higher odds to spend time outdoors during their workday. By contrast, employees who experienced encouragement to go outside, and who experienced communication about the possibility to go outside, showed 3,1 higher odds of going out.

2.4.3 Alienation from nature and what prevents people from going outside

For an extended period, human life was deeply connected to and depending on nature contact and a deep relation to the outdoors, but our modern western society today does not require any nature contact at all anymore to fulfill our daily needs of life (Matz, Stieb, Davis, Rose, Chou & Brion, 2014). It developed apart from this evolutionary imprint of nature contact, leading to a mismatch between imprint and reality. This mismatch can potentially cause distress or contribute to the occurrence of unhealth (Grinde & Patil, 2009). Life got as effortless as never before and still, mental and physical ill-health are causing serious health challenges. As outlined before, nature contact provides a valuable resource for health, but even though the

positive effects of nature contact are clearly known, many people do not spend time outdoors (Maller, Townsend, Pryor, Brown & Leger, 2005).

Several reasons for the loss of human-nature interaction can be identified. The rapid growth of urban areas is leading to a denser living with many people in the same areas, which often are characterized by a high amount of artificial building material and few green spaces. Additionally, the development of technology and the change of free time activities towards sedentary indoor activities leaves less time to practice outdoor activities. Soga and Gaston (2016) name the change of the living surrounding and its consequences as “loss of opportunities” as a reason for a decline in outdoor experience. Furthermore, they outline a “loss of orientation” towards nature and natural surroundings, as people tend to have a reduced positive affirmation towards nature when they spend less time in it. In turn, people who have a positive emotional relationship with nature spend more time outdoors, and people who spend time in natural places as children are more likely to do the same when they are adults (Soga & Gaston, 2016). When it comes to nature contact as a recreational activity, people tend to underestimate the positive effect that nature contact can have on mood and well-being, which can be another reason why people don’t spend time outside, even if they have the possibility to do so (Capaldi et al., 2015).

Soga and Gaston (2016) outline the consequences of the alienation from nature on four different levels: health and well-being, emotions, attitudes, and behavior toward nature. With a lack of nature contact, people lose a valuable resource for health and well-being. Maller et al. (2005) support this proposition as they outline that spending less time outdoors is associated with higher risk of chronic stress and psychological unhealth. People’s emotional relation toward nature is changing when they spend less time outdoors, as they experience less connectedness with nature and less interest to spend time outdoors (Soga & Gaston, 2016). This, in turn, impacts people’s attitudes towards nature, and less value is put on natural environments, leading to less interest to protect it (Soga & Gaston, 2016). With regards to the current environmental destruction and climate change, this is a fundamental problem as it not only affects people's individual well-being but also has a societal component. Finally, the behavior towards nature is affected by the alienation from nature as well. The individual loss of nature contact can have a societal and political component as people who do not spend time outdoors are less likely to be committed for pro-environmental behavior (Soga & Gaston, 2016). These four dimensions are interconnected and interdependent, as one is influencing another and can do it both in a positive and in a negative spiral. If people have access to green areas or not, and if they make use of nature contact or not, can have extensive consequences, as having access to green areas in urban settings is associated with mortality (Barboza, Cirach, Khomenko, Iungman, Mueller, Barrera-Gómez, Rojas-Rueda, Kondo & Nieuwenhuijsen, 2021).

2.5 Outdoor Office Work

The field of OOW is quite new and rare, but the interest around it rose recently due to the changed demands the Covid-19 pandemic is putting up on employers and employees. In

contrast to the previously outlined nature contact during the workday as a mainly recreational part of the day, OOW refers specifically to the execution of working tasks outdoors, providing a resource for recovery during the workday. Pettersson's (2019) study shows that the awareness about OOW often is not present for office employees, even if it turns out that they conducted work tasks outdoors before. This deviation in perception shows that, as long working outdoors is not conceptualized from for example the employer, it is not perceived as OOW (Pettersson, 2019).

Petersson Troije et al. (2021) studied OOW among employees of a big Swedish municipality. The authors outlined the following conditions to make OOW feasible: concerning the physical preconditions and the infrastructure it is to say that on the one hand, an appropriate distance to the outdoor area is needed, and that on the other hand, different equipment depending on the work task is needed, for example sun or rain protection, power outlets, Wi-Fi, and walking routes and maps. Next to practical preconditions that must be met, there are sociocultural and organizational conditions that facilitate OOW within an organization: existing values and norms concerning work seem to be the most influencing (either supporting or hindering) factors when it comes to OOW, and especially the managers' attitude towards it is vital. An open-minded and supportive culture within the team and the department is important when it comes to the acceptance and support of working outdoors. On the organizational level there are a trust-based leadership as well as policies and insurances that allow OOW crucial (Petersson Troije et al., 2021).

Following work tasks are identified to be suitable for OOW: Thinking and planning, creating and producing, talking on the phone, participating in events, e-mailing and corresponding, administrating (reporting, ordering, etc.), reading, scouting and learning, holding/attending meetings, meeting informally, to man/crew, traveling and transporting oneself and taking a break, lunch break or "fika" (Petersson Troije et al., 2021, p. 2-3). These findings are in line with Pettersson's findings from 2019 (Pettersson, 2019). The studies showed that almost all work tasks that occur during a typical office working day can be conducted outside, when the preconditions are appropriate.

Employees experience several positive effects when working outdoors. Concerning well-being and recovery they experienced a good well-being, felt in contact with nature, felt energized during and after conducting OOW, and felt furthermore calmer, less stressed, and experienced better sleep compared to not working outdoors (Petersson Troije et al., 2021). Additionally, they experienced an increased sense of autonomy and freedom, appreciated the chance of feeling privacy and being undisturbed, and reported to be "able to breath", both physically and in a symbolic way. The enhanced autonomy and enhanced control that is experienced when working outdoors is of important relevance in these findings as experienced job control is a resource for a healthy working life (Bakker & Demerouti, 2007). The participants also experienced a positive effect on their cognition as they felt more creative and felt that being outside helped them to think "outside the box", which contributed to problem solutions (Petersson Troije, 2021). Furthermore, the participants experienced improved communication and improved relations at their work as they perceived conversations to be easier and opener when conducted outdoors while walking, compared to sitting indoors face to face (Petersson Troije, 2021).

But, next to a broad range of positive effects and experiences reported the participants also about negative emotions they experienced in relation to OOW: on the one hand was the feeling of guilt a common topic as working outdoors occasionally felt “too good to be work”, and participants felt like they were not “allowed” to enjoy too much while they are working. On the other hand, participants experienced it as difficult to change habits and to implement new routines into their working day (Pettersson Troije, 2021). Additionally to this, Pettersson (2019) lined out that social norms might be perceived as a hindering factor when it comes to OOW, as participants of the study experienced it to be not socially acceptable to work outdoors, if no other of their colleagues does it. Furthermore, can the absence from the office evoke fears to miss out on social interaction with colleagues or work-related discussions (Pettersson, 2019). Until now, there are no concrete guidelines or concepts concerning “How to do Outdoor Office Work”, as Pettersson’s (2019) study shows, and the missing of reference points and rules concerning OOW can cause uncertainty among employees, as they are not sure in what way OOW is feasible and acceptable at their workplace or not (Pettersson, 2019). The studies of Pettersson Troije et al. (2021) and Pettersson (2019) provide insight into the emerging field of OOW, yet it is still unclear what hinder employees to conduct office related work tasks outdoors. Possible barriers and impediments will be outlined in the result section of this study.

2.6 Innovation and Resistance to change

OOW is an innovative way of working, embedded into the development of NWW. The relevance of the outdoors both in general and at the workplace is rapidly growing due to the demands that the Covid-19 pandemic is putting on employees and employers, as physical distancing and remote work became part of a new working reality from March 2020 and onwards. The increased requirement of physical distancing is leading to an increase in remote work (Sostero et al., 2020; Statista, 2020). At the same time, working outdoors instead of indoors became more popular during the pandemic, as meeting indoors should be avoided. The Covid-19 pandemic is an opportunity to develop green NWW, adding to UN SDG’s Agenda 2030. The Covid-19 pandemic is putting a challenge on existing work routines and norms, and it showed that it is possible to adapt new habits if it is required. The adaption to new habits is not always easy, and innovational change can lead to resistance among receivers.

According to Dibrov (2015, p. 92) is the “innovation process considered not only in terms of technical or technological changes, but also from the position of institutional transformations”. Implementing an innovative way of working can be interpreted as a form of institutional transformation, but resistance to change can be hindering for a successful adaptation. The subject of innovation resistance is mostly thematized in the context of economical markets and economic growth but will in this context be referred to an innovative way of working, as the way work is conducted and its influence on employee well-being influences employee productivity, and therefore indirectly the economic competitiveness of a company.

On the individual level, several reasons for a possible resistance to change can be observed. Oreg et al. (2008) identified six disposals that make people likely to resist change. First, a fear or an aversion to lose control, as the individual is insecure if control will be ceded during and

after a change. Second, a reluctance to change the way of thinking. Third, a lack of psychological resilience and therefore a lack of resources to cope with changes. Fourth, difficulties to adjust to new and unknown situations. Fifth, favoring known to unknown situations and preferring low-stimuli situations. And sixth, the unwillingness to give up known and comfortable situations and habits. Furthermore, it can be a challenge to adapt to changes at the workplace if an employee's self-identity is strongly connected to the workplace, as change can be interpreted as assault (Halford, 2004). As people have a need for psychological balance, and change implies the risk to disturb that balance, resistance as an initial reaction to change is common, and known habits and routines are preferred to stick to (Heidenreich & Spieth, 2013; Hon, Bloom, & Crant, 2014).

On the organizational and social level can following influential factors be identified: the adaption of social groups and social settings to innovational changes takes a long time, and referred to NWW practices, different dimensions and characteristics of NWW can be implemented in various pace: the implementation of new ICTs and new physical workplace characteristics is faster (around 6 months) than the implementation of a new management style or a change in organizational culture (Blok et al., 2012). The organizational culture and the management approach within an organization play a crucial role when it comes to innovational changes (Dibrov, 2015).

Innovations create contradictions within organizations which can disrupt the balance state within the organization, leading to the creation of uncertainty and containing the risk of conflicts between the status quo and the future perspective, on sides on the individual as well as on sides of the organization (Dibrov, 2015). Dibrov (2015, p. 94) outlines five different levels of innovation resistance, namely "lack of resistance (a perfect condition for implementation of innovation process), distrust (ignorance of innovative technology), non-participation (misunderstanding and ignoring the effects of innovation), hostility (misunderstanding and ignoring innovation goals) and sabotage (full denial of innovation)". Heidenreich and Spieth (2013) refer to product innovation and the authors distinguish between active innovation resistance and passive innovation resistance. In active innovation resistance the consumer is evaluating a product and compares the evaluation to his own expectations. Depending on the evaluation the product is resisted or accepted. In contrast to this is passive innovation resistance an initial consumer response, without evaluating the product before. People strive for psychological balance and an innovation implies the risk to disturb this balance, as the process of readjustment can imply effort. Therefore it can happen that people resist right from the beginning, which may be caused by an individual predisposition to resist innovations (Heidenreich & Spieth, 2013).

When it comes to innovations and innovation resistance, several moderating and supporting factors can be identified to simplify and ease the approach towards innovations and innovational processes. An empowering and supportive management style is simplifying the process when innovations and NWW are about to be implemented (Blok et al., 2012; Hon et al., 2014). Furthermore, an organizational culture which implies a climate for modernity and supportive colleagues simplifies the process and functions a factor that moderates and minimizes the resistance to change (Hon et al., 2014). If employees receive sufficient

information about the upcoming change and its purpose, and can actively participate in the change process, the resistance to change is minimized as well (Hon et al., 2014).

When it comes to the implementation of innovations and innovative ways of working, the risk of resistance to innovation and to change is a serious challenge that dares both institutions and individuals. To ensure a successful and sustainable change, this risk must be kept aware of, and the changing process must be shaped in a way that makes it most successful.

3 METHOD

3.1 Grounded Theory

As the field of OOW is new and emerging, and therefore no theoretical background concerning this topic is existing, the chosen qualitative method is Grounded Theory (GT). GT has its aim to discover and develop theory “that offers an abstract understanding” (Charmaz & Thornberg, 2021) through data, and it is a suited method when it comes to explaining a relatively unknown area (Alvesson & Sköldbberg, 2000; Corbin & Strauss, 2015). In GT, everything can be data and data can be collected in form of interviews, field notes, articles, conversations and more in natural settings (Charmaz, 2014). The underlying thought is that the theory will be grounded in the data and will be constructed from the data, meaning that the methodological approach is inductive. According to Charmaz (2014) constructivist approach has the researcher an active role by giving rise to the data. Referring to Charmaz (2014), Singh and Estefan (2018, p. 2) state that GT “encompasses the interconnections of concepts and categories to interpret and explain patterns or process (es) of a psychosocial phenomenon.”

GT was initially developed by Glaser and Strauss in the 1960s, who researched about dying in hospitals. Afterwards enhanced Strauss the methodological approach and until today, there are three common GT approaches: by Glaser, Strauss and Corbin, and Charmaz (Singh & Estefan, 2018). Even though the different approaches share the same aim, different underlying philosophical approaches and approaches in knowledge acquisition distinguish them. Glaser’s approach, also called for classical grounded theory, is positivist and objectivist, and he views the researcher as a distant observer, implicating that the “reality lies in the field and remains independent of the researcher” (Singh & Estefan, 2018, p. 3). Strauss and Corbin take a more postpositivist and objectivist position and acknowledge that the researchers subjective influence on the research process is inevitable. Strauss and Corbin still aim to minimize the researchers bias as much as possible, with the aim to present the reality as close as possible (Singh & Estefan, 2018). In contrast to the previous two approaches, Charmaz takes a constructivist-interpretivist perspective and holds the view that the researcher and the research participants co-construct knowledge during the research process. The researcher has a present role during the process of analysis of interpretation, and the researcher’s previous

knowledge and experience concerning the studied subject is acknowledged (Charmaz, 2014; Singh & Estefan, 2018). Singh and Estefan (2018, p. 5) state that according to Charmaz (2014) “experience and expertise become reference points to ask relevant questions and can enhance the researcher’s theoretical sensitivity, that is, the ability to see, define, and express phenomena and their inter relationships in abstract form”. Charmaz approach was used for this study as the author agrees with Charmaz stance that the researcher’s previous knowledge and experience provides benefit for the study and that reality is observed through the eyes of the researcher and can therefor never be seen truly independent of the researcher.

GT is often used in social sciences and medical care context, always with the aim to ground and base the theory on the data emerging from the given context. Several studies have used GT before, such as Leteta, Bouchal, Berg and Sinclair (2020) who aimed to “uncover the social process occurring in a bereavement education workshop“ and Appelgren Engström, Häggström-Nordin, Borneskog & Almqvist (2019) who researched on how mothers in same sex marriage strive for equal parenthood. GT enables the researchers to interact with the data from an early point of research on. Through GT, the researchers get into close contact with the research participants and their experiences and thoughts, and by this, they can uncover the underlying processes forming the theory. As Charmaz (2014) constructivist approach starts from the premise that it is people who construct data, the focus lays on the data constructed by interviewees during semi-structured interviews and phone calls in this study. The data collection and analysis of the data occurs simultaneously in GT (Charmaz, 2014).

The field of OOW is new, and until now, there only is knowledge existing why employees do not spend time outside during the workday in form of non-work-related activities (Hitchings, 2009, 2010; Lottrup, 2012). Thus, no knowledge concerning why employees do not conduct office work outdoors even if they have the possibility to do so is existing. By deepening the understanding concerning the office-employees’ perception of work and their view on nature and the outdoors, as well as their perception of the possibility to conduct work outdoors, a theory addressing the hindering reasons concerning outdoor office work will be explored and developed.

3.2 Participants and selection

The sampling of participants was purposive and following requirements for participants were set: The participants conduct office work as their main work, and they have access to either an outdoor office or to green areas close to their workplace but do not make use of it as a workspace. During the research process the participant requirements were extended, and persons who are engaged in the field of OOW and have an outside perspective on why outdoor offices and green spaces are not made use of as workspaces, were included. Adding this group of persons into the sampling group turned out to provide valuable data for the study. The participants were recruited via contacts within the research project SOFCO (Concepts for the Sustainable Office of the Future) at Mälardalens University, Sweden, through snowball sampling within existing contacts and through notices and postings in social media. The author reached out to possible participants via mail, explaining the aim of the study and asking for

interest to participate. After every interview the author asked the interviewee if he/she knows another person that would fit in the participants requirement. If the second person agreed, contact details were exchanged and the author reached out to the person in question via mail again.

In total, 12 participants took part in the study, of which 9 participated in one-to-one online interviews and 3 participants took part in phone calls. The age range of the 9 interview participants was between 24 and 59 years, including 7 females and 2 males, located in Sweden, Germany and the Netherlands, both in urban, sub-urban and rural areas. 6 of the participants had access to an outdoor office or green space but did not make use of it as a workspace. 3 participants were engaged in the field of OOW, as they were dedicated to the introduction and launching of an outdoor office and outdoor workspaces at their workplace. The participants were employed in the private sector in following jobs and branches: administration, HR, project management, engineering, strategic initiatives, and editorial work.

Furthermore, 3 phone calls with persons who are committed to, work or research in the field of OOW provided additional data for this study – the persons in question were located in Sweden and the Netherlands and were recruited through initiative contact after internet research concerning outdoor offices, as well as through snowball sampling with initially recruited contacts. All phone contacts were female, aged between 33 and 47.

3.3 Data collection and materials

The interviews were conducted between April and July 2021 and lasted between 30 and 75 minutes. Due to the Covid-19 pandemic, it was not possible to conduct the interviews in person, instead they were conducted online using the program Zoom. The 9 interview participants were interviewed by intensive interviewing. Intensive interviewing is described as “a gently-guided, one-sided conversation that explores research participants’ perspective on their personal experience within the research topic” (Charmaz, 2014, p. 56). The interviews followed an interview guide (Appendix C), leaving space for individual, subject- and situation-based adaptations of the interview. The interview guide was constantly developed during the process of the data collection to gain focus for the most relevant aspects of the field of study and the appendix shows the final version of it (Charmaz, 2014, Charmaz & Thornberg, 2021). The interviews were recorded and then transcribed afterwards. 5 interviews were conducted in English, 3 were conducted in German and 1 interview was conducted in Swedish. When transcribing the interviews, they were translated into English to facilitate the analysis.

Notes were taken during and after the interviews to grasp for example facial expressions of the interviewees or to retain between-the-lines statements. This is an important part of data collection as, as stated before, everything serves as data in GT. As video interviews take away the complexity of non-verbal communication, the notification of it is of high value. Even though Charmaz (2014) recommends getting back to interview participants during the research to deepen or clarify certain aspects of the interview, or to deepen the knowledge concerning an emerging category, the scope of the master’s thesis did not allow this procedure.

Before the interviews were conducted, the participants were informed about the content and aim of the study and as well as their right to withdraw at any point of time. Furthermore, the participants were informed that the interviews will be recorded before they gave written consent to participate in the study. The interview guide was tested in a pilot interview and was adapted after that. In the refined version several questions concerning the current indoor workspace were excluded, and the focus was put on the participants' experience and thoughts concerning the outdoors, especially the possibility to conduct work outdoors.

The phone calls were not recorded and followed the interview guide in a loose way. The interviewer took notes throughout the interview to grasp important key points and reflections on sides of the participants. The interviewer adapted the asked questions and flow of conversation flexibly to the content of the conversations. All phone contacts were dedicated to promoting, developing, or researching within the field of OOW and provided valuable insights for this study.

3.4 Data analysis

For the data analysis, Kathy Charmaz' (2014) guideline concerning constructing Grounded Theory was applied. The data analysis in this GT study implicated following characteristics and steps: The process of interviewing and analyzing was conducted simultaneously as it enables the researcher to discover relevant key points during the research process and to adapt the interview structure by exploring relevant codes during the process (Charmaz & Thornberg, 2021). The interviews were directly transcribed after they were taken. Practical steps in analyzing the data are coding of the data in two steps, initial and focused coding, and memo writing. The different steps will be outlined more detailed in the following.

The first step of coding was initial coding and the researcher named fragments and expressions in the data line by line, applying line-by-line coding in this study, describing actions in an analytical manner (Charmaz, 2014). A common technique is the usage of gerunds to avoid naming topics and themes in the early stage of coding. By naming actions instead, the researcher remains open to all directions (Charmaz, 2014). During this stage of coding, constant comparison between the codes showed appearing patterns in the data (Leteta et al., 2020). At the same time when initial coding took place, the author applied memo writing as a tool of analyzing. Memos are "informal analytical notes" and they "prompt (the researcher) to analyze (the) data and codes in the early research process" (Charmaz, 2014, p. 162). The following quote is an example of a memo on interview 3.

"She says that working outdoors would feel luxurious for her, but she also says that she probably would enjoy it. But there was something hesitating, something unsure in her voice. Reflection: something luxurious often is something expensive, something you have to earn, for special occasions, what you cannot have every day. Saying that working outdoors would be something luxurious for her might indicate that she doesn't see it as a serious option to do it regularly? The way she perceives work, and the outdoors seems to be influencing her willingness (or readiness?) to actually do it. This seems to be something to check on."

Writing this memo enabled the author to become attentive towards possible hindering reasons to not conduct work outdoors, which during the study turned out into the sub-category “perception of work”.

The next step of coding was focused coding. Focused coding pursues the work that was done through initial coding and functions as a tool to “sift, sort, synthesize and analyze large amounts of data” (Charmaz, 2014, p. 138). Focused codes support the researcher to define conceptual categories and their properties. The researcher was about to identify which initial codes appeared more frequently and which codes have more significant relevance and usefulness than others. The initial codes were then framed into analytical and abstract focused codes (Charmaz, 2014).

Focused codes build the theoretical direction of the data. During the process of coding, constant comparison between codes and data supported the researcher to construct theoretical categories that were supported by the data. The theoretical categories were defined, and its properties outlined until theoretical saturation was met (Charmaz, 2014).

The constant comparison between codes, categories and data, also through help of memo writing, enabled the researcher to discover the relationships between the categories. By sorting out the relationships between the categories and the role of each category for the whole, the theory was finally constructed. The theory entails one core category (*Norms*) and three main categories (*Personal Factors*, *Organizational Factors* and *Practical Issues*).

3.5 Ethical considerations

When it comes to ethical consideration within the study, the main importance lays on the privacy protection and confidentiality both of person-related information as well as company-related details. Before conducting and recording the interviews, a letter of consent was sent out to the participants. The letter included information about the background and aim of the study and information about their right to withdraw at any point of time. Furthermore, it explained that when it comes to the transcription of the interview, no personal and workplace-related information that make it possible to identify their person will be written down and that the audio file will be deleted after the transcription is done. Some participants signed the letter of consent online and some, who had not the possibility to do that, were explicitly giving verbal consent to participate in the study.

4 RESULTS

The results of the study are based on 9 interviews and 3 phone calls (n=12) with persons who either don't conduct office work outdoors or who are engaged to develop, support and research within the field of OOW. The participants were aged between 24-59 years (M= 41), and located

in Sweden, Germany, and the Netherlands. The participants in Sweden as well as the Netherlands had either access to a dedicated outdoor office or to a terrace/sitting area by the office or were involved in the development of an outdoor office. No one of the participants from Germany had access to a dedicated outdoor office, but to green areas around the office, the own balcony, or a terrace by the office. As known until now, there is no outdoor office existing in Germany. The participants were employed in the private sector within administration, HR, project management, engineering, strategic initiatives, and editorial work.

The analysis resulted in the construction of one core category, *Norms*, and three main categories, *Personal Factors*, *Organizational Factors* and *Practical Issues* (figure 1). The core category *Norms* is underlying and influencing the main categories as fundamental and overarching norms shape the personal, organizational, and practical factors that influence why office work is not conducted outdoors.

The core category refers to the societal and workplace-related norms within office work which shape the perception of office work and the frame within it is conducted. These norms define what kind of behaviors are perceived as appropriate as well as unconventional within office work. Each main category is influenced by the core category, and the main categories are related to each other. *Personal Factors* include intrapersonal factors that influence why persons do not work outdoors. *Organizational Factors* refer to various aspects on sides of the organization which influence the likelihood of employees to conduct OOW. *Practical Issues* include concrete practical boundaries that employees experience when it comes to OOW. The categories, their properties, and their relationship to each other will be outlined more detailed in the following section.

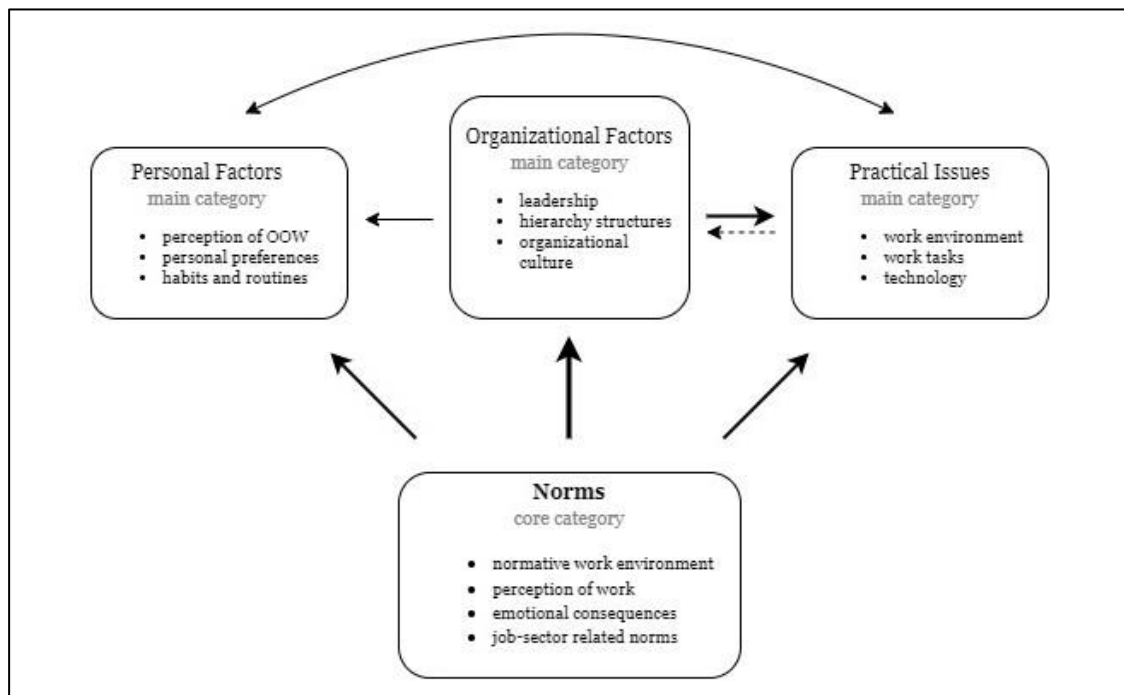


Figure 1. Theoretical Model presenting the core category *Norms* and the three main categories

4.1 Norms

The core category *Norms* entails 4 sub-categories, *normative work environment*, *perception of work*, *emotional consequences*, and *job-sector related norms*. It refers to the existing norms concerning office work and influences the way office work is perceived and conducted. The analysis shows that the *normative work environment* is strong. Office work is clearly connected to the idea of being indoors, sitting or standing at a desk. This normative frame is shaping the way office work is perceived and expected to be conducted. This perception was found in nearly every interview that was conducted for this study. This statement from Interview 3 (Sweden) shows a clear perception about the normative work environment: “The way I think about work is that work is sitting behind the screen, sitting at an office table”. Until the interview for the study, several participants, mostly the ones from Germany, never thought about the possibility to conduct work outdoors, showing how strong the idea of being indoors while working is. An extension of *the normative work environment* is the *perception of work*. This includes the perception that work tends to be something uncomfortable, stressful and something that is not too enjoyable. The participant from interview 8 (Germany) wishes for the future “that you don’t only connect work to something that is uncomfortable, or stressful”. Subsequent to the described perception of work, several participants describe an existing self-identification of busy work habits observed on their colleagues. The way oneself identifies with work seems to influence how work is approached and conducted, and either opens or encloses the readiness for a health-promoting way of working. Participant 6 (Germany) reflects:

“I have several colleagues who often talk about how hard and much they work, and how much stress they have, in a way that they want to show off, I feel like. Showing they are someone because they are so busy. To them, the thought of working in a well-being promoting way would seem so weird, it’s not in line with how they think, this, showing how tough they are. I think this mentality has to change before something like this [outdoor office] could be possible.”

Furthermore, the *normative work environment* in combination with the *perception of work* leads to an *emotional consequence* on the personal level when it comes to working outdoors. Feelings that are experienced are guilt, the fear to lose reputation from colleagues and insecurity. Guilt is the most present feeling, as several participants do not feel the “permission” to feel good while working. “When I would work outside on the terrace, that would feel a bit too luxurious I think”, stated the participant of interview 3 (Sweden). Choosing the word “luxurious” for describing how it would be to work outside underlines the emotional reaction several participants experience when it comes to working outdoors.

By shifting the workspace from inside to outside, participants experience a conflict between existing norms and the new way of working, leading to difficult emotions and therefore to the avoidance of working outdoors. Furthermore, several participants experience the fear to lose reputation from their colleagues when working outdoors. Participants worry that their colleagues might think they would not be working when they are sitting outside, leading to a feeling of insecurity whether to work outdoors. The participant of interview 7 (Sweden) is one of the persons that supports the implementation and usage of outdoor offices and states her experiences as following:

“In the beginning, there was this stigma of working outdoors that we thought we have to change, it was like... when someone saw that someone went out, they were thinking that this person wasn’t working, you know, people talked about that. The trust that the person really is working had to build up.”

The participant of interview 5 (Netherlands) states:

“When I sit outside and other people see me, my colleagues might think that I am not working, and that doesn’t feel good for me. I don’t want them to think I am lazy. I don’t really know how to handle that”.

The fear to lose reputation from colleagues can lead to feelings of insecurity and discomfort, and therefor to the preference to work indoors. The feeling of insecurity is furthermore caused by the lack of norms concerning how to conduct OOW in an appropriate way. Next to this, the lack of an “outdoor office etiquette” is prominent as stated in interview 5 (Netherlands):

“I am afraid that I will disturb someone when I have meetings outside, how do you behave when working outdoors? I don’t really know. In the office, there are these unwritten rules of what is okay and what is not, but this whole working outdoors thing is so new, nobody really knows.”

Additionally play job-position and *job-sector related norms* a role when it comes to (not) working outdoors. Interviewee 5 (Netherlands) is dedicated to developing an outdoor office which can be shared by a complex of different job departments in the Netherlands. One department is located within the financing sector, and he refers to branch-specific norms that can be hindering for the usage of the outdoor office:

“I don’t see a problem for the other departments to use the outdoor office, but I think it will get difficult to encourage the people from the financing sector to use it. The existing expectations about for example clothing, neat and tidy suits, you know, are strong, and the outdoors, well, it’s the outdoors. Even if you have weather protection, you might get dirty, or freeze in your light suit. It’s hard to bring that together”.

4.2 Personal Factors

The category *Personal Factors* with its 3 sub-categories *perception of OOW*, *personal preferences*, and *habits and routines* illustrates how intrapersonal factors influence if a person is working outdoors or not.

During the interviews it turned out that most of the participants who don’t work outdoors have no clear idea or a restricted *perception* of what OOW can be and entail. The interviews showed that most participants perceive working and having a meeting as two different things in relation to OOW. When talking about OOW, most participants associate individual (computer) work with it and don’t consider meetings as a form of OOW. Interviewee 7 states: “I didn’t think of bringing my computer outdoors, I probably thought about sort of having meetings, and I thought about bringing a notepad outdoors to think or having more sort of thinking time outside”. Both in interview 2 (Sweden) and 7 (Sweden), the participants stated that they never have worked outdoors, but during the interviews it turned out that both participants had meetings outdoors in the past. It seems to be unclear that meetings can be a form of OOW and

a general knowledge about the concept of OOW seems to be lacking. Other participants never considered the possibility to conduct office work outdoors, even if suitable outdoor spaces are existing.

Additionally, the sub-category *personal preferences* entails individual preferences concerning the structuring of work and workspace. First, having the need of a clear structure in terms of the workday, assigned workspace, and clear boundaries between work and free time is observed. Several participants experience it as rewarding to have a clear and enclosed structure in their workday, to know where their workspace is, and to work at a place that is clearly connected to work for them, as well as leaving this place when the working day is over. This place is associated either with an office or with an assigned work area with desk at home. Opening the boundaries and moving the workplace outside is experienced as stressful as clear structures are missing. Second, several participants who prefer to work indoors prefer to work in a low stimulus environment to be able to fully focus. In interview 9 (Germany), the participant states: “I often must write texts where I have to be very precise [...] and I can’t focus outside. Noises, wind, all those stuffs, I prefer to be inside then”. Third, *habits and routines* during the workday are a crucial factor why people who have access to an outdoor workspace don’t make use of it. Interview 4 (Sweden) was held with a person who is engaged in and supports the usage of the Outdoor Office at her workplace, and she describes her experiences as following:

“I try to book of course my own meetings outside at the outdoor office, and the most common comment I get is ‘oh, this is really nice, but I forget about it all the time, I don’t think about that I could go here’, and I see that people are so stuck in their own habits, that they, even if they like it, just don’t go outdoors”.

The existing norms within office work and the outlined personal factors go closely together. The personal preferences to work indoors in a clearly structured working environment are in line with the existing norms within office work, as office work usually is perceived to be conducted indoors at a desk. These norms shape the participants perception of OOW, as it seems to be self-evident to conduct work indoors that the possibility to conduct it outdoors sometimes is not even considered.

4.3 Organizational Factors

The category *Organizational Factors* with its 3 sub-categories *leadership*, *hierarchy structures* and *organizational culture* entails several aspects on sides of the organization which influence the likelihood of employees to conduct OOW, or flexible working methods in general. The analysis showed that the existence of flexible working methods is a prerequisite to enable OOW. *Organizational Factors* are directly influenced by existing *Norms* and seem to be the dominant main category as their influence on *Practical Issues* and *Personal Factors* are stronger than reverse.

When it comes to *leadership* the analysis showed that role modeling in relation to OOW is one of the key factors that influence if an employee conducts OOW or not. Both participants who

don't conduct office work outdoors and those who are dedicated to the development of outdoor offices highlight the importance of (team-) leader behavior. Interviewee 8 (Germany) reflects:

“Right now, I would have difficulties to go to my supervisor and say I will go outside now and answer my emails there, that would be this... it has to be actively promoted and set an example by the superiors, otherwise I would not do it.”

The role modeling seems to be important to show that working outdoors is accepted. It seems also seems to be important as a reminder for employees to break existing working routines and habits and to encourage them to work outdoors, as outlined in the previous section about *habits and routines*.

Furthermore, *hierarchy structures* influence the likelihood to conduct OOW and flexible working methods in general. Participants that experience strong hierarchies and traditional organizational structures at the workplace do not experience the possibility to work flexibly or even from outdoors. Interviewee 9 (Germany) describes her experiences from her previous workplace (editorial house) as following:

“Even if the remote work was mandatory by law [spring 2020, Germany] and it worked well, the managers wanted everyone, as soon as it was possible again, to come back to the office. And that is a form of control and surveillance, they want to see that there are my employees, and they are working on this and that. Even if it's measurable that productivity and the work itself was even better when people were working from home. I think it's still stuck in so many heads, this... you must work from 9 to 5, and then you performed on work. This presence culture.”

The results showed that flat hierarchies within the organization are a requirement to enable OOW as a form of flexible working. Furthermore, the development of the extent of flexible working methods seems to have reached a certain level until OOW will be seriously considered. Interviewee 8 (Germany) reflects on flexible working and OOW as following:

“[Working from home] was never done here before the pandemic, but rethinking takes time and I think sitting outside with a laptop and work, it was never done before and until it's possible to do that it will take time.”

Attaching to the existing *hierarchy structures* is the *organizational culture* of a company. The degree to which flexible working norms are integrated into the organizational culture seems to define to what extent OOW can be a natural part of daily working life. Interviewee 7 (Sweden) supports the development of OOW and reflects on how the internalization of a flexible working culture changed the way her team approaches OOW:

“Before the pandemic it was a 'just' concept that we were talking about, [...] and with the pandemic it has changed. Now a lot of my colleagues do meetings while they are out walking [...], no one raises an eyebrow anymore if you are sitting in a park during a meeting [...]. Now I think we trust each other.”

A trust-based working culture seems to be essential to integrate OOW into daily working life and conversely, and a control-based working culture seems to hinder the likelihood to conduct OOW.

The core category *Norms* and the main category *Organizational Factors* are deeply intertwined and interdependent. Societal norms shape the way office work is organized and conducted, and at the same time does the way office work is used to be organized shape the existing perceptions and expectations concerning office work. The organizational factors are the practical reflection of prevalent norms within office work.

4.4 Practical Issues

The main category *Practical Issues* with its 3 sub-categories *work environment*, *work tasks* and *technology* focuses on concrete practical boundaries that employees experience when it comes to OOW.

The sub-category *work environment* includes the lack of weather protection, either in form of sun or rain and wind protection as one of the experienced hinders. The lack of protection leads to a barrier for employees to consider working outdoors as an opportunity. The participant from interview 1 (Sweden) reflects:

“The weather could be a big problem, if it would start raining... Good weather in Sweden, I mean, you would have three or four months a year. 25%. And from those 25% of the period when it’s suitable temperature, maybe 50% of the days are good to be outside, because it can rain, the light can be way too bright, anything can happen.”

Furthermore, participants who have problems or sensitivities with their musculoskeletal system, especially neck and back, experience lacking ergonomics as a hindering reason to conduct work outdoors.

“I have an ergonomic mouse, which is important for my wrist, and I have a desk where you can sit and stand, I can’t have it outdoors. [...] Especially ergonomic working, especially for my neck and shoulders, that is important.” (Interview 2, Sweden).

One of the phone contacts from Sweden criticizes that the lack of suitable outdoor office furniture, which combines a surface to place the computer or notepad on with weather protection. The lack of suitable furniture is one of the very practical reasons why employees don’t conduct office work outdoors on a regular basis.

The sub-category *work-tasks* refers to work-tasks and required equipment which is not possible to use outdoors. Several participants conduct work-tasks that require double screens for effective work. These work-tasks can be working on rental contracts, Excel calculations and more. “When I imagine writing these contracts on a small laptop, a lot of pages and small font size, you know... no. Better not. I would be so ineffective. I need two screens for that”, states the participant from interview 2 (Sweden). Participants also experience meetings that require presentations as a hindering reason to conduct work outdoors. “Sometimes we are required to prepare a presentation for the meeting to present the latest simulations, or to show a simulation during the meeting, that is not possible outdoors”, Interview 1 (Sweden). Additionally, participants see confidential meetings as unsuitable to be conducted outdoors, as they worry to disrespect the privacy of the meeting participants.

The sub-category *technology* refers to the insufficient availability of internet connection and electricity outdoors. Both terraces at companies, which are not declared as an Outdoor Office, and nearby areas in parks often do not provide an accessible Wi-Fi network, or employees do not have enough mobile data to work outdoors. Additionally, the lack of electricity narrows the capabilities to conduct office work outdoors. “I always need an internet connection, I could use my phone as a Wi-Fi bridge, but it hasn’t a lot of data. But there is no public Wi-Fi I could use”, states the participant from interview 6 (Germany).

The range of how much these practical issues are seen as hinders differs from person to person, as personal perception and preferences influence the viewpoint. Nonetheless, these aspects were returning in all interviews with different extensions and are therefore experienced as hinders when it comes to OOW.

The core category *Norms* is influencing the main category *technology* in a way that existing norms shape the available infrastructure for (outdoor) office work. Office work is expected to be conducted indoors, leading to difficulties conducting work outdoors as the existing infrastructure is insufficient.

4.5 Relationships between main categories

4.5.1 Organizational Factors – Practical Issues

The *Organizational Factors* that influence if employees conduct OOW or not have a strong influence on *Practical* factors. If the organizational culture does not include flexible working norms and openness for innovation, the likelihood for employers to provide a sufficient infrastructure is rather small. In consequence, suitable outdoor workspaces, electricity, and Wi-Fi are missing. Furthermore, if leaders do not support working outdoors, the barrier for employees to request outdoor workspaces gets higher. The support of flexible working practices in general and an organizational culture that supports trust-based working are essential influential factors on *Practical Issues*. Conversely seems the influence of *Practical Issues* on *Organizational Factors* be minor.

4.5.2 Organizational Factors – Personal Factors

As *Organizational Factors* determine how an organization is run, how work within the organization is conducted and how the superior-employee relationship is lived, the *Organizational Factors* partly influence the previously outlined *Personal Factors*. In organizations where flexible working, including working outdoors, is a part of the organizational culture, the *personal perception* of OOW is different than in other companies. Participants who weren’t in contact with the concept of OOW before the study had a more determined perception of OOW than those participants that were familiar to the concept at their workplace.

4.5.3 Personal Factors – Practical Issues

When it comes to the relationship between *Personal Factors* and *Practical Issues* it is to say that lack of suitable infrastructure has an influence on the personal perception of OOW. Employees that experience insufficient technology in forms of missing Wi-Fi or power outlets, have a determined perception of possible work tasks for OOW, and experience working outdoors as something inconvenient. This perception is also depending on the work tasks as participants who need few technical devices for their work show a higher willingness to work outdoors.

5 DISCUSSION

The aim of the study was to provide new knowledge and deepen the understanding about employee's reasons not to conduct office-related tasks outdoors even if they have the possibility to do so. The research question "*What factors hinder office workers to conduct office-related tasks outdoors?*" was addressed with a Grounded Theory approach and the data was collected during semi-structured online interviews and phone calls. The analysis of the data resulted in the construction of one core category, *Norms*, and three main categories, *Personal Factors*, *Organizational Factors* and *Practical Issues*. These three categories describe the main reasons why employees do not conduct office work outdoors even if they have the possibility to do so. In the following, the results will be discussed in relation to the research question and previous research and will be placed in a broader context as well.

The analysis showed that reasons why employees do not conduct office work outdoors can be located on various levels which in turn act partly interdependent, whereas underlying norms have the most powerful impact. The existing norms concerning office work (*normative work environment & perception of work*) are found in every interview, independently from which country the participants came, or which type of job, gender, or age they had. It can be assumed that the existing working norms are predominant in other western countries as well. Even if study participants were interested in (trying) to work outdoors, a negative *emotional consequence* was hindering them to do so. This shows how powerful existing normative structures are and that they are predominant in current workplaces. Even though the Covid-19 pandemic was a key driver in the development of flexible working solutions, norms seem to be deeply rooted in society and working life, influencing the readiness for innovative ways of working. As norms seem to be deeply grounded in the office working culture, they have an influence on the other factors found in this study.

Norms influence the described *Personal Factors* in a way that *personal preferences* and *habits & routines* mirror the existing norms. What employees express as a personal preference can partly be interpreted as an internalization of prevalent office working norms. Concretely this means that employees describe their preference to work indoors, at a place that is clearly defined as a workspace, which in turn is in line with current existing office working norms (Hitchings, 2009). It can be questioned to what extent employees with the preference to work

indoors have it because it truly fits their personal needs best, or if they have it because their work life socialization took place in this surrounding.

Furthermore, norms seem to shape *Organizational Factors* which embody reasons why employees do not work outdoors. *Leadership, hierarchy structures, organizational culture* and *Norms* are deeply intertwined and act interdependent. If an indoor society (Hitchings, 2009) is the current norm, this will also be promoted within an organization. Consequently, organizations design the *work environment* and the provided *technology* in a way that is suited for working indoors but not for working outdoors. This became clear in the results as a commonly stated hindering reason to not conduct office work outdoors is the lack of suitable furniture and sufficient technology. The abstract hindering reason of norms turns into very practical and tangible hindering reasons.

In the following section, the four categories of the theoretical model will be discussed in relation to previous research and a broader context.

5.1 Results in relation to previous research

5.1.1 Norms

The results show that the core category *Norms* lines out that norms are the underlying reason why employees do not work outdoors. That the influence of norms is that strong was surprising and an unexpected finding, as most interview participants came from Sweden and the Netherlands. These countries share a similar working culture which is associated by flexibility, innovation orientation and a low hierarchy (Hofstede, 1980/2001; Strand, Freeman & Hockerts, 2015). Germany's working culture in turn is associated with smaller openness for change and innovation, and hierarchy structures are stronger (Hofstede, 1980/2001). But even if Sweden's and the Netherlands working culture is described as open for innovation, underlying norms are so powerful that they can hinder employees to work outdoors.

The literature in the previous research section indicates that a *normative work environment* is a determining factor concerning how work is conducted on how work is *perceived*. Hitchings (2009, 2010) elaborations concerning the existing role of an office worker and his description of the modern western world as an indoor society do not refer to OOW in specific but to other forms of spending time outdoors during the workday. The findings of this study extend the findings of Hitchings (2009, 2010). They show that the *normative work environment* also is determining the usage of OOW. The *job-sector related norms* were mentioned by Hitchings (2009) as well, as he refers to acknowledged and not acknowledged ways to sit outside.

Petersson Troije et al. (2021) and Pettersson (2019) discuss norms in relation to OOW and their findings are fundamental for the findings of this study. Whereas Petersson Troije et al. (2021) observed that negative emotions in relation to OOW can occur, the results from this study provide a deeper insight by emphasizing that these *emotional consequences* can be a hindering reason to conduct work outside. This implicates the need to communicate about

emotions in relation to OOW at the workplace, showing that the negative emotions have their origin in old, rooted norms. This understanding might help to overcome negative feelings, leading the way to more readiness for OOW. Furthermore, norms concerning OOW need to be expanded as no concrete guidelines concerning how to conduct OOW are existing, as this study as well as Petterssons (2019) research show. Overall are both the existence and lack of certain norms reasons why OOW is not conducted. This knowledge can be used by organizations who want to promote OOW in a way that they on the one hand create working norms within the organization that minimize the occurrence of negative feelings. On the other hand, organizations can provide “OOW guidelines” to lead the way into OOW.

Oreg et al.s (2008) disposals to individual resistance to change can be applied on the results of this study. The prevalence of a *normative work environment* and the occurrence of innovative ways of working at the same time can lead to innovation resistance in forms of reluctance to change the way of thinking (Oreg et al., 2008). The *perception of work* in forms of being indoors and a desk is so deeply rooted and familiar that changing the way of thinking sometimes is resisted. As the concept of OOW is so young, organizations need to acknowledge that the process towards innovation implementation takes time until it is fully accepted.

Even if there already are outdoor offices in Sweden and the Netherlands in contrast to Germany, and there are people and organizations who support the development of those, the readiness to actively conduct OOW is partly improvable. The results of this study show that traditional norms are more prevalent than expected and hinder employees to conduct work in an innovative way.

5.1.2 Personal Factors

Personal Factors have a powerful influence when it comes to not conducting OOW. Several participants reported that they get stuck in their *habits and routines* instead of remembering to go outside. The same phenomenon was observed by Hitchings (2009) in relation to time spend outdoors during a workday in other ways than working. This shows a shared responsibility on sides of employer and employee if organizations what to support their employees to work outdoors. It is not enough to only provide the possibility to work outdoors, but employees need support in the development of new working habits. Furthermore, holding on to *habits and routines* can be a form of resistance to change as employees might be unwilling to give up the known and comfortable situation (Oreg et al., 2008). In this passive innovation resistance employees stick to the known instead of trying out the new (Heidenreich & Spieth, 2013). This can be problematic for organizations as they need to show respect and understanding for the employee's decision on the one hand. On the other hand, employers need to help employees to open up for the outdoor office if they want to successfully implement it.

The lack of outdoor office habits can be rooted in the prevalent *perception of OOW*. The results of this study are in line with Petersson Troije et al.s (2021) and Petterssons (2019) results who line out that employees often have an insufficient perception of what OOW can be and entail. Whereas Petersson Troije et al.s (2021) and Petterssons (2019) studies show that there is a knowledge gap, this study provides show that this gap may also be a reason for why OOW is

not conducted. This means for organizations who want to support the utilization of OOW to provide detailed clarification concerning what OOW is and how it can be conducted.

Through the eye of Oreg et al.s (2008) reasons for resistance to change can the *personal preference* to work indoors explained with a fear of aversion or to lose control. A change might go along with discomfort and the persons in questions might therefore prefer to stay in known and low-stimuli situations (Oreg et al., 2008). This is of importance for organizations and employers as they need to know that it might not be the outdoor office which is the “problem” but that intrapersonal reasons can be hindering employees to make use of the outdoor office.

5.1.3 Organizational Factors

The concept of OOW might sound interesting for employers and employees who want to be and act more modern and innovative. But using an outdoor office as a tool to become more modern and innovative does not work as the existing *organizational culture* is influencing the success of it, as the results of this and Petersson Troije et al.’s (2021) study show. A trust-based *leadership* in combination with low *hierarchy structures* need to be present and lived before an outdoor office can be successful. Otherwise, employees will not make use of it as the newly provided freedom is causing too many *emotional consequences*. The results of the study show that outdoor offices can be a way to set already existing modern structures into practice. But they also indicate that organizations must ask themselves if they live a trust-based leadership (or if they are willing to live it). Furthermore, organizations need to question their hierarchy structures.

5.1.4 Practical Issues

In their study Petersson Troije et al. (2021) line out requirements for a successful working outdoors, naming rain protection and power outlets amongst others. What Petersson Troije et al. (2021) list up as requirements turn out to be serious hindering reasons to work outdoors if they are lacking, referring both to the *work environment* and to the *technology*. What on first sight simply seems to be an insufficient OOW infrastructure can on second sight be interpreted as a mirror of the lack of urban green areas (Soga & Gaston, 2016). Currently there seem to exist either office buildings or green space for leisure activities, but the combination of both is rare. Even if practical issues such as power outlets or furniture are in comparison to organizational culture easier to influence and to change, organizations need to be aware of that the requirements on the *work environment* outdoors are different ones that on the work environment indoors.

5.2 Method discussion

As outlined before, the qualitative method Grounded Theory was chosen as OOW is a young topic and no theoretical background concerning why employees do not conduct office work outdoors is existing. The research and the construction of theory was based on the “direct knowledge of the studied phenomenon”, not on presumptions on sides of the researcher, and

the quality of the study and its results can be assured by this (Charmaz & Thornberg, 2021, p. 310). Charmaz (2014) “proposes four main criteria for [constructivist] grounded theory studies: *credibility*, *originality*, *resonance*, and *usefulness*” (in Charmaz & Thornberg, 2021, p. 315).

For this study, *credibility* can be ensured by providing sufficient rich data, allowing to analyze it thoroughly. The wide spectrum of interview participants including different professional groups, ages and countries, increases the richness of data and therefore its quality. Still, possible flaws concerning *credibility* can be identified as following. Charmaz (2014) recommends getting back to interview participants to elaborate lacking data or to get back to a certain statement, but due to the frame of the master’s thesis it was not possible. This implies the risk that the depth of the data of certain interviews is shallower than it potentially could be. The width of data is covered with several interviews until theoretical saturation was met (Charmaz, 2014). The impossibility to conduct the interviews in person omits important nonverbal communication details such as body language and movement, gestures, eye-contact, facial expressions, and the scene as a total, which can be seen as a lacking when it comes to the interpretation of data (Charmaz, 2014, p. 136). A prominent level of reflexivity on sides of the researcher while analyzing data and constructing codes increases the quality of the study, even though it is the researcher’s language that impacts the construction of the codes, which can therefore never be fully objective (Charmaz, 2014, p. 114). “Language plays a crucial role in how and what we code” (Charmaz, 2014, p. 114). 5 interviews were held in English (2nd language for both researcher and interviewee), one in Swedish (1st language for interviewee and 2nd language for researcher), and 3 in German (1st language both for interviewees and researcher). The interviews that were held in Swedish and German were translated into English afterwards. This implies the risk that essential statements mutated, and essential points got lost in the translation process. The same challenge exists when both interviewee and researcher were talking in English, as thoughts might be formulated less precise than when interviewing in first language. The same possible drawback may be existing when it comes to coding of the interviews.

The *originality* of the study is given as it is offering new insights concerning why employees do not conduct office work outdoors, even if they have access to green spaces or outdoor areas at work. Charmaz and Thornberg (2021, p. 316) describe that *resonance* in GT “demonstrates that the researchers have constructed concepts that not only represent their research participants’ experience, but also provide insight to others”. From this point of research, the question of resonance cannot be fully answered. On the one hand provided the research participants the data collected for the analysis, and therefore the research participants’ experiences discovered in this study led to the construction of theory. However, the theory’s categories give a broader perspective on hindering reasons for employees to not conduct office work outdoors, and the theory aims for an applicability for office employees that were not participants of this study.

As this study’s contextual frame is the development of sustainable office work solutions in accordance with NWW, the *usefulness* of this study is high. By understanding how powerful existing norms and habits in the context of office work are, this study reveals underlying

processes of hindering reasons to not conduct office work outdoors. These insights provide valuable foundations for “practice applications” (Charmaz & Thornberg, 2021, p. 316).

6 CONCLUSION

The question why employees do not work outdoors even if they have the possibility to do so seeks answers on multiple interdependent levels. What on first sight might appear as a question that can be answered simply turns out as a question that addresses a complex fabric of present and underlying norms, expectations, involved emotions, practical challenges, and resistance to change. The study shows that existing societal norms are powerful and long-lasting. It is not sufficient to only provide new ways of working such as OOW, it needs also be understood that underlying reasons might hinder employees to make use of it as intended. The results of this study draw a wide picture of the reasons why employees do not conduct office work outdoors, even if they have the possibility to do so.

7 FUTURE PERSPECTIVE

The developed theoretical framework of this study supports future research in a way that would help designing an intervention including factors that influence the successfulness of the intervention. Knowing why employees do not work outdoors helps to design outdoor offices in a way that is attractive for more employees. In a further step, research needs to examine which form and duration of OOW has the best health effects for employees. This knowledge would facilitate for companies and organizations to develop OOW guidelines which provide information for employees how to conduct OOW and how to benefit from it in the best way. In summary, it can be stated that at this point of time, further research on OOW is needed to fully exploit the benefits of conducting office work outdoors.

REFERENCE LIST

- Allvin, M., Aronsson, G., Hagström, T., Johansson, G., & Lundberg, U. (2011). *Work Without Boundaries: Psychological Perspectives on the New Working Life* (1st ed.). Wiley.
- Alvesson, M., & Sköldberg, K. (2004). *Reflexive methodology: New vistas for qualitative research* (Repr). London: SAGE.
- Ameln, F. von, & Wimmer, R. (2016). Neue Arbeitswelt, Führung und organisationaler Wandel. *Gruppe. Interaktion. Organisation. Zeitschrift Für Angewandte Organisationspsychologie (GIO)*, 47(1), 11–21. <https://doi.org/10.1007/s11612-016-0303-0>
- Appelgren Engström, H., Häggström-Nordin, E., Borneskog, C., & Almqvist, A.-L. (2019). Mothers in same-sex relationships-Striving for equal parenthood: A grounded theory study. *Journal of Clinical Nursing*, 28(19-20), 3700–3709. <https://doi.org/10.1111/jocn.14971>
- Appel-Meulenbroek, R. (2016). Modern offices and new ways of working studied in more detail. *Journal of Corporate Real Estate*, 18(1), 2–3. <https://doi.org/10.1108/JCRE-02-2016-0010>
- Arbetsmiljöverket. Ann Ponton Klevestedt (2016). *Arbetsmiljön 2015*. Retrieved 2021-09-02 from <https://www.av.se/arbetsmiljoarbete-och-inspektioner/arbetsmiljostatistik-officiell-arbetskadestatistik/arbetsmiljon-2015/>
- Ayoko, O. B. [Oluremi B.], & Ashkanasy, N. M. (2020). The physical environment of office work: Future open plan offices. *Australian Journal of Management*, 45(3), 488–506. <https://doi.org/10.1177/0312896220921913>
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bälter, O., Hedin, B., Tobiasson, H., & Toivanen, S. (2018). Walking Outdoors during Seminars Improved Perceived Seminar Quality and Sense of Well-Being among Participants. *International Journal of Environmental Research and Public Health*, 15(2). <https://doi.org/10.3390/ijerph15020303>
- Barboza, E. P., Cirach, M., Khomenko, S., Iungman, T., Mueller, N., Barrera-Gómez, J., . . . Nieuwenhuijsen, M. (2021). Green space and mortality in European cities: a health impact assessment study. *The Lancet Planetary Health*, 5(10), e718-e730. [https://doi.org/10.1016/S2542-5196\(21\)00229-1](https://doi.org/10.1016/S2542-5196(21)00229-1)
- Berman, M. G., Jonides, J., & Kaplan, S. (2008). The Cognitive Benefits of Interacting With Nature. *Psychological Science*, 19(12), 1207–1212. <https://doi.org/10.1111/j.1467-9280.2008.02225.x>

- Berto, R. (2005). Exposure to restorative environments helps restore attentional capacity. *Journal of Environmental Psychology, 25*(3), 249–259.
<https://doi.org/10.1016/j.jenvp.2005.07.001>
- Blok, M. M., Groenesteijn, L., Schelvis, R., & Vink, P. (2012). New Ways of Working: Does flexibility in time and location of work change work behavior and affect business outcomes? *Work (Reading, Mass.), 41 Suppl 1*, 2605–2610.
<https://doi.org/10.3233/WOR-2012-1028-2605>
- Bodin-Danielsson, C. & Bodin, L. (2008). Office Type in Relation to Health, Well-Being, and Job Satisfaction Among Employees. *Environment and Behavior, 40*(5), 636–668.
<https://doi.org/10.1177/0013916507307459>
- Boubekri, M., Cheung, I. N., Reid, K. J., Wang, C.H., & Zee, P. C. (2014). Impact of windows and daylight exposure on overall health and sleep quality of office workers: A case-control pilot study. *Journal of Clinical Sleep Medicine: JCSM: Official Publication of the American Academy of Sleep Medicine, 10*(6), 603–611.
<https://doi.org/10.5664/jcsm.3780>
- Brown, D. K., Barton, J. L., Pretty, J., & Gladwell, V. F. (2014). Walks4Work: Assessing the role of the natural environment in a workplace physical activity intervention. *Scandinavian Journal of Work, Environment & Health, 40*(4), 390–399.
<https://doi.org/10.5271/sjweh.3421>
- Capaldi, C., Passmore, H.-A., Nisbet, E., Zelenski, J., & Dopko, R. (2015). Flourishing in nature: A review of the benefits of connecting with nature and its application as a wellbeing intervention. *International Journal of Wellbeing, 5*(4), 1–16.
<https://doi.org/10.5502/ijw.v5i4.449>
- Charmaz, K. (2014). *Constructing grounded theory* (2nd edition). *Introducing qualitative methods*. Los Angeles, London, New Delhi, Singapore, Washington DC: SAGE.
- Charmaz, K., & Thornberg, R. (2021). The pursuit of quality in grounded theory. *Qualitative Research in Psychology, 18*(3), 305–327.
<https://doi.org/10.1080/14780887.2020.1780357>
- Chevalier, A., & Kaluza, P. D. G. (2015). Psychosozialer Stress am Arbeitsplatz: Indirekte Unternehmenssteuerung, selbstgefährdendes Verhalten und die Folgen für die Gesundheit. in J. Böcken, B. Braun, & R. Meierjürgen (publisher), *Gesundheitsmonitor 2015. Bürgerorientierung im Gesundheitswesen: Kooperationsprojekt der Bertelsmann Stiftung und der BARMER GEK* (p. 228-253). Bertelsmann Stiftung.
- Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory*, 4th ed. Thousand Oaks, CA: Sage Publications.
- DAK-Gesundheit (2013). *DAK-Gesundheitsreport 2013*.

- Dale, K., & Burrell, G. (2008). *The spaces of organisation and the organisation of space: Power, identity and materiality at work*. Basingstoke: Palgrave Macmillan.
- Demerouti, E., Derks, D., Brummelhuis, Lieke L. ten, & Bakker, A. B. (2014). New Ways of Working: Impact on Working Conditions, Work-family Balance, and Well-being. In *Korunka & Hoonakker 2014: The impact of ICT on quality in working life* (pp. 123–137).
- Dibrov, A. (2015). Innovation Resistance: The Main Factors and Ways to Overcome Them. *Procedia - Social and Behavioral Sciences*, 166, 92–96.
<https://doi.org/10.1016/j.sbspro.2014.12.489>
- Elsbach, K. D., & Pratt, M. G. (2007). 4 The Physical Environment in Organizations. *The Academy of Management Annals*, 1(1), 181–224.
<https://doi.org/10.1080/078559809>
- Fisher, S. (1990). Environmental change, control and vulnerability. In S. Fisher, & C. L. Copper (Eds.), *On the move: The psychology of change and transition*. 53–65. Chishester: Wiley
- Fjeld, T., Veiersted, B., Sandvik, L., Riise, G., & Levy, F. (1998). The Effect of Indoor Foliage Plants on Health and Discomfort Symptoms among Office Workers. *Indoor and Built Environment*, 7(4), 204–209. <https://doi.org/10.1177/1420326X9800700404>
- Försäkringskassan (2016). Lidwall, U., & Olsson-Bohlin, C. *Sjukskrivning för reaktioner på svår stress ökar mest: Psykisk ohälsa. Korta analyser 2016:2*.
- Försäkringskassan (2020). Lidwall, U. *Sjukfrånvaro i psykiatriska diagnoser: En registerstudie av Sveriges arbetande befolkning i åldern 20–69 år* (Socialförsäkringsrapport 2020).
- Gensler (2012). *What we've learned about focus in the workplace*. Retrieved from https://www.gensler.com/uploads/document/306/file/Focus_in_the_Workplace_10_01_2012.pdf
- Gladwell, V., & Brown, D. K. (2016). Green Exercise in the workplace. In J. Barton, R. Bragg, C. Wood, & J. Pretty (Eds.), *Green exercise: Linking nature, health and well-being* (pp. 139–149). London, New York: Routledge Taylor & Francis Group Earthscan from Routledge.
- Grawitch, M. J., Gottschalk, M., & Munz, D. C. (2006). The path to a healthy workplace: A critical review linking healthy workplace practices, employee well-being, and organizational improvements. *Consulting Psychology Journal: Practice and Research*, 58(3), 129–147. <https://doi.org/10.1037/1065-9293.58.3.129>
- Grinde, B., & Patil, G. G. (2009). Biophilia: Does visual contact with nature impact on health and well-being? *International Journal of Environmental Research and Public Health*, 6(9), 2332–2343. <https://doi.org/10.3390/ijerph6092332>

- Haapakangas, A., Hallman, D. M., Mathiassen, S. E., & Jahncke, H. (2018). Self-rated productivity and employee well-being in activity-based offices: The role of environmental perceptions and workspace use. *Building and Environment*, *145*, 115–124. <https://doi.org/10.1016/j.buildenv.2018.09.017>
- Halford, S. (2004). 'Towards a Sociology of Organizational Space'. *Sociological Research Online*, *9*(1), 13–28. <https://doi.org/10.5153/sro.885>
- Haluza, D., Schönbauer, R., & Cervinka, R. (2014). Green perspectives for public health: A narrative review on the physiological effects of experiencing outdoor nature. *International Journal of Environmental Research and Public Health*, *11*(5), 5445–5461. <https://doi.org/10.3390/ijerph110505445>
- Hansmann, R., Hug, S.-M., & Seeland, K. (2007). Restoration and stress relief through physical activities in forests and parks. *Urban Forestry & Urban Greening*, *6*(4), 213–225. <https://doi.org/10.1016/j.ufug.2007.08.004>
- Hartig, T., Evans, G. W., Jamner, L. D., Davis, D. S., & Gärling, T. (2003). Tracking restoration in natural and urban field settings. *Journal of Environmental Psychology*, *23*(2), 109–123. [https://doi.org/10.1016/s0272-4944\(02\)00109-3](https://doi.org/10.1016/s0272-4944(02)00109-3)
- Heerwagen, J. H., Kampschroer, K., Powell, K. M., & Loftness, V. (2004). Collaborative knowledge work environments. *Building Research & Information*, *32*(6), 510–528. <https://doi.org/10.1080/09613210412331313025>
- Heidenreich, S., & Spieth, P. (2013). WHY INNOVATIONS FAIL — THE CASE OF PASSIVE AND ACTIVE INNOVATION RESISTANCE. *International Journal of Innovation Management*, *17*(05), 1350021. <https://doi.org/10.1142/S1363919613500217>
- Hitchings, R. (2009). *Indoor office workers and outdoor nature: a research report*. London.
- Hitchings, R. (2010). Urban greenspace from the inside out: An argument for the approach and a study with city workers. *Geoforum*, *41*(6), 855–864. <https://doi.org/10.1016/j.geoforum.2010.07.004>
- Hon, A. H. Y., Bloom, M., & Crant, J. M. (2014). Overcoming Resistance to Change and Enhancing Creative Performance. *Journal of Management*, *40*(3), 919–941. <https://doi.org/10.1177/0149206311415418>
- Hunter, M. R., Gillespie, B. W., & Chen, S. Y.-P. (2019). Urban Nature Experiences Reduce Stress in the Context of Daily Life Based on Salivary Biomarkers. *Frontiers in Psychology*, *10*, 722. <https://doi.org/10.3389/fpsyg.2019.00722>
- Jahncke, H., Hygge, S., Halin, N., Green, A. M., & Dimberg, K. (2011). Open-plan office noise: Cognitive performance and restoration. *Journal of Environmental Psychology*, *31*(4), 373–382. <https://doi.org/10.1016/j.jenvp.2011.07.002>
- Kaplan, R., & Kaplan, S. (1989). *The experience of nature: A psychological perspective*. Cambridge, UK: Cambridge University Press.

- Kaplan, R. (2001). The Nature of the View from Home. *Environment and Behavior*, 33(4), 507–542. <https://doi.org/10.1177/00139160121973115>
- Kingma, S. (2019). New ways of working (NWW): work space and cultural change in virtualizing organizations. *Culture and Organization*, 25(5), 383–406. <https://doi.org/10.1080/14759551.2018.1427747>.
- Kingsley, J., & Townsend, M. (2006). ‘Dig In’ to Social Capital: Community Gardens as Mechanisms for Growing Urban Social Connectedness. *Urban Policy and Research*, 24(4), 525–537. <https://doi.org/10.1080/0811140601035200>
- Korunka, C., & Hoonakker, P. (2014). *The Impact of ICT on quality of working life*. Dordrecht: Springer. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=766311> <https://doi.org/10.1007/978-94-017-8854-0>
- Largo-Wight, E., Chen, W. W., Dodd, V., & Weiler, R. (2011). Healthy workplaces: The effects of nature contact at work on employee stress and health. *Public Health Reports*, 126 Suppl 1(1_suppl), 124–130. <https://doi.org/10.1177/00333549111260S116>
- Largo-Wight, E., Wlyudka, P. S., Merten, J. W., & Cuvelier, E. A. (2017). Effectiveness and feasibility of a 10-minute employee stress intervention: Outdoor Booster Break. *Journal of Workplace Behavioral Health*, 32(3), 159–171. <https://doi.org/10.1080/15555240.2017.1335211>
- Lee, J. (2015). *The Impact of ICT on Work* (1st ed. 2016 ed.). Springer.
- Leteta, B. A., Bouchal, S. R., Berg, B., & Sinclair, S. (2020). Meaningful Messages From Grief Workshop Participants: A Constructivist Grounded Theory Study. *Journal of Hospice and Palliative Nursing: JHPN: The Official Journal of the Hospice and Palliative Nurses Association*, 22(3), 180–187. <https://doi.org/10.1097/NJH.0000000000000641>
- Levanon, Y., Gefen, A., Lerman, Y., Givon, U., & Ratzon, N. Z. (2012). Reducing musculoskeletal disorders among computer operators: comparison between ergonomics interventions at the workplace. *Ergonomics*, 55(12), 1571–1585. <https://doi.org/10.1080/00140139.2012.726654>
- Leyshon, R., Chalova, K., Gerson, L., Savtchenko, A., Zakrzewski, R., Howie, A., & Shaw, L. (2010). Ergonomic interventions for office workers with musculoskeletal disorders: A systematic review. *Work (Reading, Mass.)*, 35(3), 335–348. <https://doi.org/10.3233/WOR-2010-0994>
- Lottrup, L., Grahn, P., & Stigsdotter, U. K. (2013). Workplace greenery and perceived level of stress: Benefits of access to a green outdoor environment at the workplace. *Landscape and Urban Planning*, 110, 5–11. <https://doi.org/10.1016/j.landurbplan.2012.09.002>
- Lottrup, L., Stigsdotter, U. K., Meilby, H., & Corazon, S. S. (2012). Associations between use, activities and characteristics of the outdoor environment at workplaces. *Urban*

- Forestry & Urban Greening*, 11(2), 159–168.
<https://doi.org/10.1016/j.ufug.2011.12.006>
- Maller, C., Townsend, M., Pryor, A., Brown, P., & St Leger, L. (2006). Healthy nature healthy people: 'contact with nature' as an upstream health promotion intervention for populations. *Health Promotion International*, 21(1), 45–54.
<https://doi.org/10.1093/heapro/daio32>
- Matz, C. J., Stieb, D. M., Davis, K., Egyed, M., Rose, A., Chou, B., & Brion, O. (2014). Effects of age, season, gender and urban-rural status on time-activity: Canadian human Activity Pattern Survey 2 (CHAPS 2). *International Journal of Environmental Research and Public Health*, 11(2), 2108–2124.
<https://doi.org/10.3390/ijerph110202108>
- McCoy, J. M. (2005). Linking the Physical Work Environment to Creative Context. *The Journal of Creative Behavior*, 39(3), 167–189. <https://doi.org/10.1002/j.2162-6057.2005.tb01257.x>
- Mellner, C., Kecklund, G., Kompier, M., Sariaslan, A. and Aronsson, G. (2016), "Boundaryless Work, Psychological Detachment and Sleep: Does Working 'Anytime – Anywhere' Equal Employees Are 'Always on'?", *New Ways of Working Practices (Advanced Series in Management, Vol. 16)*, Emerald Group Publishing Limited, pp. 29-47.
<https://doi.org/10.1108/S1877-636120160000016003>
- Michie, S. (2002). Causes and management of stress at work. *Occupational and Environmental Medicine*, 59(1), 67–72. <https://doi.org/10.1136/oem.59.1.67>
- Monaghan, N., & Ayoko, O. B. [Oluremi Bolanle] (2019). Open-plan office, employees' enactment, interpretations and reactions to territoriality. *International Journal of Manpower*, 40(2), 228–245. <https://doi.org/10.1108/IJM-10-2017-0270>
- Moore, M., Townsend, M., & Oldroyd, J. (2007). Linking Human and Ecosystem Health: The Benefits of Community Involvement in Conservation Groups. *EcoHealth*, 3(4), 255–261. <https://doi.org/10.1007/s10393-006-0070-4>
- Nag, P. K. (2019). *Office Buildings: Health, Safety and Environment. Design Science and Innovation*. Singapore: Springer Singapore. <https://doi.org/10.1007/978-981-13-2577-9>
- Nisbet, E. K., Zelenski, J. M., & Murphy, S. A. (2011). Happiness is in our Nature: Exploring Nature Relatedness as a Contributor to Subjective Well-Being. *Journal of Happiness Studies*, 12(2), 303–322. <https://doi.org/10.1007/s10902-010-9197-7>
- Oppezzo, M., & Schwartz, D. L. (2014). Give your ideas some legs: The positive effect of walking on creative thinking. *Journal of Experimental Psychology. Learning, Memory, and Cognition*, 40(4), 1142–1152. <https://doi.org/10.1037/a0036577>
- Oreg, S., Bayazit, M., Vakola, M., Arciniega, L., Armenakis, A., Barkauskiene, R., . . . van Dam, K. (2008). Dispositional resistance to change: Measurement equivalence and

- the link to personal values across 17 nations. *The Journal of Applied Psychology*, 93(4), 935–944. <https://doi.org/10.1037/0021-9010.93.4.935>
- Organization for economic co-operation and development (OECD) (1996). The knowledge-based economy. General distribution OCDE//GD (96)102.
- Petersson Troije, C., Lisberg Jensen, E., Stenfors, C., Bodin-Danielsson, C., Hoff, E., Mårtensson, F., & Toivanen, S. (2021). Outdoor Office Work - An Interactive Research Project Showing the Way Out. *Frontiers in Psychology*, 12, 636091. <https://doi.org/10.3389/fpsyg.2021.636091>
- Pettersson, T. (2019). *Ett visst mått av olydnad: Uppfattningar och erfarenheter av utomhuskontorsarbete*. Kungliga Tekniska Högskolan (KTH), Stockholm
- Pretty, J., Peacock, J., Sellens, M., & Griffin, M. (2005). The mental and physical health outcomes of green exercise. *International Journal of Environmental Health Research*, 15(5), 319–337. <https://doi.org/10.1080/09603120500155963>
- Richardson, E. A., & Mitchell, R. (2010). Gender differences in relationships between urban green space and health in the United Kingdom. *Social Science & Medicine* (1982), 71(3), 568–575. <https://doi.org/10.1016/j.socscimed.2010.04.015>
- Rodríguez Aboytes, J. G., & Barth, M. (2020). Transformative learning in the field of sustainability: a systematic literature review (1999–2019). *International Journal of Sustainability in Higher Education*, 21(5), 993–1013. <https://doi.org/10.1108/IJSHE-05-2019-0168>
- Rosa, H. (2013). *Beschleunigung und Entfremdung: Entwurf einer kritischen Theorie spätmoderner Zeitlichkeit* (R. Celikates, Trans.) (1. Auflage). Berlin: Suhrkamp
- Salanova, M., Llorens, S., & Ventura, M. Technostress: The Dark Side of Technologies. In *Korunka & Hoonakker 2014: The impact of ICT on quality in working life* (pp. 87–103).
- Shanahan, D. F., Bush, R., Gaston, K. J., Lin, B. B., Dean, J., Barber, E., & Fuller, R. A. (2016). Health Benefits from Nature Experiences Depend on Dose. *Scientific Reports*, 6, 28551. <https://doi.org/10.1038/srep28551>
- Shibata, S., & Suzuki, N. (2002). Effects of the foliage plant on task performance and mood. *Journal of Environmental Psychology*, 22(3), 265–272. <https://doi.org/10.1006/jevp.2002.0232>
- Siegrist, J. (2010). Effort-reward imbalance at work and cardiovascular diseases. *International Journal of Occupational Medicine and Environmental Health*, 23(3), 279–285. <https://doi.org/10.2478/v10001-010-0013-8>
- Singh, S., & Estefan, A. (2018). Selecting a Grounded Theory Approach for Nursing Research. *Global Qualitative Nursing Research*, 5, 2333393618799571. <https://doi.org/10.1177/2333393618799571>

- Soga, M., & Gaston, K. J. (2016). Extinction of experience: the loss of human-nature interactions. *Frontiers in Ecology and the Environment*, 14(2), 94–101. <https://doi.org/10.1002/fee.1225>
- Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology*, 12(3), 204–221. <https://doi.org/10.1037/1076-8998.12.3.204>
- Sostero, M., Milasi, S., Hurley, J., Fernández-Marcías, E., & Bisello, M. (2020). *Teleworkability and the COVID-19 crisis: a new digital divide?* European Commission. Seville.
- Statista (2020). Change in remote work trends due to COVID-19 in the United States in 2020. Retrieved from: <https://www.statista.com/statistics/1122987/change-in-remote-work-trends-after-covid-in-usa/>
- Tähtinen, K., Remes, J., Karvala, K., Salmi, K., Lahtinen, M., & Reijula, K. (2020). Perceived indoor air quality and psychosocial work environment in office, school and health care environments in Finland. *International Journal of Occupational Medicine and Environmental Health*, 33(4), 479–495. <https://doi.org/10.13075/ijomeh.1896.01565>
- Tennessen, C. M., & Cimprich, B. (1995). Views to nature: Effects on attention. *Journal of Environmental Psychology*, 15(1), 77–85. [https://doi.org/10.1016/0272-4944\(95\)90016-0](https://doi.org/10.1016/0272-4944(95)90016-0)
- Thompson, A., & Bruk-Lee, V. (2019). Naturally! Examining Nature’s Role in Workplace Strain Reduction. *Occupational Health Science*, 3(1), 23–43. <https://doi.org/10.1007/s41542-019-00033-5>
- Toivanen, S. (2019). *Ute är inne – kom igång med kontorsarbete utomhus*. Akademiska Hus
- Twohig-Bennett, C., & Jones, A. (2018). The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. *Environmental research*, 166, 628–637.
- Ulrich, R. S. (1984). View through a window may influence recovery from surgery. *Science (New York, N.Y.)*, 224(4647), 420–421. <https://doi.org/10.1126/science.6143402>
- Ulrich, R. S., Simons, R. F., Losito, B. D., Fiorito, E., Miles, M. A., & Zelson, M. (1991). Stress recovery during exposure to natural and urban environments. *Journal of Environmental Psychology*, 11(3), 201–230. [https://doi.org/10.1016/S0272-4944\(05\)80184-7](https://doi.org/10.1016/S0272-4944(05)80184-7)
- Van den Berg, A. E., & Custers, M. H. G. (2011). Gardening promotes neuroendocrine and affective restoration from stress. *Journal of Health Psychology*, 16(1), 3–11. <https://doi.org/10.1177/1359105310365577>
- United Nations. THE 17 GOALS. <https://sdgs.un.org/goals>

- Van Meel, J. (2011). The origins of new ways of working. *Facilities*, 29(9/10), 357–367. <https://doi.org/10.1108/02632771111146297>
- Vieten, L., Wöhrmann, A. M., & Michel, A. (2022). Boundaryless working hours and recovery in Germany. *International Archives of Occupational and Environmental Health*, 95(1), 275–292. <https://doi.org/10.1007/s00420-021-01748-1>
- Wilke, C., Ashton, P., Elis, T., Biallas, B., & Froböse, I. (2015). Analysis of work ability and work-related physical activity of employees in a medium-sized business. *BMC Research Notes*, 8(1). <https://doi.org/10.1186/s13104-015-1781-9>
- Wilson, E. O. (1984). *Biophilia*. Cambridge, Mass: Harvard University Press. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=282598>
- World Health Organization (2016). *Urban green spaces and health: A review of evidence*. WHO Regional Office for Europe: Copenhagen.
- Yoshida, T. (2021). How has workcation evolved in Japan? *Annals of Business Administrative Science*, 20(1), 19–32. <https://doi.org/10.7880/abas.0210112a>

APPENDIX A: INFORMATION LETTER

Outdoor Office Work – Master’s Thesis Research Project

Hej!

My name is Verena Herzhoff and I am about to write my master’s thesis within the program “Work Life Studies” at Mälardalens Högskola (MDH), Västerås. My research topic is about **Outdoor Office Work**, meaning conducting office-related tasks outdoors and it is part of the research project “Sustainable Offices of the Future” (SOFCO) at MDH.

In my project I am to understand why employees prefer to work indoors instead of outdoors and why they **don’t make use of outdoor office facilities**, even if they have the possibility to do so.

Does this apply to you? Yes? Perfect! I would be glad if you can support my studies! 😊

- The interview takes place **online**, lasting about 30-45 minutes, depending on your time schedule.
- The interview should be conducted **as soon as possible**. I am **flexible** and we can conduct the interview when it suits you best.
- Your identity and anonymity are protected at all time.

I would be very thankful if you have the possibility to support the research project!

Please contact me via mail if you are interested vhxxxx@xxxxx.se .

BIG THANKS and best regards,

Verena Herzhoff

*Master’s student in Work Life Studies
Mälardalens Högskola, Västerås*

APPENDIX B: LETTER OF CONSENT

Information letter – letter of consent

Dear interview participant,

Thank you for being interested to participate in this research study about Outdoor Office Work. In this study, I am interested to gain a deeper understanding of the use of Outdoor Office workplaces. As this way of working is in its infancy and few people are working like this yet, the aim is to gain a deeper understanding concerning office-employees' view on nature and the possibility to conduct office-related work tasks outdoors.

The research will be conducted by an interview via Zoom, taking between 30 and 60 minutes. The interview will be recorded.

In the research process, everything you tell me will be handled with highest discretion and confidentiality. Your anonymity and identity will be protected. After typing up the interview, the audio file will be deleted. When typing the interview, no name or information that can identify your person or internal information from your workplace will be written down.

Your participation in this research is voluntary and you have the right to withdraw at any point of time.

If you require further information about the study, you are welcome to contact me or my supervisor and the research project leader Susanna Toivanen (susanna.xxxxxx@xxx.se) at any point of time.

Thank you for supporting my research!

Verena Herzhoff

M.Sc. Work Life Studies, Mälardalens Högskola
vhxxxx@xxxx.se

I have read the above information regarding this research study and consent to participate in this study.

_____ (Printed Name)

_____ (Signature)

_____ (Date)

APPENDIX C: INTERVIEW GUIDE

Interview guide

Personal description

- Introduce/describe yourself.
- For how long are you working here? What are you working with?
- How does a usual working day look like for you?
- Can you tell me more about your work tasks? How do you conduct them? What (technical) tools do you use?
- If working in the office: how do you commute to your job?
- How do you spend your breaks?
- Can you tell me how your free time /weekends look like, how do you spend it?

Being/working indoors

- Can you tell me more about your workspace, how would you describe it?
- You described your workspace as... What do you associate with working at your desk, in your office, in your home, ... (indoors)?
- What feelings and emotions do you experience about your workspace?
- Tell me about a time when it felt very good to work like this. What characterized the situation?
- Tell me about a time when it not felt good to work like this. What characterized the situation?
- How would you describe a, for you, ideal workspace?

Outdoor office

- *How would you describe "The Outdoors"? What does it mean to you?*
 - o *How would you describe your relation to the outdoors?*
- *In what way do you spend time outdoors?*
- *When was the first time you made notice / were introduced to the possibility of working outdoors?*
- *How did you make notice / were informed about it?*
- *In what way is the outdoor workspace a topic that is talked about between colleagues?*
- *How do you observe the utilization of the outdoor workspace?*
- *What do you associate with the outdoor workspace?*
- *What are your thoughts concerning the possibility of working outdoors?*
 - o *Can you tell me more about your considerations, concerns, ideas, ... concerning working outdoors?*
- *What emotions arise when you think about the idea of working outdoors?*
- *What experiences do you have concerning conducting work outdoors?*
 - o *How was, if you ever tried it, your experience of working outdoors? Can you tell me more about it?*
 - o *Can you tell me what was positive about your experience? Can you name details about the situation?*
 - o *Can you tell me what did not went well about it?*
- *If you imagine you're going to be working outdoors tomorrow, what thoughts and emotions arise?*
- *If you imagine working outdoors tomorrow, imagine your colleagues sees you working in the spring sun. How does this feel? What would they say?*

- Imagine the same situation, working in the spring sun, and your superior walks by. How does this feel? What would he/she say?

Well-being

- How would you describe your current well-being?
- What does influence the way you feel? What role does your work play in the way you feel?
- Did your overall well-being change since you started working here?
- What supports you to achieve a high level of well-being?

Reflection and conclusion of the interview

- You have told me about your current workspace and about your thoughts concerning the possibility of working outdoors, is there something more you want to talk about? Is there something we missed to talk about?
- Is there something you want me to understand better?
- Do you have questions to me?
Let me summarize your thoughts to make sure that I understand you correctly.



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