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How do job demands have an impact on in-role performance through work engagement?

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Abstract

The purpose of this research is to examine how job demands (loneliness, technological problems, and job insecurity) have an impact on in-role performance through work engagement (vigor, dedication, and absorption) in the virtual context as a consequence of the global pandemic. The study has two hypotheses in which it first investigates the relationship between job demands and work engagement, and hence investigates the relationship between work engagement and in-role performance. The theoretical framework is based on the theory of Work Engagement by Schaufeli (2002) and the Job Demand-Resource Model by Bakker & Demerouti (2011). Our research design is based on a qualitative methodology with quantitative support. The qualitative method is used to explain how job demands have an impact on employees' work engagement through an in-depth analysis where data is derived from semi-structured interviews. The qualitative method is used to reveal indications of the relationship between the variables (job demands, work engagement, in-role performance) through statistical analysis, which in turn confirms or rejects the hypotheses. The sample of our research is customer consultants at a Norwegian call center who have been highly affected by the global pandemic of Covid-19, and who have been working from home during the past year. Findings from the research reveal tendencies that both loneliness, technological problems, and job insecurity have an impact on employees' work engagement. However, loneliness seems to affect engagement to the greatest extent as it shows to have an impact on both vigor, dedication and absorption, followed by job insecurity and then technological problems. Further, the findings have empirical support in which employees who experience less work engagement as a consequence of job demands perform at lower levels. Similarly, employees who do not experience job demands to the same extent seem to be more engaged and hence have higher in-role performance. The findings add to the literature of positive organizational psychology and are useful for both employees as well as for organizations.

Keywords: *job demands, work engagement, in-role performance, loneliness, technological problems, job insecurity, virtual context*

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1.0 Introduction

This research examines the negative role of job demands in terms of workplace loneliness, technological problems, and job insecurity on employees working from home, and how these have an impact on work engagement. Little empirical research has examined how job demands operate as determinants of work engagement. Due to the fact that the Job-Demands Resource Model has predominated in the research of work engagement, previous studies have mainly focused on job resources and their role in fostering work engagement. It is therefore suggested that future research should shift focus from job resources to job demands, and hence examine how job demands function as determinants of work engagement (Mauno et al., 2007). Although some quantitative studies have indicated that job demands are negatively associated with work engagement (Hakanen, 2002; Hakanen & Demerouti, 2007; Bakker & Demerouti, 2011), there is little evidence illuminating and describing why there might be a negative relation between them. It can therefore be argued that it is both interesting and necessary to investigate this connection with the help of qualitative research that can be fed back to the literature to further develop the research within job demands and work engagement. However, although the study is mainly based on a qualitative methodology, it also includes a quantitative approach that serves as support for the qualitative data, and which will thus contribute to answering the research question.

The virtual context in relation to home office is emphasized in this research due to the highly relevant Covid-19 pandemic which has affected the world in several ways. Covid-19 spread rapidly across the globe and became announced as a pandemic by the World Health Organization (WHO) in 2020. As a consequence of this, organizations had to find new, efficient ways to work due to lockdown, isolation, and social distance between people (BBC, 2020; Kniffin et al., 2021). Although organizations have in many years been leveraging technological advances to work remotely across boundaries, the pandemic has changed this drastically during the last year. A study conducted in 2012 suggested that approximately 66% of multinational companies worked from home (Society for Human Resource Management, 2012, as cited in Gilson et al., 2015). Today, working from home has become commonplace for organizations with a need to

rethink working arrangements and make employees adapt to the “new normal” (BBC, 2020). To illustrate, a study from 2020 shows that the number of people working from home in Switzerland has nearly doubled during the coronavirus crisis (Deloitte, 2020). Most of today's organizations have therefore been forced into mandatory remote work. There is also evidence that Covid-19 has affected the working conditions for employees in terms of job demands, and that employees who work from home experience more vulnerability to different job demands (Gilson et al., 2015; Gilson et al., 2004). One can thus question how demands impact employees' work engagement. Although much research has examined how working from home can both positively and negatively impact individual outcomes, there is a lack of studies examining the relationship between remote work and work engagement. This constitutes a gap in the literature (Gilson et al., 2015).

In this research we delimit the study by focusing on customer consultants at a Norwegian call center. Consequently, we have chosen to include three specific job demands which can be argued that call center employees may experience when working from home for a longer period and that can have an impact on their work engagement. As the customer consultant employees of our research have worked from home during the entire Covid-19 pandemic, we found it relevant to examine how their experiences of workplace loneliness, technological problems, and job insecurity (i.e. job demands) influence their work engagement. Workplace loneliness is interesting to investigate due to the lack of studies examining this as an emotional demand (Judge et al., 2021). In addition, workplace loneliness as well as technological problems and job insecurity are highly relevant demands as a result of today's virtual working conditions and uncertainties associated with the pandemic.

Furthermore, the research investigates whether workplace loneliness, technological problems, and job insecurity have a negative impact on employees' in-role performance through the mediating role of work engagement. As most previous studies have focused on subjective indicators of performance (Bakker & Demerouti, 2007), this research uses objective indicators of performance to examine the relationship between job demands and in-role performance. Thus, we

believe our study is informative and valuable as it adds knowledge regarding virtual working conditions (i.e. job demands) that may undermine employee work engagement and in-role performance in call centers.

Our research question is defined as follows:

How do job demands have an impact on in-role performance through work engagement?

2.0 Theory and Hypotheses

The following section will present the theory of *Work Engagement* and the *Job-Demand Resource Model*, and discuss how these two theories are related to each other. Additionally, this section will present the outcomes of work engagement with a particular focus on in-role performance as an important employee and organizational outcome.

2.1 Work Engagement

The concept of work engagement is related to positive organizational behavior (POB) research, and involves the study of positively oriented human resource strengths and capacities that can be measured, developed and managed in organizational settings (Bakker & Schaufeli, 2008). The concept has been defined in several different ways by scholars, and this impacts the way the concept can be measured. For instance, Khan (1990, p. 694) conceptualizes work engagement as the “harnessing of organization member’s selves to their work roles: in engagement, people employ and express themselves physically, cognitively, emotionally, and mentally during role performances.” In other words, engaged employees put a lot of effort in their work because they identify with it.

Another well-known definition of work engagement is the one developed by Schaufeli et al., (2002, p. 74), which describes engagement as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption.” Since this definition captures the significance of the concept to a large extent and is highly recognized in the research of work engagement, it will be emphasized in this research. Although work engagement can be defined in several different ways, most scholars agree upon the general understanding of the

concept; that engaged employees have high levels of motivation, energy, and identify strongly with their work (Bakker et al., 2008). Moreover, most researchers argue that rather than a situational-based condition, work engagement is considered as a more persistent affective-motivational state of work-related well-being that is not focused on any specific event, object, behavior, or individual (Schaufeli & Bakker, 2003).

Work engagement includes three dimensions, namely *vigor*, *dedication*, and *absorption* (Schaufeli et al., 2002). Vigor refers to high levels of energy and resilience while working, the willingness to invest effort in work, and endurance when facing difficulties. Dedication is characterized by being strongly involved in work and experiencing significance, enthusiasm, inspiration, and challenge. Absorption refers to being fully concentrated and deeply engrossed and devoted to work (Schaufeli et al., 2002; Schaufeli & Bakker, 2003). These three dimensions constitute the overall concept of work engagement. However, they can also be understood as *physical*, *emotional*, and *cognitive* components of engagement, where vigor corresponds with the physical aspect, dedication corresponds with the emotional aspect, and absorption corresponds with the cognitive aspect (Schaufeli et al., 2002). More specifically, May et al., (2004) emphasizes these correspondences by exemplifying vigor with “I exert a lot of energy performing my job”, dedication with “I really put my heart into my job”, and absorption with “performing my job makes me forget about everything else.” These aspects thus form a deeper understanding of the dimensions of work engagement. Further, it is important to stress that work engagement differs from other related concepts such as “workaholics” as people who are engaged are not addicted to their work. Rather, engaged employees work hard due to the positive emotions they experience with work, such as joy, enthusiasm, and inspiration (Bakker & Demerouti, 2008).

2.2 The Job Demand-Resource Model

The Job Demand-Resource Model (JD-R Model) is a theoretical framework which integrates two independent research traditions, namely the stress research tradition and the motivation research tradition. The model can be organized in the overall model of work engagement as job demands and resources are understood as

antecedents of work engagement (Bakker & Demerouti, 2011; Bakker & Demerouti, 2008). The JD-R theory indicates that every occupation has its own specific characteristics associated with employee well-being (e.g. work engagement, motivation, job stress, burnout). These characteristics can be classified in two general categories, namely *job demands* and *job resources* (Bakker & Demerouti, 2011). As the main focus of our research is solely on the job demands and how they function as determinants of work engagement, we will not discuss the role of job resources as they have been extensively shown to predict work engagement by several studies.

2.2.1 Job Demands

Job demands refers to those aspects of a job that require sustained physical and/or social effort, and are associated with psychological costs, such as exhaustion and stress (Bakker & Demerouti, 2011, p. 2). Examples of job demands are mental demands, emotional demands, and physical demands, or more specific demands such as time pressure and workload. It is important to note that such demands are not necessarily negative since they can be understood as challenges that may promote work engagement for employees. When these demands are too high, however, they may turn into stressors rather than challenges. This may be evident if the employees fail to recover adequately after meeting demands that require high effort (Meijman & Mulder, 1998, as cited in Bakker & Demerouti, 2011). Thus, the central principle for job demands is that they evoke an energy depletion process that can lead to negative impacts on employees (Bakker et al., 2003a). For instance, most research on job demands has examined how they have a significant negative influence on individual health problems including exhaustion, repetitive strain injury, anxiety, dissatisfaction, absenteeism, burnout, and depression (Bakker & Demerouti, 2007; Bakker et al., 2003a; Hakanen et al., 2008). However, there is a lack of research investigating how job demands have an influence on employee work engagement, which makes the connection between them unclear (Sawang, 2012).

As mentioned, the focus of our research is on customer consultants at a Norwegian call center who have been and still are working from home due to Covid-19. According to Bakker et al., (2003a), a call center can be defined as a

workplace where the main work is mediated by computer and telephone-based technologies that enable the efficient distribution of incoming and outgoing calls between employees and customers. The interaction occurs with the use of a display screen equipment and with the access to and inputting of information (Holman 2003, as cited in Bakker et al., 2003a). These are typical characteristics of call center employees, including the employees of our study. The reason we chose to target our study at this specific group of employees is because the JD-R model satisfies the need for specificity by including various types of demands depending on the occupation being studied (Bakker & Demerouti, 2007). Building on the JD-R model, we focus on the job demands that can be argued to occur for call center employees working from home. These are defined as *workplace loneliness* (emotional demand), *technological problems* (technological demand), and *job insecurity* (mental demand), and will be further presented and discussed.

2.2.2 Workplace Loneliness

In regard to the JD-R model, workplace loneliness can be understood as an emotional demand (Heinrich & Gullone, 2006; Jung et al., 2021; Bakker & Demerouti, 2011). Emotional demands are defined as emotionally charged situations that stimulate the emotional aspect of individuals. However, there are different definitions of emotional demands as it is often adapted to the specific research and sample being studied (Heuven et al., 2006). Workplace loneliness is in this case considered as an emotional demand among employees working from home (Bèlanger et al., 2013, as cited in Gilson et al., 2015).

Workplace loneliness is affected by work situations and refers to a psychological feeling that can harm employees as well as organizations. It is a subjective perception of employees when their social desires are not satisfied due to lack of interpersonal relationships among coworkers in a work environment (Ernst & Cacioppo; Wright et al., 2006, as cited in Judge et al., 2021). When the amount, frequency, and quality of social contact between an employee and his or her coworkers weakens, it has been argued to negatively affect job attitudes such as engagement (Heinrich & Gullone, 2006; Takeuchi et al., 2011). As suggested by Jung et al., (2021) and Öge et al., (2018), the negative influence of loneliness on work engagement can occur as a result of employees' social relationships with

coworkers. Employees are dependent on interpersonal relationships which constitute a job resource of the social environment of the workplace. When this job resource is significantly reduced due to remote work and distance among coworkers as a consequence of Covid-19, it can be argued that they may experience feelings of loneliness which in turn can lead to impaired engagement. Although several studies have found that emotional demands negatively affect the work engagement of employees (Shah et al., 2017; Lloreans et al., 2007; Schaufeli & Bakker, 2004), there is a lack of studies examining the relationship between workplace loneliness as an emotional demand and work engagement. Thus, research on workplace loneliness is still scarce and should therefore be further developed (Judge et al., 2021). This is where our research contributes as it examines how employees' experience of workplace loneliness influences their engagement in the virtual context.

2.2.3 Technological Problems

Technological problems can be seen as a job demand for most occupational groups that are leveraging information- and communication technologies in performing their jobs. Particularly when it comes to call center employees, technological problems can be seen as a highly relevant job demand. This is because they are exclusively relying on information and communication systems in performing their job, as well as on interactive display terminals during telephone calls with customers (Bakker et al., 2003). When the workplace is moved from the office to remote work settings, corporate technological devices can be argued to sometimes perform worse from home compared to the office as issues such as slow or unreliable internet connection or problems with devices or access can occur (Trapp, 2021). In addition, once technological problems do occur during home office, technical support will no longer be readily available for assistance (Trapp, 2021). The problem is often left to employees themselves, resulting in longer time used for solving the issue. Based on this, it can be argued that technological problems can lead to weakened engagement among employees, among other things due to frustration, irritation, unpredictability, and lack of control (O'Boyle & Hogan, 2019).

2.2.4 Job Insecurity

Mental demands can take form in many different ways, and one of them can be argued to be job insecurity. Job insecurity refers to the level of uncertainty employees perceive in terms of involuntarily potential loss in their job continuity (De Witte, 1999; Greenhalgh & Rosenblatt, 1984; Hui & Lee, 2000). It is important to emphasize that what individuals perceive as potential loss of continuity in a job situation can range from permanent loss of the job itself to loss of some subjectively important features of the job (Greenhalgh & Rosenblatt, 1984). Therefore, job insecurity does not necessarily imply that employees will lose their jobs; it refers to the perceived risk of nature and the continued existence of one's job (Sverke & Hellgren, 2002). Although job insecurity has been very seldom studied as a determinant of work engagement (Mauno et al., 2007), it has been argued that employees who experience insecurities about their job tend to have more negative job attitudes towards their work. This is because of the focus of potential loss which further can lead to anxiety, frustration, and anger (Kiefer, 2005). Studies have found that employees have during the later years become more aware of issues related to job insecurity, and that employees who feel senses of insecurity in regard to their job are more likely to experience negative work-related outcomes which can impair their performance (Jordan, Ashkanasy, & Hartel, 2002; Hollon, 2010).

Covid-19 has caused crises in many industries and organizations around the world which have led to financial uncertainties and recession in the global economy (The World Bank, 2020). As a result, pay-cuts and unemployment have doubled in Norway during the crisis, and high unemployment is expected to last for several years (Knudsen, 2020). When it comes to the industry to which the call center employees operate, it has been particularly vulnerable to recession as a result of the pandemic and the unpredictable situation. One can therefore question whether the employees have experienced uncertainties related to permanent or temporary layoffs due to the pandemic and the consequences the company has been facing. Therefore, this research finds it interesting to analyze and discuss employees' experiences of job insecurity regarding involuntarily potential loss of their job and its impact on work engagement.

2.3 Outcomes of Work Engagement

Today's organizations expect their employees to show initiative, be proactive, take responsibility for development and achievement, and perform at high levels. However, in order to meet these organizational expectations, it is important for employees to be energetic, dedicated, and absorbed in their work (Bakker & Schaufeli, 2008; Bakker et al., 2008). In other words, employees need to experience high levels of work engagement. When it comes to the individual outcomes of work engagement, it is argued that engaged employees often possess more positive emotions such as joy, interest, happiness, enthusiasm, and passion, and are more productive, creative, and satisfied with their job. Additionally, engaged employees experience better overall health and perform at higher levels of in-role performance (Borst et al., 2019). Such individual outcomes will further be beneficial for organizations as it will positively influence organizational performance in terms of competitive advantage and success. In sum, engaged employees have in general positive attitudinal, behavioral, and performance outcomes which benefits the overall organization. Therefore, organizations thrive to achieve higher levels of work engagement among employees (Borst et al. 2019).

2.3.1 In-role Performance

This research is investigating in-role performance as an outcome of employee work engagement. In-role performance refers to the officially required behaviors that directly performs the duties required by a job. Among other things, in-role performance includes effective functioning and meeting organizational objectives (Motowidlo & Van Scotter, 1994; Behrman & Perreault, 1984, as cited in Bakker et al., 2004). Research shows that job demands are the most important predictor of in-role performance among human service professionals (Bakker, Demerouti, & Verbeke, 2003c). For instance, workload, emotional demands, and work-home conflict has been argued to negatively influence in-role performance through the mediating role of exhaustion and disengagement. This implies that when people become exhausted under the influence of demands, they will not be able to perform well as their energetical resources are diminished (Bakker et al., 2004). When it comes to the measurement of in-role performance, most previous studies on the JD-R model have relied on self-report measures. It is therefore suggested

that future research should include more objective indicators such as customer satisfaction, profitability, turnover, and sales to measure performance (Bakker & Demerouti, 2007). This study therefore focuses on objective indicators of individual performance by including the number of calls answered by the customer call center employees to examine whether there is a relationship between the job demands (i.e. loneliness, technological problems, and job insecurity) and in-role performance through the mediating role of work engagement.

With the theory of our research presented, Model 1 gives a clear and descriptive understanding of our research question:



Model 1: Our research model based on the JD-R model of work engagement by Bakker & Demerouti (2007).

Based on the theory and literature on work engagement, job demands, and in-role performance and their connection to our research question, this study has two hypotheses:

Hypothesis A: Experiences of loneliness, technological problems, and job insecurity has a negative impact on employees' work engagement.

Hypothesis B: Work engagement has an impact on employees' in-role performance.

3.0 Research Methodology

This section presents the research design and methodology of our research study. Research design refers to the framework for collecting and analyzing data with the purpose of answering the research question, whereas research method is the

specific technique for collecting and analyzing data within the research design (Bryman & Bell, 2011). In this research, both a qualitative and quantitative methodology is implemented. As mentioned earlier, elements from quantitative methods are used in order to complement and support the qualitative research design. Quantitative research involves a deductive approach as it emphasizes quantification in the collection and analysis of data with the purpose of testing theories (Bryman & Bell, 2011). The purpose of this research is to test the two hypotheses derived from theory. Thus, this element of quantitative research features the measurement of social variables (i.e. job demands, work engagement, in-role performance) to find their relationship through correlation analysis. To specify, job demands is the independent variable and work engagement is the dependent variable in hypothesis A, whereas work engagement is the independent variable and in-role performance is the dependent variable in hypothesis B. These variables will be measured with the use of Likert scales which will be further explained in this chapter. It is important to emphasize that although the use of quantitative data will help reveal relationships between the variables and as such enable us to confirm or reject the two hypotheses, the main purpose of this study is to describe *how* these relationships occur through the use of qualitative research design and methodology. The quantitative elements will therefore mainly function as supplement to the qualitative data and findings.

A qualitative research design with the use of interviews as a method for data collection is preferable in order to answer the research question in depth. A qualitative method involves an inductive approach to theory and research where findings are fed back to the theory that gave rise to the research. Thus, theory becomes the outcome of research and something that occurs after the collection and analysis of data (Bryman & Bell, 2011). In other words, the findings from our research can be fed back to the theoretical framework of job demands, work engagement, and in-role performance in the virtual context. Additionally, as most studies have been quantitative in this field of research, we believe a qualitative study provides value as it emphasizes an in-depth analysis and discussion of the concepts and their relationship.

Qualitative research emphasizes words rather than quantification in the collection and analysis of data. It therefore addresses “why” or “how” questions in order to develop an understanding of a phenomenon from the perspective of those individuals being studied (Pratt, 2009). As in the formulation of our research question “*how* do job demands have a negative impact on in-role performance through work engagement”, we want to examine the experience of job demands (i.e. loneliness, technological problems, and job insecurity) on work engagement from the perspective of the employees at the call center. This approach is referred to as “interpretivism” where the emphasis is placed on the understanding of a phenomenon through the eyes of the people being studied. In this research, interpretivism is concerned about the examination of the subjective meanings, interpretations, and experiences of job demands and work engagement held by call center employees (Bryman & Bell, 2011). This entails an in-depth study of a group of individuals who share certain characteristics, which in this case are (1) call center employees who have (2) worked from home during the last year. One of the particular strengths of qualitative research is the understanding of the social world it provides, due to its capacity to capture phenomena in rich detail. A qualitative approach is beneficial in this research as we attempt to capture rich and detailed information about how call center employees experience loneliness, technological problems, and job insecurity on work engagement, and this is difficult to fulfill with a quantitative methodology (Langley & Abdallah 2013).

A qualitative research design usually provides a detailed account of the setting or environment being studied. These descriptive details are important as they provide information about the context in which individual behavior takes place (Fossey et al., 2002). In this research, emphasis is placed on the virtual setting as the aim is to examine call center employees who are working from home. Thus, emphasis on the context is important in order to understand employees' experience of loneliness, technological problems, and job insecurity on their work engagement as a consequence of Covid-19 and remote work. Hence, a qualitative study is needed in order to capture this significant setting.

3.1 Sample

As qualitative studies are concerned with information richness, two key considerations should guide the sampling method; appropriateness and adequacy. In other words, sampling in qualitative research requires identification of appropriate participants who can best inform the study. In addition, it requires an adequate sampling of information sources in terms of people, situations, and types of data to address the research question and to develop a full description of the phenomenon being studied (Fossey et al., 2002). The sampling of our research was purposive as we did not seek to sample participants on a random basis. Rather, our aim was to sample participants in a strategic and conscious way in which the individuals were selected due to their relevance of experiencing the phenomena (Fossey et al., 2002; Bryman & Bell, 2011). As researchers we have therefore been clear in the criteria for what to include in our sample. These criteria are (1) employees who are (2) working from home. In order to sample participants with these criteria we contacted a customer call center through our network where all employees are working from home. Since one of the master students has knowledge about the workplace in which the participants are employed, we assumed that the employees would provide us with relevant and rich information for the research.

Furthermore, no fixed minimum number of participants is necessary to conduct sound qualitative research. Qualitative research can therefore involve small numbers of participants while the amount of data gathered can be large. However, the number of participants depends on the research and on the depth of information needed to fully describe the phenomena (Fossey et al., 2002). This makes qualitative research creative and flexible in nature, which is, as mentioned, one of its significant strengths. It is argued that when the amount and depth of information as a result of data collection is insufficient to be able to properly analyze data and draw conclusions from findings, one can decide to sample more participants in order to gather the needed information. Similarly, it may not be necessary to conduct as many interviews as first decided if the information is sufficient and if new data does not reveal any new information (Langley & Abdallah, 2013). Although we wanted to examine the experiences of all employees in the customer service department to obtain as rich and detailed

information as possible, only 10 employees agreed to participate in the study. Thus, the sample of this research consists of 10 participants from the call center, where the age group ranges from 23 to 31 years and consists of 3 men and 7 women. All participants work in the same unit, have customer contact, and mainly perform the same tasks. However, their job title and job description differ to some extent.

3.2 Interviews

In this research, we used interviews as a tool for data collection. Interviews are one of the most widely used methods in qualitative studies with the aim to gather important information from the interviewees that is relevant for the research. This information is particularly related to the interviewees behavior, attitudes, experiences, feelings, and thoughts. When conducting interviews one is interested in understanding the perspectives of the interviewees (Fossey et al., 2002). Interviews are thus valuable in this research because it potentially generates knowledge about virtual-specific job demands that may have an impact on employees' work engagement and in-role performance. Furthermore, interviews are considered as an attractive data collection strategy because of its advantages. More specifically, it enables researchers to collect rich and detailed data where the interviewees have freedom to describe their own thoughts and feelings about the phenomena being examined (Fossey et al., 2002), and this is important when collecting data for our research question.

The interviews are conducted with a semi-structured approach. The reason for why we chose this approach is because of the flexibility it provides for both the interviewees and interviewers. With semi-structured interviews, the interviewees have the opportunity to elaborate and reflect on the phenomena we address more freely without too many constraints. Additionally, as interviewers, we will have the opportunity to ask follow-up questions if there is something we want the interviewees to reflect on more. Although semi-structured interviews include a list of questions that are connected to the phenomenon being studied (Bryman & Bell, 2011), the interview guide is not rigidly set as our interviewees have considerable leeway when answering the questions. Thus, the interview guide is mainly used as support where questions can vary from the outlined plan and where one is not

restricted to follow the exact order of the questions. Nevertheless, it is important that all essential questions from the interview guide are asked during the interviews, and that similar wordings among the interviewees is used in order to avoid different interpretations and misunderstandings (Bryman & Bell, 2011). The interview guide is divided into two categories - one for the job demands (i.e. loneliness, job insecurity, technological problems) and one for work engagement (i.e. vigor, dedication, absorption). More specifically, the first part of the interview guide measures employees' experiences of job demands, while the second part measures their experiences of work engagement. The interview guide is presented in Appendix 1 with both an English and Norwegian version.

3.3 Measuring Job Demands

The questions related to job demands in the interview guide are based on quantitative self-report scales. The questions are redesigned to fit within the qualitative method and are thus made more open-ended. As a result, the interviewees can respond as they want and in their own terms since the questions do not suggest certain kinds of answers. With open questions the interviewees' understanding of the phenomena are deeply explored and unusual answers are allowed (Bryman & Bell, 2011), and in this way, such questions enable us to collect rich, unfiltered, and detailed data about the interviewees' experiences, thoughts, and feelings.

The interview questions related to the measurement of workplace loneliness and job insecurity are developed and based upon already established self-report scales. The measurement of loneliness was developed by Wright (2006) and is called the "Loneliness at Work Scale" (LAWS). The scale consists of 16-items related to work-based social and emotional provisions, and has shown considerable ability to measure work-related loneliness as opposed to loneliness in general (Wright, 2006). Due to its validity, we based the questions of our interview on the scale, but designed the questions more open-ended to capture more rich and detailed information about the employees experiences of workplace loneliness as a consequence of remote work. Job insecurity is also measured through open questions based on the Job Insecurity Scale (JIS) developed by Ashford et al. (1989). The original 57-item JIS includes five subscales, including the importance

of job features, probability of negative change to these job features, importance of total job changes, likelihood of change to total job, and powerlessness. The questions related to job insecurity in our interview are based on the subscale “the importance of total job changes” as we aim to examine whether and how employees experience job insecurity in terms of layoffs as a consequence of Covid-19. Lastly, when it comes to the measurement of technological problems, there are no already established scales developed by researchers. However, in a study conducted by Bakker et al., (2003a) they measured technological problems with two items which were highly and positively related and assumed to constitute one index for technological problems. Hence, based on these items we developed open questions to examine employees' experiences of technological challenges while working from home.

3.4 Measuring Work Engagement

There are several instruments that can measure work engagement, and the Utrecht Work Engagement Scale (UWES) has received great support and validation across studies (Schaufeli & Bakker, 2003). The scale is a self-report questionnaire mainly developed for quantitative research to assess the three dimensions of work engagement (i.e. vigor, dedication, absorption). It can be used among different occupational groups and countries, and has been translated by scholars into several languages, including Norwegian and English. This leads to the minimization of any linguistic misunderstanding in our research project. The questionnaire includes in total 17 items divided into the three dimensions; 6 vigor items, 5 dedication items, and 6 absorption items (Bakker & Demerouti, 2008; Schaufeli & Bakker, 2003). Based on the questionnaire, individuals who score high on vigor have high levels of energy, joy, and endurance in their work. Individuals who score high on dedication experience work as meaningful, inspiring, and challenging, and are enthusiastic and proud about their work, which positively influences their identification with work. Further, individuals who score high on absorption are deeply engrossed in their work and have difficulties with detaching from it, which in turn makes time fly and other things are forgotten (Schaufeli & Bakker, 2003).

Although most research on work engagement have conducted quantitative studies based on the UWES, several researchers have also used the scale in qualitative studies. For example, a well-known study conducted by Schaufeli et al., (2002) used structured qualitative interviews to reveal interesting findings about Dutch employees and work engagement. Accordingly, Engelbrecht (2006) used interviews among Danish midwives and added significant information to the Dutch findings by showing how engagement translates into behavior. In addition, the actual development of the UWES is built upon intensive in-depth interviews of work engagement (Schaufeli et al., 2001). Hence, we based our interview questions related to work engagement on the UWES, but developed the questions more open-ended in the same way as the questions related to the job demands.

In addition to the open-ended questions related to job demands and work engagement, the interview guide also includes quantitative measures in terms of Likert scales. The Likert scale is a point scale used for the interviewees to express how much they agree or disagree with the particular statements (Bernstein, 2005). Under each category in the interview guide (i.e. loneliness, technological problems, job insecurity, vigor, dedication, absorption), the participants received statements in which they had to place themselves on scales of agreement. The purpose with these scales was to strengthen and clarify the findings from the participants' answers by including numerical understandings of their experiences related to the phenomena.

3.5 Measuring In-role Performance

Employee in-role performance is measured with the use of an objective indicator. More specifically, the objective indicator is the number of inbound calls answered by each employee during a one month period (March) in 2021. The measurements of this specific month indicated normal operation for the company during this season. In addition, it had been one year since the employees moved to the home office and thus were used to the virtual working conditions. The objective indicators were provided by the company in which the customer consultants are employed. Based on the number of calls each employee answered in total, we attempt to examine whether their in-role performance can be described in relation to their work engagement as a result of their experiences of job demands. Thus,

their experience of work engagement will function as a mediating role between job demands and in-role performance.

3.6 Data Collection

Due to the current situation with Covid-19, all interviews were conducted through the video communication system “Zoom.” The interviews were conducted in Norwegian and took approx. 30 minutes. Further, when it comes to qualitative research it is common to record the interviews (Bryman & Bell, 2011). The interviews were therefore recorded in order to carry out detailed analysis, to ensure that the interviewees’ answers are captured in their own terms, and to avoid the loss of the interviewees’ phrases and language. Moreover, recording was beneficial as we conducted semi-structured interviews and hence had leeway from the formulated schedule of questions, which in turn made it necessary to be responsive to the interviewees in order to follow up their answers.

3.6.1 Informed Consent and Legal Regulations

Prior to each interview we asked the participants for their consent to record the interview, and informed them that the recorded material would be used to transcribe the tapes. All participants accepted the request for the interview to be recorded. Furthermore, when it comes to anonymity we assumed that the participants would provide more open, honest, and detailed answers when they are being kept anonymous. Thus, in order to preserve the interviewees anonymity they are named as “interviewee A, B, C”, etc. throughout the thesis.

The participants received information about the research project (i.e. the purpose of the research, topics that will be examined, the approximate duration of the interview, how the interview will be conducted, etc.). The participants also received information about their rights during the process (the right to access, delete, and correct information), and that they can withdraw from the project at any time if desired. Further, the participants were made aware that their personal data as well as the company name and industry will be kept anonymous and confidential due to the GDPR legislations, and that their personal data and recorded tapes would be deleted after project completion (NSD, n.d.). In addition, the research project was reported to and approved by NSD to comply with the legal regulations (see Appendix 2).

4.0 Analysis

4.1 Qualitative Analysis

The aim with qualitative data analysis is to obtain a deeper sense of the information provided by the interviewees and hence make connections between concepts that help researchers answer the research question (Hycner, 1985). The first step in the analysis was to transcribe each interview based on the tape recordings. Transcription involved writing down the literal words and sentences from the interviews. The second step involved translating the interviews from Norwegian to English based on thorough considerations of the wording and words to assure that the data reflected the participants accurate experiences of the phenomena. This was done after all interviews were conducted. After finishing all transcriptions, we started with the analysis process. There are several ways in which researchers can perform qualitative data analysis. However, in this research we performed what is called a deductive thematic method of data analysis. This approach is particularly useful since our research question already identifies the main themes and categories used to group the data (Miles & Huberman, 1994).

Themes are higher-order and more abstract concepts above categories used to identify a major element of the analysis of the data, while categories are concepts that are representing real-world phenomena and which can be understood as descriptions of themes (Brymann and Bell 2008; Vaismoradi et al., 2016). The categories of our analysis are identified as “loneliness”, “technological problems”, “job insecurity”, “vigor”, “dedication”, and “absorption”. The categories are theory-driven and identified from a priori approach as they derive from the characteristics of the phenomena under study and our prior theoretical understanding of it. In addition, our decisions about what topics to cover in our research and how to best obtain information about these topics from the interviews became a rich source of priori categorization. Thus, the topics naturally occurred as categories. The categorization is made visible in the interview guide as we separated each topic in a structured manner with multiple questions related to each category. Further, as the categories “loneliness”, “technological problems”, and “job insecurity” derive from the theory of job demands, job demands became the first theme of our analysis. Similarly, “vigor”, “dedication”, and “absorption”

derive from the theory of work engagement, and hence work engagement became the second theme of the analysis. Thus, as a result of the already identified and established themes and categories derived from the theory and our research, the analysis became structured and predetermined.

After identifying themes and categories, the next critical step in the analysis process was to employ codes to the data. Coding can be defined as meaningful labels in terms of words or sentences that are assigned to categories (Miles & Huberman, 1996, as cited in DeCuir-Gunby et al., 2011, p. 137). Our coding was theory-driven as it emerged from the existing theory and transformed the data into higher-level insights in terms of categories and themes. The aim was to interpret and assign meaning to the data by breaking it down into phenomena that seemed to be of potential theoretical significance and that appeared to be particularly salient within the social worlds of the participants being studied. Thus, our coding involved separating, collecting, and organizing data in a structural manner with the purpose to reduce and simplify data. This enabled us to examine which codes were related to the categories. Hence, coding became the building block for the categories (i.e. loneliness, technological problems, job insecurity, vigor, dedication, absorption) and themes (i.e. job demands, work engagement) in order to create and understand the connection between concepts. An overview of our coding is presented in Appendix 3.

4.2 Quantitative Analysis

In addition to the thematic analysis, we also analyzed the participants' placement on the Likert scales to represent their reality of job demands and work engagement in a numerical value (see Table 1 in Appendix 4). This is an element of quantitative analysis which supports the qualitative data in the research as it makes it possible to read the findings and understand them in a statistical way. A quantitative analysis was also conducted in regard to employees' in-role performance (i.e. the number of answered incoming calls among employees during a period of one month) which was retrieved from the company to reveal hard data and objective employee performance. This data was entered into SPSS, which is a statistical software platform that offers advanced statistical analysis. In order to simplify the data, the number of calls was rated from 1-10, where 1 was

the least number of calls and 10 was the most number of calls made during the given period (see Table 2 in Appendix 5).

The numerical findings related to job demands, work engagement, and in-role performance were transferred to SPSS. SPSS was thus used for quantitative analysis to demonstrate the correlations between the variables through Pearson's r . Said in other words, Pearson correlation was used to identify the relationship between the variables "job demands" and "work engagement", as well as the relationship between "work engagement" and "in-role performance". This further helped to confirm or reject the hypotheses.

5.0 Results

Based on the quantitative statistics and the analysis of the interviews, several results have been disclosed and these will be presented in the following. It is the results that are considered as most relevant in relation to the research question that will be presented in order to illuminate our research study. Thus, more specifically, this section will first confirm or reject the two hypotheses based on the quantitative analysis, and further present results from the qualitative analysis based on the in-depth reflections and experiences from the interviewees. The qualitative results are grouped in six distinctive categories (loneliness, technological problems, job insecurity, vigor, dedication, absorption), and will be presented individually before being discussed in connection with each other in order to answer the research question.

5.1 Quantitative Results

5.1.1 Job Demands and Work Engagement

Table 1 in Appendix 4 shows the interviewee's numerical value on job demands and work engagement as a result of their placement on the statements included in the Likert scales. This table thus presents the results of the employees experiences of these two variables. To understand the relationship between the job demands and work engagement, the correlation analysis will be presented.

Correlations			
		JobDemands	WorkEngage ment
JobDemands	Pearson Correlation	1	-.499
	Sig. (2-tailed)		.142
	N	10	10
WorkEngagement	Pearson Correlation	-.499	1
	Sig. (2-tailed)	.142	
	N	10	10

Pearson's correlation represents a negative relationship between job demands and work engagement. A correlation of $-.499$ reveals a strong correlation, which in other words indicates a tendency that when the amount of job demands increase, work engagement decreases. The significant level of $.142$ does not fulfill a desirable result as this should be closer to $.10$ in order to argue that the probability of the event occurring by chance is small (Ross, 2017). Nonetheless, due to the small sample, this study does not have the ability to provide a preferable significance level. However, the hypothesis will still not be rejected as the purpose of the study is to find tendencies and further support the qualitative approach. It can therefore be argued that there are tendencies that job demands can have a negative impact on employees' work engagement. Hence, the empirical finding seems to support hypothesis A and is indicative for the qualitative results.

5.1.2 Work Engagement and In-role Performance

Table 2 in Appendix 5 shows that both interviewee B and F have a large number of answered calls during the measured period, while interviewee H has the least number of answered calls. This table thus presents the results of the employees in-role performance. To understand the relationship between work engagement and in-role performance, the correlation analysis will be presented.

Correlations			
		WorkEngage ment	Performance
WorkEngagement	Pearson Correlation	1	.758 [*]
	Sig. (2-tailed)		.011
	N	10	10
Performance	Pearson Correlation	.758 [*]	1
	Sig. (2-tailed)	.011	
	N	10	10

*. Correlation is significant at the 0.05 level (2-tailed).

Pearson's correlation represents a positive relationship between work engagement and in-role performance. A correlation of .758 reveals a strong positive correlation, which in other words indicates a tendency that when employees' work engagement increases, they will achieve higher levels of in-role performance. However, it can still be argued that the small sample size may foster uncertainties related to the findings as the significance level indicates that the probability of the event occurring by chance is higher than wanted. Nonetheless, the hypothesis will still not be rejected as the purpose of the study is to find tendencies. Thus, it can be argued that there are tendencies that work engagement can have a positive impact on employees' in-role performance. Hence, the empirical finding seems to support hypothesis B.

5.2 Qualitative Results

5.2.1 Job Demands and Work Engagement

In order to assess whether and to what extent the employees experience the three job demands as a result of home office, they were asked several questions related to loneliness, technological problems, and job insecurity. In addition, to assess whether and to what extent the employees experience work engagement as a result of home office, they were asked questions related to their experience of vigor, dedication, and absorption in their work. This section will therefore present the results of the employees' experience of job demands and work engagement, and how the results are connected by drawing parallels between the categories of job demands and work engagement to reject or confirm hypothesis A.

5.2.1.1 Loneliness

All of the ten interviewees could disclose that they felt loneliness in the work-related context as a result of working remotely and the distance to the office and colleagues. This is because home office leads to a lack of daily social interactions where “short casual conversations” in the lunch break or by the coffee machine is no longer possible. These types of conversations are what many interviewees called “the water cooler effect”, and argued that this is what they are mostly missing. Several of the interviewees highlighted the possibility to interact with colleagues through digital tools such as Teams, which for some is considered as positive as it provides the opportunity for social contact and stimuli. Nonetheless, the majority argued that this tool does not replace the normal “face-to-face” contact with colleagues. Moreover, it also gets pointed out that the main communication through Teams is about work-related topics as a result of scheduled meetings. As a consequence, the interviewees expressed their dissatisfaction of not being able to have spontaneous and non-work-related conversations, often described as personal or private conversations. In sum, the focal point of the interviewees’ experience of loneliness was mainly associated with the lack of everyday face-to-face contact with colleagues. To highlight this experience, some interesting quotations are presented in the following:

Interviewee F: *“The few times I have been to the office during the last year, I have noticed that I really appreciate meeting colleagues face-to-face. I also miss having proximity as well as conversations that are not work-related. It is much more difficult to have random conversations when you do not meet people physically.”*

Interviewee A: *“I miss my colleagues and the daily human contact. There are days where I don’t talk to anyone, and this makes me feel lonely sometimes.”*

Interviewee J: *“I miss the social interaction and the collegial break you get in the office. I find it very difficult to sit alone and work a whole day without this type of break.”*

Interviewee D: *“When you talk via Teams, you do not talk about much other than work-related topics. You don't get that informal conversation that you would otherwise have had at the office (...). I would say that now I am in a place where I feel quite lonely in relation to work.”*

Furthermore, some of the interviewees argued that lack of social contact affects their inspiration towards work, as well as their energy level and enthusiasm. Moreover, the working days could for many be experienced as boring due to little contact with colleagues, which could further negatively influence their motivation at work in general.

5.2.1.2 Technological Problems

With regard to technological problems, results show that there are various answers to whether the interviewees experience such challenges, what kind of issues they experience, and how often they occur. The most common technological demands were related to the Wi-Fi and VPN connection. In addition, some of the interviewees experienced problems with the hardware such as the screen, keyboard, wire, or phone. All interviewees said that they had experienced technological challenges, but to varying extent. However, when such challenges occurred, several expressed frustration, irritation, and stress. Some also said that such problems could make their work more challenging and inefficient at times. Nevertheless, the majority of the sample explained that the problems are beyond their control and hence something they cannot do anything about. As a result, this led to indifference towards such issues.

Interviewee J: *“I experience that technological challenges have become a growing problem after we started with home office versus when we worked at the office.”*

Interviewee G: *“I get very frustrated and annoyed when these issues occur. It can ruin my whole morning. It often also takes a while to get work started which can make me a bit stressed as we need to start working at 08.00 am. It is annoying because these issues become stress-related factors. However, when the problem gets solved, I get back to work quickly, so it is never a long-standing problem.”*

Interviewee F: *“It does happen from time to time, however, I don't feel it has been to any greater extent than before when I was working at the office.”*

5.2.1.3 Job Insecurity

Particularly interviewee A, B, C, D, G and H said that they experience job insecurity to a greater or lesser extent. This is because they have several times received notice regarding layoffs during the last year as a consequence of Covid-19 and the associated restrictions towards the industry. Some of these interviewees described a feeling of fear and insecurity for the future. In addition, they said that feeling insecure made them become more lazy and less motivated in which they did not want to perform more than what was required from them. However, it is worth noting that they pointed out that layoffs were beyond their control. On the other hand, other interviewees argued that they had not felt any insecurity regarding layoffs.

Interviewee C: *“I was absolutely afraid of being laid off, and that was also the case. I was laid off for 2 months and was quite afraid of not having a job in the future.”*

Interviewee G: *“I have experienced being laid off once, and after this I have received 2-3 new layoff notices. So I have always felt that there is a high probability that I can be laid off.”*

Interviewee H: *At first, I thought it was very unlikely. However, when it happened the first time, my insecurity increased and I have been insecure about whether I will keep my job since that situation.”*

5.2.1.4 Vigor

Firstly, there are varying results related to whether the employees experience that home office affects their efficiency in work. Most of the interviewees believed they worked more efficiently from home due to minor distractions, disruptions, interruptions, and small talks which would normally be the case when working from the office. Accordingly, interviewee B argued that since one sits a lot alone

working, there is a constant trying to find other tasks to work with when there is quiet, and that such quiet situations at the office would usually have been spent chatting with colleagues. On the other hand, some interviewees believed they worked less efficiently from home since there are other things one can do that are more tempting, such as cooking, cleaning, sitting on the phone, reading the news, etc. They also argued that such temptations make it harder to get into “work mode” as well as it is easier to take more breaks. It also gets pointed out that little monitoring and control from managers makes the employees work less efficiently. Moreover, interviewee H said that it is more difficult to distinguish between work and leisure time when working from home since everything happens in the same room, and that this has a negative impact on productivity and efficiency. In contrast to these results, however, interviewee E did not notice large differences in efficiency and productivity.

Interviewee A: *“I work less efficiently from home, absolutely. I get things done, but it takes a little longer because no one is bothering you or monitoring you, which is usually the case in the office.”*

Interviewee B: *“I think I spend more time on my phone when I work from home than from the office since people can see what I do. I also take more breaks.”*

Interviewee I: *“I do not like to be disturbed, so home office has made me more efficient.”*

When it comes to the employees energy level, interviewee B, F, I, and J argued that they experience a high energy level always or once/a few times a week due to the fact that they have more flexibility and freedom when working from home. Interviewee F and I also argued that their energy level is generally high since they work more efficiently and focused from home due to less distractions and interruptions. However, interviewee F pointed out that when the energy level is low, it is easier for the productivity and efficiency level to decrease. Further, the interviewees argued that their energy level would have been even higher if they had worked from the office since they get energy from meeting colleagues and being social. Contrarily, the rest of the interviewees argued that they rarely experience a high energy level in their work due to the lack of social stimuli.

Interviewee B: *"At this point, my energy level is at 5 (high energy level weekly), but it would probably have been at 7 (high energy level daily) if I could have been at the office with my colleagues."*

Interviewee E: *"When I am at the office and see other employees I talk more and thus get more energy."*

Interviewee H: *"Sitting at home leads to a low energy level, so I think it would have been better to be at the office."*

Interviewee G: *"When I work from home, everything becomes more boring and monotonous since I do not get that social interaction that makes the days more exciting and interesting. I get energy from being around people and colleagues, so when I work from home the energy level is usually low"*

Furthermore, there are varying answers related to whether the employees feel they can work for long periods at a time when they work from home. Interviewee B, C, F, and I argued that they can always/often work for long periods when working from home since there is less noise and distractions from other colleagues. In addition, interviewee C stated that it is a shorter distance to both the coffee machine and the toilet when working from home, which in turn leads to shorter breaks. Interviewee E also stated that since the workplace is more available, it makes it easier to work for longer periods at a time. Lastly, interviewee I pointed out that it is easier to manage your own workdays from home as you can make yourself unavailable on Teams as well as you can postpone a task to a time that suits you better, such as in the afternoon or evening. On the other hand, the other interviewees argued that they sometimes/rarely can work for long periods at a time when working from home. This was justified by the lack of motivation in addition to distractions at home. Moreover, it was argued that since one is not controlled or monitored at home, one is able to take more and longer breaks. Additionally, due to the lack of social contact with colleagues, interviewee G argued that one uses more time on the phone to seek social stimuli other places, such as through social media.

There are also varying answers related to whether the employees look forward to starting their working day from home. Interviewee B and J said that they looked more forward to starting their working day when they worked at the office because they then had the opportunity to meet colleagues and hence be social. Interviewee C also said that it was tough to start the working day from home in the beginning, but that it has become easier over time although it can still be perceived as difficult at some times. Interviewee D and H argued that they are not motivated to get up in the morning because they, when working from the office, used to have the social contact to look forward to. On the other hand, interviewees A, E, F, G, and I said that they are looking forward to starting their working day from home because they now have more flexibility, as well as the mornings are perceived as less stressful and more comfortable.

Lastly, most of the interviewees believed that they are persistent at work when working from home as they believe that home office has little influence on stamina. On the other hand, however, interviewees D, F, and J stated that it is more difficult to be persistent at work when working from home due to lack of motivation when facing adversity.

Interviewee F: *“It is a little harder to motivate yourself when you face adversity and sit at home alone since it becomes easier to relax and give lower effort.”*

Interviewee J: *“The sofa is more easily accessible when at home, so it has happened that I give up more often during the last year.”*

5.2.1.5 Dedication

In the second category, interviewees were asked questions related to the work and the tasks itself. The enthusiasm and joy in relation to work was varying among the employees as several of the interviewees expressed that this could vary and change from day to day, depending on different factors. However, interviewee F felt enthusiastic and joyful every day. In addition, interviewee J often experienced enthusiasm and joy when being at the office, however, this decreased when working from home. Interviewee H and B also experienced less enthusiasm and

joy when working from home, and argued that it would most likely have been higher if one had the opportunity to frequently interact with colleagues and discuss work-related topics and cases that occur.

Interviewee F: *“Well.. you have many small interactions every single day and you have some tasks to solve in each of these interactions which is exciting to find a solution to in cooperation with colleagues! ”.*

Interviewee J: *“When things go well I get very happy and enthusiastic. I solve tasks every week so I get this happy feeling from the work I do. With that being said, enthusiasm has probably decreased during this home office period as I have no one to share my joy and enthusiasm with, which is a bit demotivating.”*

Interviewee G: *“I experience less joy and enthusiasm when I sit at home working because I feel that I am alone about the job in a way. I do not experience teamwork or the same unity we had in the office when we collaborate to solve cases.”*

Interviewee D: *“There is no inspiration to get from other colleagues when working from home, and it also makes it difficult to share ideas with each other.”*

When the interviewees were asked questions about pride, several could say that they felt very proud with the work they have conducted during this demanding period, considering that several tasks had become more difficult as well as the communication between colleagues had become more challenging. In addition, several interviewees connected pride to the fact that they managed to solve problems for customers in a satisfactory manner, as well as some pointed out that they felt proud of the number of calls they were able to answer during a day/week.

Interviewee B: *“When we have meetings our manager shows how many cases you solve and how many phone calls you have answered during a week, and I am often at the top which makes me very proud and motivated.”*

Interviewee E: *“I feel proud that I can solve a problem for the customers and help them, and I am proud that I feel confident in what I do and that I can solve any inquiry”.*

On the other hand, interviewees H and D did not experience any special pride in their work.

Interviewee H: *“I have not thought of that, so I guess not..”*

Interviewee D: *“No.. and that would have been the case independent of whether I would have been working at the office or at home, because everything is a habit and I do not feel proud of solving problems for customers.”*

Primarily, interviewee A, G, and H disclosed that they feel like the work-related tasks have become more challenging since they started with home office. The main reasoning for this was argued to be the larger “distance” between the colleagues which resulted in difficulties to ask questions or ask for help as the availability among the team is reduced. Another argument that was highlighted by the majority of the interviewees was poorer communication as one had to wait longer for clarifications through emails or chats. However, interviewee B, F, and J argued that Teams is a good communication tool to ask colleagues various questions. These interviewees have therefore stressed that the communication regarding work-related topics has been sufficient. Furthermore, interviewee E and I also highlighted that the tasks have become more difficult because they feel a different kind of interaction and dynamic among the team when working from home. Interviewee G also stated that it is more difficult to collaborate with team members since “you do not get the same kind of flow in the conversation as you would otherwise have had in the office, and you do not know the employees' mood or how they feel, or if they are busy for instance.”

Interviewee H: *“What is most challenging or difficult is communication as it takes longer. It is easy to send an email or write a message on Teams, but I believe sitting in the same room still makes communication much faster and easier.”*

Interviewee A: *“It is much better to work in the office than at home because you have the opportunity to ask for help and talk to other employees physically instead of emailing or chatting. It takes 100 years to get a quick clarification and there are certain issues that require you to get feedback fairly quickly. So as a result, my work has become more difficult from home.”*

Interviewee I: *“You lose a lot of the meaning in an interaction when using digital tools. You do not have the opportunity to, for instance, spontaneously learn something through short conversations and social interactions in an office. As a result, some of the tasks have become more demanding because you have to plan the “learning.”*

Furthermore, the interviewees answered questions related to meaningfulness and purposefulness in regard to their work. The majority of the interviewees felt a sense of purpose and meaning in the work they conducted. Primarily, interviewee A, B, C, E, F, G and J experienced that it was rewarding to help customers as they help them with different inquiries. Several also mentioned that they felt that the tasks they performed added value to the society as a whole, and not only to the employer. Furthermore, interviewee I argued that it can often vary in which tasks feel purposeful and meaningful. Nevertheless, it is pointed out by numerous interviewees that it is an important factor to have a sense of meaningfulness at work as it motivates them. Interviewee H and D, however, expressed lack of meaning and purpose of their work. In addition, interviewee D felt that the work conducted was more of a habit and less important for the society.

Interviewee F: *“I feel my job creates value for the company I work for and is beneficial for others (...) I can make it better for some customers and I can see that I can add a kind of value to the community and the people around me.”*

Interviewee I: *“It is important for me to not have too many tasks without purpose and meaning, as I can quickly be demotivated by spending my time on what I consider a waste.”*

Interviewee J: *“I work with customers and solve their problems which is both purposeful and meaningful, as well as it adds value to the company I work for.”*

Interviewee D: *“I’ve thought about it many times. I have been thinking that I have such a meaningless job. It is not something that helps the world or that makes a person’s everyday life better. I do not see it as a very important job.”*

5.2.1.6 Absorption

There are varying answers related to whether the interviewees think that time flies when working from home. Interviewee A and B argued that time flies since one has the opportunity to do other things at home during the working hours.

However, they pointed out that when there is nothing to do, time passes slowly since one previously could use the time to talk or take coffee breaks with other colleagues at the office. Many of the interviewees also argued that time usually flies, but that this was a result of the large workload. Contrarily, interviewee D, G, H, and J stressed that time passes slowly since the days are perceived as being very similar and monotonous due to lack of social contact. This leads to days being experienced as less interesting and exciting. Thus, many argued that time flies when one has continuous social interactions.

Interviewee I: *“It rarely happens that I look at the clock and get surprised, something I previously experienced quite often.”*

Interviewee B, C, E, F, G and I believed they work more focused from home due to less noise and distractions. At the office, one could get easily unfocused when other colleagues are talking in the same room. Thus, many find it easier to focus on their own work when working from home. In contrast, interviewee H and J argued that there are more distractions at home which makes it more difficult to be focused. In addition, interviewee A and D stated that it is often more tempting to read the news or do other things such as scrolling through the phone since one does not get controlled or monitored in the same way at home.

Interviewee F: *“At home I can work concentrated and focused without being disturbed which is not always the case when working in an open landscape. There is a lot of noise in the office, and people often come to your desk and ask*

questions. There are always some disturbing elements which you experience to a lesser extent at home.”

Interviewee H: *“I am more unfocused at home because I associate my home with leisure and not work.”*

When it comes to intensity, interviewee A, B, D, F, G and I argued that they often or always enjoy working intensely. This is because it provides more job satisfaction as well as time passes more quickly since it means that one has work to do. Many also said that it is easier to relax afterwards if you have worked intensely for a longer period of time. On the other hand, interviewee C, E, and H argued that they can often lose motivation if there is a lot of stress, and that they rather enjoy working at their own pace. Interviewee G also stressed that working intensely can be exhausting in the long run, and that it requires more breaks. Further, interviewee J argued that the ability to work intensely at home is more difficult due to distractions.

Lastly, the majority of the interviewees argued that they find it easy to detach themselves from work when working from home. Although the distinction between leisure and work can for many be perceived as less clear as the workplace is more accessible, this does not seem to affect whether they find it difficult to detach. In contrast, interviewee F experienced it more difficult to distinguish between leisure and work due to the workplace always being available.

Interviewee E: *“After 4 pm I barely think about work.”*

Interviewee F: *“I can close the computer at 16.00. However, I often check it again in the evening or early in the morning when I have time, just to check if there is something I need to fix.”*

5.2.2 Job Demands and Work Engagement

Based on the presented results, it can be argued that job demands and work engagement can be seen in relation to each other as it seems like both loneliness, technological problems, and job insecurity can have a negative influence on employees' work engagement. First, loneliness seems to affect employees' level of energy, inspiration, enthusiasm, and motivation, which are all central factors related to work engagement. Further, technological problems are argued to affect employees' experiences of efficiency and challenge with work, which are central factors of vigor and dedication. Lastly, the results related to job insecurity indicates decreased motivation among the employees in general as they are mostly willing to do what is minimally required in the job, and motivation is considered as a central component of work engagement.

To exemplify, interviewee B and F experienced less job demands in the home office situation, which in turn leads to higher levels of work engagement. On the other hand, interviewee H experienced job demands to a greater extent and hence became more disengaged. In regard to the other interviewees, they had varying experiences of job demands, and the results therefore implies that these had a moderate level of work engagement. Thus, based on these results, hypothesis A is supported.

5.2.3 Work Engagement and In-role Performance

The results from the quantitative analysis indicate interesting findings in which there seems to be a relation between job demands and in-role performance through the mediating role of work engagement. As mentioned earlier, both interviewee B and F have high levels of in-role performance as they have answered most calls during the measured period, which can be argued to be a result of their high levels of work engagement. In contrast, interviewee H has low levels of in-role performance as the number of answered calls is small compared to interviewee B and F. This can be argued to be a consequence of the low levels of the individuals' work engagement. In regard to the other interviewees, the results show that they had moderate levels of work engagement, which in turn reveal moderate levels of in-role performance. Thus, based on these results, hypothesis B is supported.

6.0 Discussion

The purpose of this study was to examine how job demands have an impact on in-role performance through work engagement. The next section will draw parallels between the categories of job demands, work engagement, and in-role performance in depth, and discuss how the results are related to the theory guiding the research.

6.1 Loneliness and Work Engagement

Workplace loneliness is considered as an emotional demand that occurs due to lack of interpersonal relationships and that can negatively affect employees' job attitudes (Heinrich & Gullone, 2006; Takeuchi et al., 2011). Based on the results, it can be argued that workplace loneliness is connected to all three dimensions of work engagement.

First, vigor refers to high levels of energy and resilience while working, the willingness to invest effort in work, and endurance when facing difficulties (Schaufeli et al., 2002; Schaufeli & Bakker, 2003). When seeing vigor and loneliness in relation to each other based on the results, it can be argued that they do have a connection in which workplace loneliness seems to negatively impact employees' level of vigor. The majority of the employees pointed out that loneliness from colleagues and the workplace due to home office affects their energy level negatively, and that their energy level would have been higher if they had worked from the office. This is because they get energy from being with and around people and colleagues. The breaks at the office mostly involve being surrounded by colleagues and talking and discussing topics that are not work-related, and these breaks help replenish new energy for the employees. Furthermore, loneliness can be connected to vigor since some of the interviewees explained that they looked more forward to starting their working day when working from the office rather than from home as they were able to meet colleagues and friends, which provides them with social stimuli. As this is not the case during the home office period, it can be perceived as demotivating to start the working day from home. Motivation is a necessary work-related state for achieving higher levels of work engagement for employees, which can further foster positive organizational outcomes. Thus, when employees experience

demotivation, it can negatively impact their experiences of work engagement (van Tuin et al., 2020). Several interviewees also pointed out that workplace loneliness in general negatively impacts their overall motivation towards work when working from home. As a consequence, this results in lower levels of engagement among the employees which can further be associated with negative organizational outcomes (van Tuin et al., 2020)

Secondly, dedication is characterized as being strongly involved in work and experiencing significance, enthusiasm, inspiration, and challenge (Schaufeli et al., 2002; Schaufeli & Bakker, 2003). The results indicate that employees' experiences of loneliness from the workplace can negatively influence their enthusiasm due to the lack of interactions and discussions about work-related topics with colleagues. In addition, loneliness seems to have an impact on inspiration as it is considered more difficult and complex to share and discuss thoughts and ideas through Teams. Further, many of the interviewees explained that their experience of work has been more challenging when working from home due to the "distance" from colleagues which makes it more difficult to ask questions, get help, communicate in general, and achieve dynamic interactions. It can therefore be argued that the findings related to loneliness from colleagues and the workplace can result in an increased experience of challenges in one's work. Third, absorption refers to being fully concentrated and deeply engrossed and devoted to work (Schaufeli et al., 2002; Schaufeli & Bakker, 2003). The findings of this study indicates that several interviewees believe that their feelings of loneliness have a negative effect on their level of absorption. This is because loneliness leads to a state of what they described as "boredom" and "restlessness" as a consequence of the working days being experienced as longer due to lack of frequent breaks with social stimuli and interaction. Thus, time appears to go slow for interviewees that experience high levels of loneliness.

In sum, loneliness seems to have a negative influence on all three dimensions of work engagement. Nonetheless, it can be argued that it might be other external factors that can have an impact on these findings. For instance, one can assume that loneliness has increased in general due to the current situation with Covid-19 with isolation and social distancing which affect other aspects of employees lives

beyond work. Hence, the general experience of loneliness can be discussed to have a spillover effect on the home office situation.

6.2. Technological Problems and Work Engagement

Technological problems can be understood as a job demand that can impact employees' work engagement. In this case, results show that technological problems can have an impact on the employees' level of vigor and dedication, but no indications of findings were revealed in regard to absorption. When it comes to technological problems and vigor, several of the interviewees who experienced technological problems as a result of working from home explained that this affects their level of efficiency. When such problems or challenges occur, it usually takes longer to perform tasks, the workflow gets impaired, and employees are not given the opportunity to work at the pace they want. Many of the interviewees pointed out that such problems did rarely arise at the office. As a result, the employees experience frustration, irritation, and a loss of patience. This can influence their levels of work engagement, which supports the discussion by O'Boyle & Hogan (2019). It can be further argued that technological problems may have an impact on dedication as many of the interviewees argued that when such problems or challenges occur at home, it makes their work more challenging to perform.

6.3 Job Insecurity and Work Engagement

Job insecurity can be understood as a mental demand for employees as it refers to the level of uncertainty they perceive in terms of involuntarily potential loss in regard to their job continuity (De Witte, 1999; Greenhalgh & Rosenblatt, 1984; Hui & Lee, 2000). Although it has been argued that experiences of job insecurity leads to disengagement, their relation has not been thoroughly studied (Mauno et al., 2007; Kiefer, 2005). In this case, the results do not indicate any concrete connection between job insecurity and the three dimensions of work engagement. Rather, our findings reveal that employees who experience job insecurity in regard to layoffs have a negative impact on their overall work engagement due to negative feelings such as demotivation and a lack of desire to work. Thus, the results did not meet the expectations regarding whether and how job insecurity influences vigor, dedication, and absorption. Nonetheless, the findings reveal that job insecurity in general can be connected to work engagement through

motivation. As mentioned earlier, having high levels of motivation is a substantial state in order for employees to experience work engagement (Schaufeli & Bakker, 2003; Bakker et al., 2008). However, whether employees feel insecure depends on external factors, which in this case are the governmental restrictions towards the society and industry, and this has varied greatly over the past year.

6.4 Work Engagement and In-role Performance

Results from the quantitative analysis indicate that there is a positive correlation between engagement and in-role performance, which implies that employees who experience work engagement to a great extent perform at higher levels of in-role performance. This finding thus supports the finding presented by Borst et al., (2019). Based on this, it can be further argued that the relationship between these two variables is a consequence of the relationship between job demands and work engagement. In other words, in the circumstances in which employees experience high levels of job demands, job demands will negatively influence their extent of work engagement and hence in-role performance. On the other hand, in the circumstances in which employees are experiencing less job demands, they will experience greater levels of work engagement, and hence achieve higher levels of in-role performance.

6.5 Overall Discussion and Implications

The findings indicate that workplace loneliness can be understood as the most significant job demand which affects employees' level of work engagement as it appears to have an impact on all three dimensions of engagement. Further, one can assume that technological problems are less significant than loneliness as it has mainly been found to have an impact on vigor and dedication, and not absorption. However, the influence of technological problems on work engagement can be justified by the fact that such challenges are beyond the control of the employees, and can therefore be experienced as less disruptive on work engagement in an overall sense. The general findings thus indicate that technological problems are seen as less significant problems as they occur randomly, beyond the control of employees, and for short periods. Lastly, although we cannot draw findings related to each of the dimensions, job insecurity can be understood as having a significant impact on work engagement through motivation.

One can argue that employees who experience job demands to a great extent experience more negative personal outcomes due to the lower levels of work engagement. For instance, our findings imply that interviewee H, who experienced job demands to a greater extent, had less energy and more negative attitudes towards both the job and company. In addition, the findings imply that the quality of life deteriorated in the beginning of the pandemic and home office situation, especially due to loneliness and job insecurity. These findings support previously presented theory, namely that individuals who experience high levels of both loneliness and job insecurity have more negative attitudes towards their work (Heinrich & Gullone, 2006; Takeuchi et al., 2011; Kiefer, 2005). Further, interviewee F who in general experienced less job demands, implied higher levels of work engagement. As a result, this interviewee seemed to have more positive attitudes towards the job and company. Additionally, the findings of the study indicate that employees who have moderate experiences in regard to job demands and work engagement, only do what is necessary or expected of them in their role. Hence, these employees do not perform any extra beyond what is required by them. On the other hand, those employees who indicate higher levels of engagement seem to perform more than what is required, by for instance working outside normal working hours.

The qualitative findings of the study are supported by statistical analysis which indicates a correlation between job demands and work engagement. The correlation implies that higher experiences of job demands will have a negative impact on work engagement, and vice versa. The second statistical analysis indicates a correlation between work engagement and in-role performance, which implies that more engaged employees perform at higher levels, and vice versa. In conclusion, it can be argued that job demands have an impact on employee work engagement, which further influences in-role performance.

The findings of this study mainly contribute to the literature of work engagement and job demands in the JD-R Model (Bakker & Schaufeli, 2008; Bakker & Demerouti, 2011). This is because little empirical research has examined how job demands operate as determinants on work engagement, as previous studies have

mainly focused on the job resources in the JD-R model (Mauno et al., 2007). Moreover, little empirical research has combined and examined job demands, work engagement, and in-role performance in depth. In addition, there is a lack of studies investigating the relationship between remote work and employees' work engagement. This study therefore contributes to the literature by studying the relationship between job demands, work engagement, and in-role performance in the context of home office, and hence fills a theoretical gap in the literature (Gilson et al., 2015). In addition, this research study can have practical implications for line managers, HR, and other leaders in organizations with a call center department. First, the study provides indications and information for managers of which job demands seem to be perceived as demanding for employees as a consequence of working from home. As a result, this information can help leaders to evaluate and implement efficient initiatives to reduce employees' experiences of the job demands and help them cope with the challenges associated with remote work. Thus, the study can guide managers to increase employees' work engagement and performance through the design of higher quality remote work. To exemplify, managers should engage in more supportive leadership practices in order to eliminate or decrease employees' experiences of loneliness in this demanding situation, such as by communicating and sharing information frequently, motivating, building trust, and establishing social arenas for the employees (Madlock, 2013; Grant et al., 2013). It can also be argued that the findings and information provided from the study is highly useful for managers and organizations as the job situation will most likely be based on more flexible work practices in the future (Wang et al., 2020). Furthermore, as previous research has examined how job demands have a significant negative influence on individual health problems such as exhaustion, stress, and depression (Bakker & Demerouti, 2007; Bakker et al., 2003a; Hakanen et al., 2008), this necessitates organizations to address the issue and take action to reduce the possibility for these health problems to occur. In turn, such initiatives can further benefit the organization as a whole. In conclusion, this research has several important implications for employees and organizations.

7.0 Reliability, Validity and Limitations

Reliability and validity are two important criteria which qualitative researchers should be concerned about when judging the quality of a study and when evaluating whether the findings can be trusted. In qualitative research, this is known as trustworthiness (Patton 2001, as cited in Golafshani, 2003). This section will discuss the criteria of trustworthiness in relation to this research project, with an evaluation of credibility, transferability, dependability, transparency, and confirmability. In addition, the criterion of construct validity and ecological validity will also be discussed as they are seen as important criteria in qualitative research (Bryman & Bell, 2011).

Dependability refers to the extent to which researchers perform similar observations and interpretations in regard to the analysis and results of a study, and whether the set of meanings derived are sufficiently congruent (Franklin & Ballan, 2001). This research project was conducted by two master students, and we chose to interpret the analysis and results individually with the aim of not influencing each other's perceptions. However, when discussing the findings, we did not experience any substantial disagreements in our observation and interpretations of data. In the circumstances in which some different interpretations did occur, it enabled us to examine the phenomena from different perspectives. As a result, this enabled us to capture their significance and meaning to a larger extent, as well as it contributed to a more valuable and informative discussion. Furthermore, having a high degree of dependability can positively influence the credibility of this study, which is a criterion concerned with the aspect of truth (Korstjens & Moser, 2018). Having two master students to make coding, analysis, and interpretation decisions increases the truth of the findings as well as it reduces the likelihood of any important information being missed. In addition, although we mainly used interviews as a data collection method, we also included some quantitative elements of data collection in terms of numerical information to strengthen the data. Thus these strategies help ensure the credibility of this study.

When it comes to transparency, it refers to the degree to which the records of the research path are kept throughout the study (Korstjens & Moser, 2018). During

the whole research process we have thoroughly described each research step from the start of the project to the development and reporting of the findings. We have also provided a rationale for the decisions we have made during the process, including the choice of our research question, methodology and design, sample, method of analysis, etc. In addition, we have thoroughly described the participants and context. These details help provide valuable insights and understanding for readers.

Validity is also considered as an important criterion of qualitative research, and refers to the evaluation of the results that are generated from a study (Bryman & Bell, 2011). Transferability is a central component of validity, and has to do with whether findings can be generalized beyond the particular context in which the research was conducted. This, however, represents an issue in qualitative research because of its tendency to employ small samples (Bryman & Bell, 2011). In this research, the sample represents 10 employees which belong to the same unit. However, due to the small sample and the particular context in which they are examined, it can be argued that findings from this research do not have the ability to be generalized to wider groups and circumstances. Nonetheless, other studies investigating remote work during the Covid-19 pandemic reveal similar findings which hence strengthens the confirmability of the study. Confirmability refers to the degree to which the findings of the research study could be confirmed by other researchers (Korstjens & Moser, 2018). For instance, findings from a study conducted by Wang et al., (2020) identified four key challenges related to remote work, namely work-home disruptions, ineffective communication, procrastination, and loneliness. The study also found that the virtual working conditions could be linked to the workers performance via the experienced challenges. It can thus be argued that our research is valuable as other studies have found similar results. Furthermore, one can question the construct validity of the study. Construct validity refers to whether the measures devised of a concept really does reflect the concept, or said in other words, whether the questions related to work engagement and job demands really does reflect work engagement and job demands. As the interview questions are inspired from and based on already established and validated measures by other researchers, it can be argued that they are likely to measure the concepts they are supposed to measure. Thus, we consider the

construct validity to be high. When it comes to ecological validity, it refers to whether the questions capture experiences and opinions of the participants being studied (Bryman & Bell, 2011). As the interview questions of this research examines the participants' experiences of working from home, we consider the questions to capture current and daily life conditions. As a result, the findings can be argued to be applicable to employees every day, natural setting as they are still working from home today.

There are some limitations to this study. First, reflexivity is an important quality criterion in qualitative research, and refers to the process of critical self-reflection about oneself as researchers and the researchers relationship to the participants (Korstjens & Moser, 2018). As one of the master's students conducting this research is employed in the company and hence is in acquaintance with the employees working at the customer service, this can be understood as both a disadvantage and advantage for the research and its results. For instance, the participants might not be comfortable with or willing to give complete and accurate answers, hence being motivated to lie. As a consequence, this can create issues with the quality and trustworthiness of the research (Breakwell et al., 2006). On the other side, however, this can also have an opposite effect. When one of the interviewers knows the participants, they might be more willing, engaged, and motivated to cooperate and contribute to the research by providing more honest, detailed, and in-depth answers (Breakwell et al., 2006). This, in turn, can have a positive impact on the quality of the research. Furthermore, in regard to the sample size, it was constrained by the time we had available as well as the number of participants that were willing to contribute. Although we wanted to interview 12 employees, only 10 agreed to participate. As we observed that many of the participants varied in their perceptions on how job demands influence their experiences of work engagement, it can be argued that having even more participants would have provided us with new information beyond what had been already said by the others. However, due to the research constraints, we were not able to conduct more interviews beyond those 10.

When it comes to the reliability and validity of our quantitative research, there are some issues that can be discussed. First, a small sample size can affect the

reliability of the results since it might lead to a higher variability, which in turn can lead to bias (Bryman & Bell, 2011). In addition, one can question the external validity as a small sample size makes it difficult to generalize the quantitative findings beyond the particular context in which the research was conducted. Further, as mentioned earlier, the self-report measurements used in this study have formerly been used by other researchers which hence strengthens the validity. However, the small number of questions with Likert scales related to each concept might have had an impact on the validity of the results, as the inclusion of more Likert scale questions could have resulted in more in-depth reflections. Nonetheless, the quantitative data is only meant to support the rich qualitative data, and the main emphasis is thus not placed on these scales.

Furthermore, it is important to stress that causality might be an issue in every research (Winter, 2000). The quantitative analysis in this study did not enable us to draw conclusions about causality between the variables, although bivariate analysis helped us to uncover relationships between job demands and work engagement and work engagement and in-role performance. However, we are not able to say whether one variable actually causes the other, as other external variables can also have an impact on the relationships. In order for causal inferences to be drawn, experimental studies would be required (Slack & Draugalis, 2001).

8.0 Future Research

It is suggested that future research should conduct a longitudinal research design in order to illuminate social changes in the workplace. This entails to conduct interviews and surveys on one occasion, and then perform the same data collection methods again later on another occasion with the same sample (Bryman & Bell, 2011). This can be important to better understand how or if the variables have been influenced by the home office situation. Thus, a longitudinal study can demonstrate the differences in employees' experiences of job demands, work engagement, and in-role performance when working at the office compared to when working from home (Bryman & Bell, 2011). This can provide valuable results for whether change is the result of the real differences over the two time periods or whether other factors play an important role. Longitudinal studies are

often high on validity as they are used to describe real life situations and fluctuations in behavior, thoughts, or emotions which might be argued to be useful when understanding phenomena like job demands, work engagement, and in-role performance. Furthermore, it can be suggested to measure other types of employee performance, such as extra-role behavior by including several objective indicators. This can provide a more comprehensive picture of the many tasks call center employees might perform on a daily basis and hence their overall performance at work. Thus, the connection between work engagement and extra-role behavior is suggested to be more thoroughly examined. Lastly, as the results of this study has revealed that loneliness seems to be the most significant job demand that has an impact on work engagement, it can be interesting for future research to examine workplace loneliness independently and in-depth in the context of remote work. Moreover, as the situation with Covid-19 has challenged the traditional ways of working from the office, it can be argued to be even more necessary to investigate the impact loneliness has on individual and organizational outcomes. In turn, measures to avoid or improve workplace loneliness among employees should also be examined.

10.0 Conclusion

This qualitative research study with elements of quantitative analysis helped us answer the research question and confirm the hypotheses. The results from the quantitative analysis show tendencies that there is a correlation between job demands and work engagement, and between work engagement and in-role performance. It can therefore be argued that job demands have an impact on in-role performance through the mediating role of work engagement. However, *how* it can be argued that job demands have an impact on in-role performance through work engagement was investigated with the use of interviews. Results from these reveal that employees who experience loneliness, technological problems, and job insecurity to a great extent, are less engaged and hence perform at lower levels. Employees who do not experience job demands extensively are more engaged, which hence results in higher levels of in-role performance. Findings also indicate that the most significant job demand for work engagement is workplace loneliness, as both technological problems and job insecurity are perceived as beyond the control of employees.

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Appendix 1

Interview Guide

The purpose of this study is to conduct an in-depth understanding of how loneliness, technological problems, and job insecurity are related to work engagement and in-role performance in the context of virtual work as a consequence of the Covid-19 pandemic.

Each interview was started by presenting ourselves, the thesis project and its purpose, and the topics that would be investigated. Throughout the interview, we continuously reminded the interviewees to think of the virtual work setting when answering the questions. This was important to emphasize in order to contextualize their answers.

Introductory questions

(The introductory questions function as warm-up questions and provide us with an overview of the demographics of the interviewees and their current work situation).

1. Can you introduce yourself?

- How old are you?
- What educational background do you have?
 - High school, bachelor's degree, or master's degree?
- What position do you have in this company?
- In short, how do you experience working from home?
 - Has something been more or less challenging?
 - Is there anything you see as particularly positive or negative about working from home?

Job demands

(These questions are related to how employees experience the three job demands in the context of working from home).

1. Loneliness

(These questions are developed to understand the interviewees' experience of

loneliness, and is based on the Loneliness at Work Scale (LAWS) by Wright (2006).

Scale: **(1) Strongly disagree - (2) Disagree - (3) Undecided - (4) Agree - (5) Strongly agree**

- On a scale from 1-5, do you experience loneliness when you are socially distanced from your workplace and colleagues as a consequence of working from home?

- Please explain and elaborate on your placement on the scale.
- Why and in what way do you experience loneliness?
- How do you experience that it affects your days at work?

2. Technological problems

(These questions are developed to understand the interviewees' experience of technological problems, and is based on questions from Bakker et al., (2003a).

Scale: **(1) Never - (2) Seldom (3) Sometimes - (4) Often - (5) Always**

- On a scale from 1-5, do you experience technological problems when working from home?

- Please explain and elaborate on your placement on the scale.
- How often are you confronted with technological problems/challenges?
- What kind of technological problems are you confronted with?
- How do you experience that it affects your days at work?

3. Job insecurity

(These questions are developed to understand the interviewees' experience of job insecurity, and is based on the Job Insecurity Scale (JIS) by Ashford et al. (1989).

Scale: **(1) Highly unlikely - (2) Unlikely- (3) Neutral - (4) Likely - (5) Highly likely**

- On a scale from 1-5, do you fear that you can be laid off temporarily or permanently in your current job?

- Please explain and elaborate on your placement on the scale.

- How do you experience that it affects your days at work?

Work engagement

(The following questions are related to the employees experiences of work engagement in the context of working from home).

1. Vigor

(These questions are developed to understand the interviewees' level of vigor, and is based on the Utrecht Work Engagement scale by Schaufeli & Bakker, 2003).

Scale: **(1) Never** - **(2) Almost never**/A few times a year or less - **(3) Rarely**/A few times a month or less - **(4) Sometimes**/A few times a month - **(5) Often**/Once a week - **(6) Very often**/A few times a week - **(7) Always**

- On a scale from 1-7, are you experiencing a high energy level at work when working from home?

- Please explain and elaborate on your placement on the scale.

- On a scale from 1-7, do you experience that you can work for very long periods at a time when working from home?

- Please explain and elaborate on your placement on the scale.

- When you wake up in the morning, do you feel like starting your work day?

- Why/why not?

- Do you experience that you persevere at work even when things are not going well?

- Why and in what way?

2. Dedication

(These questions are developed to understand the interviewees' level of dedication, and is based on the Utrecht Work Engagement scale by Schaufeli & Bakker, 2003).

Scale: **(1) Never** - **(2) Almost never**/A few times a year or less - **(3) Rarely**/A few times a month or less - **(4) Sometimes**/A few times a month - **(5) Often**/One a week - **(6) Very often**/A few times a week - **(7) Always**

- On a scale from 1-7, do you experience enthusiasm and joy about your work?

- Please explain and elaborate on your placement on the scale.

-
- On a scale from 1-7, do you experience pride in the work that you do?
 - Please explain and elaborate on your placement on the scale.
 - Do you experience your job as easy, difficult, or challenging? Please elaborate on your answer.
 - Do you experience your work as meaningful and purposeful?
 - If yes, in what way?

3. Absorption

(These questions are developed to understand the interviewees' level of absorption, and is based on the Utrecht Work Engagement scale Schaufeli & Bakker, 2003).

Scale: **(1) Never** - **(2) Almost never**/A few times a year or less - **(3) Rarely**/A few times a month or less - **(4) Sometimes**/A few times a month - **(5) Often**/One a week - **(6) Very often**/A few times a week - **(7) Always**

- On a scale from 1-7, do you experience that time flies when you are working?
 - Please explain and elaborate on your placement on the scale.
- On a scale from 1-7, do you enjoy working intensely?
 - Please explain and elaborate on your placement on the scale.
- Do you feel that you are focused or unfocused when working from home?
 - Why and in what way?
- Do you find it easy or difficult to detach yourself from work when working from home?
 - Why and in what way?

Finalizing the interview

(The interviewees may have come across information during or after the interview that may supplement their answers. In addition, they may have questions for us related to the research project).

- Do you have anything else you want to share about your experiences with working from home?
- Do you have any questions or comments related to the interview or research project?

Norwegian Version of The Interview Guide

Introduksjon

(Introduksjonsspørsmålene fungerer som oppvarmingsspørsmål for intervjuet og vil gi oss en demografisk oversikt over intervjuobjektene samt deres nåværende arbeidssituasjon).

1. Kan du introdusere deg selv?

- Hva er din alder?
- Hvilken utdanningsbakgrunn har du?
 - Vgs, bachelorgrad, mastergrad?
- Hvilken stilling har du i din nåværende jobb?
- Kan du i korte trekk beskrive hvordan du har opplevd det å jobbe hjemmefra?
 - Har noe være mer eller mindre utfordrende?
 - Er det noe du ser på som spesielt positivt eller negativt med å jobbe hjemmefra?

Jobbutfordringer

Følgende spørsmål er knyttet til hvordan ansatte opplever de tre jobbutfordringene i konteksten av hjemmekontor.

2. Ensomhet

(Følgende spørsmål er utarbeidet for å forstå hvordan intervjuobjektene opplever ensomhet i konteksten av hjemmekontor. Spørsmålene er basert på the Loneliness at Work Scale (LAWS) av Wright (2006).

Skala: **(1) Helt uenig - (2) Uenig - (3) Nøytral - (4) Enig - (5) Helt enig**

- På en skala fra 1-5, opplever du ensomhet når du er sosialt distansert fra arbeidsplassen din og dine kollegaer som følge av å jobbe hjemmefra?
 - Vennligst forklar og utdyp din plassering på skalaen.
- Hvorfor og på hvilken måte opplever du ensomhet?
- Hvordan opplever du at dette påvirker dine arbeidsdager?

3. Teknologiske problemer

(Følgende spørsmål er utarbeidet for å forstå hvordan intervjuobjektene opplever teknologiske utfordringer i konteksten av hjemmekontor. Spørsmålene er basert på lignende spørsmål utarbeidet av Bakker et al., (2003a).

Skala: (1) **Aldri** - (2) **Sjelden** (3) **Noen ganger** - (4) **Ofte** - (5) **Alltid**

- På en skala fra 1-5, opplever du teknologiske problemer når du jobber hjemmefra?
- Vennligst forklar og utdyp din plassering på skalaen.
- Hvor ofte opplever du teknologiske utfordringer?
- Hva slags teknologiske utfordringer opplever du?
- Hvordan opplever du at disse utfordringene påvirker dine arbeidsdager?

4. Jobbsikkerhet

(Følgende spørsmål er utarbeidet for å forstå hvordan intervjuobjektene opplever jobbsikkerhet i konteksten av hjemmekontor. Spørsmålene er basert på the Job Insecurity Scale (JIS) av Ashford et al. (1989).

Skala: (1) **Svært usannsynlig** - (2) **Usannsynlig** - (3) **Nøytral** - (4) **Sannsynlig** - (5) **Svært sannsynlig**

- På en skala fra 1-5, frykter du at du kan bli permittert midlertidig eller permanent i din nåværende jobb?
 - Vennligst forklar og utdyp din plassering på skalaen.
- Hvordan opplever du at dette påvirker dine arbeidsdager?
- Hvordan har dette påvirket arbeidet du gjør?

Arbeidsengasjement

Følgende spørsmål er knyttet til hvordan ansatte opplever sitt arbeidsengasjement sett i konteksten av hjemmekontor.

5. Vitalitet

(Følgende spørsmål er utarbeidet for å forstå hvordan intervjuobjektene opplever

vitalitet, og er basert på the Utrecht Work Engagement-scale av Schaufeli & Bakker, 2003).

Skala: (1) Aldri i det siste året - (2) Noen ganger det siste året - (3) Månedlig - (4) Noen ganger i måneden - (5) Ukentlig - (6) Noen ganger i uken - (7) Daglig

- På en skala fra 1-7, opplever du et høyt energinivå i jobben når du jobber hjemmefra?

- Vennligst forklar og utdyp din plassering på skalaen.

- På en skala fra 1-7, opplever du at du kan jobbe i lange perioden av gangen når du jobber hjemmefra?

- Vennligst forklar og utdyp din plassering på skalaen.

- Når du står opp om morgenen, ser du frem til å starte arbeidsdagen?

- Hvorfor/hvorfor ikke?

- Opplever du at du er utholdende på jobb selv når ting ikke går så bra?

- Hvorfor og på hvilken måte?

6. Entusiasme

(Følgende spørsmål er utarbeidet for å forstå hvordan intervjuobjektene opplever entusiasme, og er basert på Utrecht Work Engagement-scale av Schaufeli & Bakker, 2003).

Skala: (1) Aldri i det siste året - (2) Noen ganger det siste året - (3) Månedlig - (4) Noen ganger i måneden - (5) Ukentlig - (6) Noen ganger i uken - (7) Daglig

- På en skala fra 1-7, opplever du entusiasme og glede i arbeidet du utfører?

- Vennligst forklar og utdyp din plassering på skalaen.

- På en skala fra 1-7, opplever du stolthet i det arbeidet du gjør?

- Vennligst forklar og utdyp din plassering på skalaen.

- Opplever du arbeidet ditt som enkelt, vanskelig, eller utfordrende? Vennligst forklar og utdyp svaret ditt.

- Opplever du at arbeidet ditt har mål og mening?

- Hvorfor/hvorfor ikke?

7. Fordypning

(Følgende spørsmål er utarbeidet for å forstå hvordan intervjuobjektene opplever fordypning, og er basert på Utrecht Work Engagement-scale av Schaufeli & Bakker, 2003).

Skala: **(1) Aldri i det siste året - (2) Noen ganger det siste året - (3) Månedlig - (4) Noen ganger i måneden - (5) Ukentlig - (6) Noen ganger i uken - (7) Daglig**

- På en skala 1-7, opplever du at tiden flyr på jobb når du jobber hjemmefra?
- Vennligst forklar og utdyp din plassering på skalaen.
- På en skala 1-7, hvor ofte trives du med å jobbe intenst?
- Vennligst forklar og utdyp din plassering på skalaen.
- Opplever du at du er fokusert eller ufokusert i jobben når du jobber hjemmefra?
 - Hvorfor og på hvilken måte?
- Opplever du det som enkelt eller vanskelig å løsrive deg fra jobben når du jobber hjemmefra?
 - Hvorfor og på hvilken måte?

Avrunde intervjuet

(Følgende spørsmål er utarbeidet med hensyn til at intervjuobjektene kan komme på relevant informasjon underveis eller etter intervjuet, og som kan supplere svarene deres. Spørsmålene åpner også opp til at intervjuobjektene kan stille oss spørsmål knyttet til selve forskningsprosjektet).

- Har du noen andre erfaringer du ønsker å dele med oss i henhold til det å jobbe hjemmefra?
- Har du spørsmål eller andre kommentarer til oss som er knyttet til intervjuet eller forskningsprosjektet?

Appendix 2

Thesis Approval NSD

Tilbakemelding på meldeskjema med referansekode 676269:

NSD har vurdert at personvernulempen i denne studien er lav. Du har derfor fått en forenklet vurdering med vilkår.

HVA MÅ DU GJØRE VIDERE?

Du har et selvstendig ansvar for å følge vilkårene under og sette deg inn i veiledningen i denne vurderingen. Når du har gjort dette kan du gå i gang med datainnsamlingen din.

HVORFOR LAV PERSONVERNULEMPE?

NSD vurderer at studien har lav personvernulempe fordi det ikke behandles særlige (sensitive) kategorier eller personopplysninger om straffedommer og lovovertridelser, eller inkluderer sårbare grupper. Prosjektet har rimelig varighet og er basert på samtykke. Dette har vi vurdert basert på de opplysningene du har gitt i meldeskjemaet og i dokumentene vedlagt meldeskjemaet.

VILKÅR

Vår vurdering forutsetter:

1. At du gjennomfører datainnsamlingen i tråd med opplysningene gitt i meldeskjemaet
2. At du følger kravene til informert samtykke (se mer om dette under).
3. At du laster opp oppdatert(e) informasjonsskriv i meldeskjemaet og sender inn meldeskjemaet på nytt.
4. At du ikke innhenter særlige kategorier eller personopplysninger om straffedommer og lovovertridelser.
5. At du følger retningslinjene for informasjonssikkerhet ved den institusjonen du studerer/forsker ved (behandlingsansvarlig institusjon).
6. Dersom du er student skal du dele meldeskjemaet med prosjektansvarlig/din veileder. Det gjør du ved å trykke på «Del prosjekt» når du er logget inn i meldeskjemaet.
7. Om deler av utvalget vil kunne gjenkjennes direkte eller indirekte i publikasjon

må du innhente eksplisitte samtykker. Vi anbefaler at utvalget gis anledning til å lese gjennom egne opplysninger og godkjenne disse før publisering.

KRAV TIL INFORMERT SAMTYKKE

De registrerte (utvalget ditt) skal få informasjon om behandlingen og samtykke til deltakelse. Informasjonen du gir må minst inneholde:

- Studiens formål (din problemstilling) og hva opplysningene skal brukes til
 - Hvilken institusjon som er behandlingsansvarlig
 - Hvilke opplysninger som innhentes og hvordan opplysningene innhentes
 - At det er frivillig å delta og at man kan trekke seg så lenge studien pågår uten at man må oppgi grunn
 - Når behandlingen av personopplysninger skal avsluttes og hva som skal skje med personopplysningene da: sletting, anonymisering eller videre lagring
 - At du behandler opplysninger om den registrerte (utvalget ditt) basert på deres samtykke / At du behandler opplysningene om dine deltagere basert på deres samtykke
 - At utvalget ditt har rett til innsyn, retting, sletting, begrensning og dataportabilitet (kopi) - At utvalget ditt har rett til å klage til Datatilsynet
 - Kontaktopplysninger til prosjektleder (evt. student og veileder)
 - Kontaktopplysninger til institusjonens personvernombud Ta gjerne en titt på våre nettsider og vår mal for informasjonsskriv for hjelp til formuleringer: nsd.no/personverntjenester/fulle-ut-meldeskjema-for-personopplysninger/sjekkliste-forinformasjon-til-deltakerne
- Når du har oppdatert informasjonsskrivet med alle punktene over laster du det opp i meldeskjemaet og trykker på «Bekreft innsending» på siden «Send inn» i meldeskjemaet.

TYPE OPPLYSNINGER OG VARIGHET

Prosjektet vil behandle alminnelige kategorier av personopplysninger frem til 01.09.2021.

FØLG DIN INSTITUSJONS RETNINGSLINJER

NSD legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art.

32). Dersom du benytter en databehandler i prosjektet, må behandlingen oppfylle kravene til bruk av databehandler, jf. art 28 og 29. For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og/eller rådføre dere med behandlingsansvarlig institusjon.

NSD SIN VURDERING

NSDs vurdering av lovlig grunnlag, personvernprinsipper og de registrertes rettigheter følger under, men forutsetter at vilkårene nevnt over følges.

LOVLIG GRUNNLAG

Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Forutsatt at vilkårene følges, er det NSD sin vurdering at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 og 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse som kan dokumenteres og som den registrerte kan trekke tilbake. Lovlig grunnlag for behandlingen vil dermed være den registrertes samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a.

PERSONVERNPRINSIPPER

Forutsatt at vilkårene følges, vurderer NSD at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om:

- lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen
- formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke behandles til nye, uforenlige formål
- dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet
- lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lengre enn nødvendig for å oppfylle formålet.

DE REGISTRERTES RETTIGHETER

Forutsatt at informasjonen oppfyller kravene i vilkårene nevnt over, vurderer NSD at informasjonen om behandlingen som de registrerte vil motta oppfyller lovens

krav til form og innhold, jf. art. 12.1 og art. 13. Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18), dataportabilitet (art. 20). Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilke typer endringer det er nødvendig å melde:

nsd.no/personverntjenester/fylle-ut-meldeskjema-for-personopplysninger/melde-enderinger-imeldeskjema

Du må vente på svar fra NSD før endringen gjennomføres.

OPPFØLGING AV PROSJEKTET

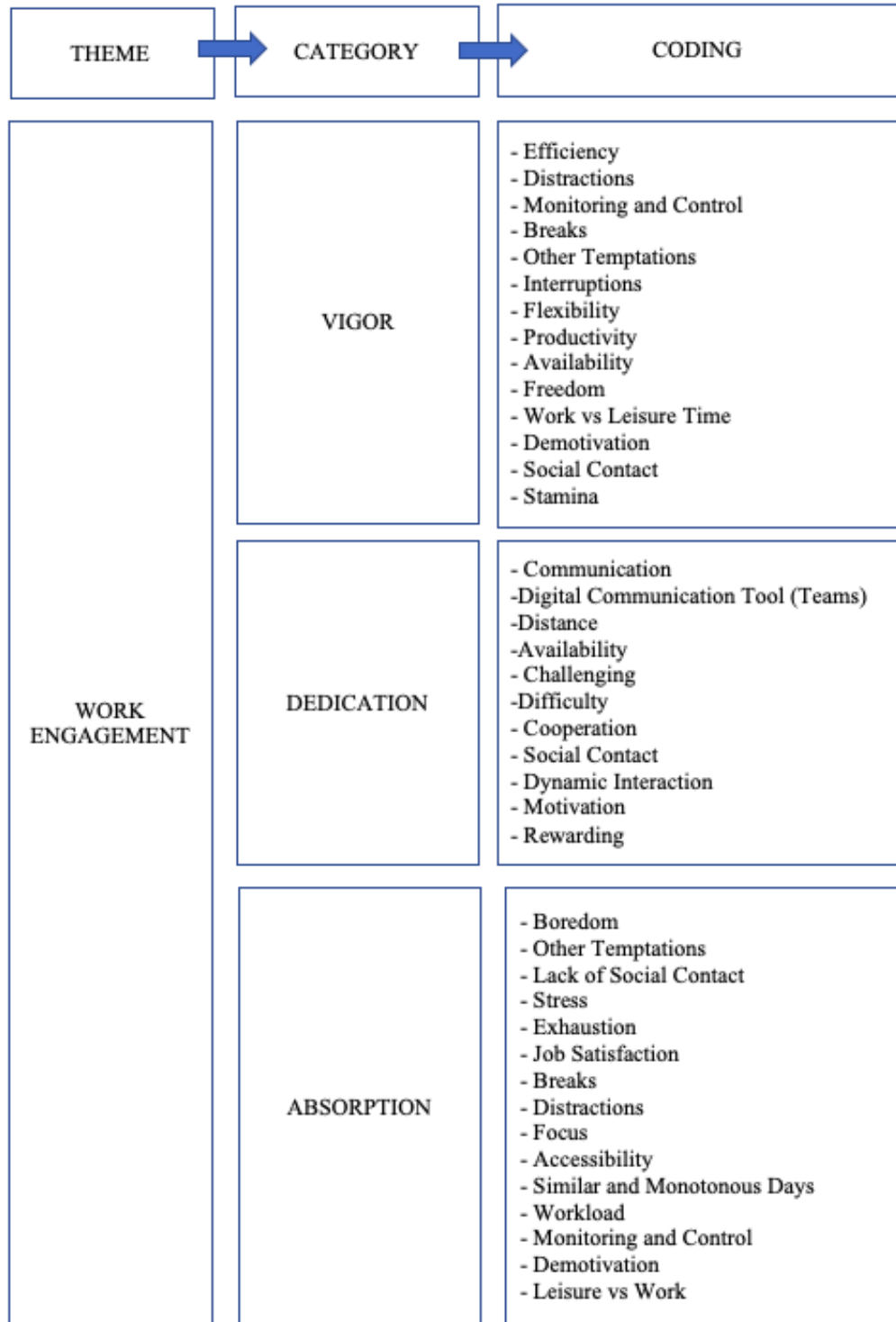
NSD vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Appendix 3

Model 2: Theme, Category and Coding of Job Demands

THEME	CATEGORY	CODING
JOB DEMANDS	LONELINESS	<ul style="list-style-type: none"> - Digital Communication Tool (Teams) - Lack of Social Contact and Interaction - Social Distance - Work-related Topics - Lack of Personal Conversations - Dissatisfaction - Demotivation - Water Cooler Effect - Face-to-face Conversations - Boredom - Inspiration - Energy - Enthusiasm
	TECHNOLOGICAL PROBLEMS	<ul style="list-style-type: none"> - Irritation - Frustration - Stress - Inefficiency - Uncontrollable - Indifference - Challenging
	JOB INSECURITY	<ul style="list-style-type: none"> - Demotivation - Laziness - Fear - Insecurity - Minimal Effort

Model 3: Theme, Category and Coding of Work Engagement



Appendix 4

Table 1: Employees' numerical value on job demands and work engagement

Interviewee	Job Demand			The Virtual Context					
	Loneliness Q1:	Technological Problems Q1:	Job Insecurity Q1:	Vigor Q1: Q2:		Work Engagement Dedication Q1: Q2:		Absorption Q1: Q2:	
A	3	3	3	4	3	4	3	5	3
B	2	4	5	5	5	2	4	6	4
C	3	3	5	3	5	4	4	7	4
D	5	2	3	3	2	3	2	3	6
E	1	2	1	4	5	1	6	7	3
F	4	2	1	5	7	7	6	5	6
G	3	3	5	4	4	4	7	5	5
H	5	2	5	2	2	2	3	1	1
I	3	3	1	6	6	5	4	4	6
J	4	4	4	5	4	5	4	1	3

Appendix 5

Table 2: Number of answered calls

Day	The Number of Answered Incoming Calls in March									
	Interviewee A	Interviewee B	Interviewee C	Interviewee D	Interviewee E	Interviewee F	Interviewee G	Interviewee H	Interviewee I	Interviewee J
1	13	32	30	12	28	41	16	5	29	23
2	7	35	25	23	18	37	41	7	20	14
3	15	12	41	7	25	30	50	11	16	21
4	21	19	15	10	4	39	15	14	17	18
5	11	41	17	10	0	51	12	8	17	11
6	17	31	8	29	21	40	51	17	38	9
7	21	56	30	15	38	28	12	20	14	31
8	35	39	16	25	27	9	36	22	0	17
9	9	30	9	31	17	27	38	18	19	29
10	9	17	19	20	14	28	2	6	8	30
11	18	18	15	29	19	52	22	8	17	9
12	29	18	5	24	19	31	0	6	19	23
13	7	34	33	9	36	19	1	12	29	11
14	26	22	27	18	12	36	6	5	41	24
15	31	30	16	3	29	10	14	13	36	14
16	6	7	13	25	19	12	22	9	8	7
17	33	45	6	7	31	26	23	26	33	15
18	15	49	10	9	30	28	17	1	9	13
19	9	53	24	19	3	31	30	15	17	33
20	30	6	8	29	8	11	15	3	4	23
21	0	17	3	5	5	15	27	3	25	10
22	10	31	7	3	16	44	18	10	11	22
23	22	32	16	14	19	27	19	4	10	16
Sum in Total	394	674	393	376	438	672	487	243	437	423
Ranking of performance	4	10	3	2	7	9	8	1	6	5