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Resources are Gold: The Relationship between Work Engagement, Work-related Sense of Coherence and Work-Home Interaction

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Summary

This master thesis is about Work Engagement and its relationship with Work-related Sense of Coherence and Work-Home Interaction. This is discussed through two different articles, where the first one mainly introduces the theoretical background, and the second one uses empirical findings to further consider the relationship. In addition, this relationship is examined across different age groups in the second article. The findings include a significant relationship between Work Engagement and Work-related Sense of Coherence, as well as Work Engagement and Work-Home Facilitation. Including, engagement does differ across age groups, and the older employees express a slightly higher level of engagement than the younger employees. The Job Demands-Resources Model is used as a theoretical frame to explain the relationship, and this expand previous knowledge by further emphasizing the importance of resources.

Sammendrag

Denne masteroppgaven handler om jobbengasjement, og dets forhold til arbeidsrelatert opplevelse av sammenheng og arbeid-hjem interaksjon. Dette er diskutert via to ulike artikler, hvor den første hovedsakelig introduserer teoretisk bakgrunn, og den andre bruker empiriske funn til å videre undersøke forholdet. I tillegg er forholdet undersøkt på tvers av ulike aldersgrupper i den andre artikkelen. Funnene inkluderer et signifikant forhold mellom jobbengasjement og arbeidsrelatert opplevelse av sammenheng, og mellom jobbengasjement og arbeid-hjem fasilitering. Engasjement varierer også mellom ulike aldersgrupper, og de eldste arbeiderne uttrykker høyere nivå av jobbengasjement enn de yngre ansatte. Job Demands-Resources Modellen blir brukt som en teoretisk ramme for å forklare forholdet, og dette utvider tidligere forskning ved å understreke viktigheten av ressurser.

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Main Introduction

This master thesis is about Work Engagement and its relationship with Work-related Sense of Coherence and Work-Home Interaction. An engaged employee is positive for the organization, the society and the individual, so one should strive to achieve this. In addition, theoretical and empirical evidence is all in favor of a strong Sense of Coherence to bring positive outcomes. These positive outcomes, is something one should focus on, so that the pathogenic focus is shifted and the main aim is to figure out what makes the individual thrive and gain resources. To put this in a theoretical frame, the Job Demands-Resources Model is used to explain why such resources as Work-Home Interaction and a strong Work-related Sense of Coherence might have a positive relationship with Work Engagement.

I found this subject interesting based on the fact that my bachelor's degree was about personal resources in the working life, and I wanted to focus more on the positive sides of work, and consider the health promoting role of work.

This master thesis is written as two separate articles, where the first one is theoretical and meant to give an insight in the complex subject of Work Engagement and its relation to Work-related Sense of Coherence and Work-Home Interaction. This article gives a deeper insight in the different concepts, and the discussion is built upon existing theory and empirical evidence. The second article is empirical, and written to be submitted to the Journal of Occupational Health Psychology. Here, Work Engagement is seen in relation to Work-related Sense of Coherence, Work-Home Interaction and across age groups. This article consists of analysis of data to further contribute to the existing research on the area. The discussion is therefore built upon the findings in the article.

Both articles are written by using the 6th Publication Manual of the American Psychological Association to secure consistency throughout the thesis.

Article 1

The Relationship between Work Engagement and

Work-related Sense of Coherence and Work-Home

Interaction

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Abstract

This paper discusses the relationship between Work Engagement, Work-related Sense of Coherence and Work-Home Interaction. This is an interesting relationship if one considers the relationship in accordance with the motivational process of the Job Demands-Resources Model. Since it is theorized and empirically proven that resources lead to positive outcomes, both for the employee and the employer, it is necessary to further examine this so that the knowledge can be developed. The conclusion is that resources are necessary, and a strong Work-related Sense of Coherence might make the individual better suited to handle stressors both at work and home, which will give a more engaged employee.

Key Words: Work-Related Sense of Coherence, Work Engagement, Work-Home Interaction, Work-Home Facilitation, Work-Home Conflict.

Work Engagement, Work-related Sense of Coherence (Work-SoC) and a good Work-Home balance are all essential for the individuals' health. On one side, Van der Colff and Rothmann (2009) argues for occupational stress to have several negative effects, including impaired performance and effectiveness, health problems and alcohol and drug usage. On the other side, work contribute to secure personal economy, brings a structure to the everyday life, creates affiliation, and gives the individual increased self-esteem (Helsedirektoratet, 2017).

An increasing number of employees struggle to combine demands from work and requirements from home, and it is important to study this because negative effects on one of the domain will influence the other domain (Geurts & Demerouti, 2003). Sense of Coherence (SoC) is a concept which plays an important role in positive processes that leads to health (Vogt, Hakanen, Jenny & Bauer, 2016), and it is essential that employees experience health both on the working area and the home area. A healthy and strong employee could mean less absence, increased productivity, and increased well-being at work (Aarø, 2011). In addition, the individual will benefit from being healthy and strong. Especially, the mental health is important, and in Norway a little over 30 % of the disability is because of mental disorder. This is an increasing group, and the status of working with good mental health is especially vital when 96 % sees work as essential for their mental health (Helsedirektoratet, 2017).

The aim of the present paper is to introduce the theoretical and empirical background of Work Engagement, Work-related Sense of Coherence and the Work-Home Interaction, and to discuss the potential relationship between them.

Theoretical and Empirical Background

Work

In the beginning of the new millennium, researchers started shifting their focus away from burnout, weaknesses and malfunctioning, and towards the positive pole of employee's well-being, their strengths and optimal functioning. Thereby focusing on engagement towards the job (Schaufeli, Salanova, González-Romá & Bakker, 2002). It is no longer sufficient to recruit the top talent; companies must inspire and enable employees so they can apply their full talent at work. It is important that the employee is proactive, committed to the job (Bakker, Albrecht & Leiter, 2011), self-directed, and take responsibility for his or her own performance and development (van den Heuvel, Demerouti, Schaufeli & Bakker, 2010).

Job Demands-Resources (JD-R) Model. In 1979, Karasek pointed out the importance of studying the demands placed on the employee and the resources available to meet the demands. Karasek's (1979) model of job strain explains how different combinations of job demands and job resources can create four different types of working situations. "Passive" job consist of a low degree of job demands and a low degree of job resources. "Low strain" job combines a low degree of job demands and a high degree of job resources. "High strain" job is where there is a high degree of job demands and a low degree of job resources. "Active" job is a combination of a high degree of job demands and a high degree of job resources.

The JD-R Model is based on the job strain model and it categorizes working conditions into two broad categories, job resources and job demands (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). According to Skogstad (2011), this model considers both demands and resources to vary from job to job.

There are two processes in the JD-R Model, one is the health impairment process, and the other is the motivational process (Demerouti et al., 2001; Schaufeli & Bakker, 2004). The job demands and job resources are dynamic and interrelated, and Skogstad (2011) explains

how resources act as a buffer between the job demands and the stress reactions. The motivational process links job resources with organizational outcomes via engagement. In this process, job resources could play an intrinsic or extrinsic motivational role, either they foster employees' growth, learning and development, or they are instrumental in achieving work goals (Demerouti et al., 2001; Hakanen Bakker & Schaufeli, 2006; Schaufeli & Bakker, 2004). The health impairment process links job demands with health problems via burnout, and gives a cognitive-emotional framework for understanding human performance in times of stress. If employees are met by high job demands sustained over a period of time this might deplete the individual's energy resources (Demerouti et al., 2001; Hakanen et al., 2006; Schaufeli & Bakker, 2004).

Job demands are "those physical, social, or organizational aspects of the job that require sustained physical and/or psychological effort and are, therefore, associated with physiological and/or psychological costs" (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007, p. 122). Job demands can be either quantitative, as in work load, or qualitative, like emotional demands (Schaufeli & Bakker, 2004). Examples of job demands are high work pressure, unfavorable physical environments, emotionally demanding client interactions (Van den Heuvel et al., 2010), work overload and personal conflicts (Schaufeli & Bakker, 2004).

It is important to see demands in the context they exist, and from the perspective of the demand they put on the work abilities and their mobilization (Meijman & Mulder, 1998). Most of the time, demands are seen to have a negative impact on the motivation and engagement of employees, but the right amount of demands might challenge the employees. Some level of stress is necessary for optimal performance (Karanika-Murray, 2010). Schaufeli and Bakker (2004) points out that job demands might turn into job stressors when meeting those demands requires high effort. This is associated with high costs that might lead

to negative responses, such as depression, anxiety, or burnout. Studies indicates how a high degree of demands perceived as hindrances relates to burnout and a low degree of Work Engagement. While, a high degree of demands perceived as challenging was related to more Work Engagement (Crawford, LePine & Rich, 2010; Searle & Lee, 2015).

Work Engagement

Work Engagement is "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption" (Schaufeli et al., 2002, p. 74). This is a lasting and pervasive affective-cognitive state which is seen as an independent and distinct concept from the term of burnout (Christensen, 2011). Engagement is a state which is not fixated on any particular object, event, individual or behavior (Schaufeli et al., 2002).

Engaged employees have a positive attitude and activity level which make them create their own positive feedback, in terms of appreciation, recognition and success (Bakker et al., 2011). Further on, Bakker et al. (2011) emphasizes how engaged employees also feel tired after a long day of hard work, but they associate this tiredness with positive accomplishments throughout the day. Meaning, they locate the reason of their tiredness to something in their power, and see it as something constructive.

Bakker et al. (2011) brings up the issue of how engagement is measured. They point out that both the positive and negative aspect of engagement should be captured. Pointing out that engagement is most needed in times of challenges and difficulties at work, and therefore engagement might come with negative emotions. The design should also include short-term and longer-term time frames, since the time frame of the existing Utrecht Work Engagement Scale, the scale most often used to measure Work Engagement, do not capture the day-to-day variations in engagement. In addition, another issue is how researchers cannot explain why engaged employees may have an off-day occasionally, and it is emphasized how an average

measure of Work Engagement leads to the ignorance of the dynamic, temporal and configurational dimensions of Work Engagement (Bakker et al., 2011).

Disadvantages with engagement might seem distant, as engaged employees have psychological capital, create their own resources and perform better, but "overengagement" can lead to the employees taking their work home and thereby have negative consequences (Bakker et al., 2011). Geurts and Demerouti (2003) emphasizes that taking the work home, undermines recovery and can lead to health problems. Engaged employees and workaholics are not the same, an engaged employee work excessively because work is fun, not because work is compulsively and a strong and irresistible inner drive (Gorgievski, Bakker & Schaufeli, 2010). The main difference is therefore that workaholism lacks the positive affective component of Work Engagement, and engagement is not compulsive like workaholism (Gorgievski et al., 2010). However, Bakker et al. (2011) wonder if Work Engagement may create workaholics. The high arousal and positive affect of engaged employees, might over time turn into negative affect and strain. Bakker et al. (2011) therefore suggest that there is a limit to engagement and engaged employees who get overly involved may experience negative consequences like Work-Home Conflict, which will be further discussed later in this article.

Dimensions of Work Engagement. Burnout is a state of mental weariness (Schaufeli & Bakker, 2004), and engagement was previously seen as the opposite of burnout (Schaufeli et al., 2002). It was assumed that engagement consisted of direct opposites of the three burnout dimensions exhaustion, cynicism and lack of professional efficacy, and therefore engagement was previously characterized by energy, involvement and efficacy. Because of this, the same instrument was used to measure the two concepts on one single general well-being dimension (Schaufeli & Bakker, 2004), but Schaufeli et al. (2002) pointed

out how the opposite concepts should be measured independently with different instruments and therefore make it possible to look at the relationship between burnout and engagement. Burnout and engagement are independent, yet negatively correlated states of mind (Schaufeli & Bakker, 2004).

Vigor is characterized by high activation, and Schaufeli et al. (2002) explains vigor as high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence in the face of difficulties. The employees experience their work as stimulating, energetic and something they really want to devote time and effort to (Bakker et al., 2011). Dedication refers to high identification, and this dimension is characterized by a sense of significance, enthusiasm, inspiration, pride and challenge (Schaufeli et al., 2002). The employees see their work as a significant and meaningful pursuit (Bakker et al., 2011). Absorption is characterized by being fully concentrated and deeply engrossed in one's work, time passes by quickly and it is difficult detaching oneself from the work. The dimension of absorption has been compared to what is called "flow", a state of optimal experience where attention, clear mind, effortless concentration, complete control and distortion of time is some of the characteristics (Schaufeli et al., 2002). The difference between flow and engagement is the length of the experience, while engagement is a pervasive and persistent state of mind, flow is a more short-term peak (Schaufeli et al., 2002).

Bakker et al. (2011) brings up the issue of how engagement should be conceptualized. The everyday connotations vary and refers to involvement, enthusiasm and commitment among other things. The definition scientist use is usually the one from Schaufeli et al. (2002), and there is broad consensus on the dimension of vigor and dedication, but the dimension of absorption is more unsure and it might be an outcome of energy and

identification, vigor and dedication. More research is needed to consider if absorption is a core aspect of Work Engagement.

Drivers of engagement. What drives engagement? Bakker et al (2011) shows how feedback on performance and a supportive supervisor increases the likelihood of achieving one's goal at work. Conditions consisting of job resources and personal resources in an active job is especially expected to be important drivers of engagement.

Job resources. Bakker et al. (2011) refers to how previous studies quite consistently show that job resources and personal resources promotes Work Engagement. Hakanen et al. (2006) consider job resources to be the most important predictors of Work Engagement. Job resources are "those physical, social, or organizational aspects of the job that (a) are functional in achieving work-related goals, (b) reduce job demands and the associated physiological and psychological costs, and (c) stimulate personal growth and development" (Xanthopoulou et al., 2007, p. 122). Examples of job resources are autonomy, social support from colleagues, skill variety (Bakker et al., 2011), control coping and decision involvement (Schaufeli & Bakker, 2004). According to Vogt et al. (2016) working in a resourceful environment might help build the employees personal resources. Job resources might also strengthen the employees' perception of comprehensibility, manageability and meaningfulness in a working context (Vogt, Jenny & Bauer, 2013). Job resources exist at different levels, where the task-level includes performance feedback, the interpersonal-level includes support from colleagues, and the organizational-level is about supervisory coaching (Schaufeli & Bakker, 2004).

Personal resources. Van den Heuvel et al. (2010) describe several different perspectives on what other researchers have defined personal resources as, and among other they mention how Antonovsky see it as general resistance resources. They choose to define

personal resources in organizational settings as "lower-order, cognitive-affective aspects of personality; developable systems of positive beliefs about one's 'self' (e.g., self-esteem, self-efficacy, mastery) and the world (e.g., optimism, faith) which motivate and facilitate goal-attainment, even in the face of adversity or challenge" (p. 129). This means, they see it as a personality trait which influence how people handle a situation. Examples of personal resources at work can be optimism, hope, resilience, self-efficacy, meaning-making and self-regulatory focus (van den Heuvel et al., 2010). These resources contribute to the employee staying positive and focus on goals, while they believe they can cope with difficult situations and make meaning out of the different situations. All of this could be said to originate from what the employees choose to focus on. Van den Heuvel et al. (2010) emphasizes how the focus influence change demands and how resources are dealt with.

Xanthopoulou et al. (2007) found that engaged employees are highly self-efficacious (they believe they can handle the demands of different contexts), optimistic (tendency to believe that they will experience good outcomes) and have a high organizational-based self-esteem (believe they can satisfy their needs by participating in roles within the organization). These resources are related to positive effects on physical and emotional well-being (Xanthopoulou et al., 2007).

Other drivers of engagement. Leadership can have a role in fostering Work Engagement among the employees (Bakker et al., 2011). A transformational leader is perceived as respected and trustworthy by the employees, has high demands, expect good results and motivate the employee to do a good job (Bass, 1995). Bakker et al. (2011) points out that the transactional and laissez-faire style might not contribute to Work Engagement since they lack motivational power and inspirational appeal. Leaders should be aware of how

their own personal resources, attitudes and strategies might impact their leadership behavior (van den Heuvel et al., 2010).

One could also see engagement as something contagious, and colleagues can influence each other with their Work Engagement, and therefore performance is a result of the combined effort of individual employees (Bakker et al., 2011). Engaged colleagues is therefore a source to engagement.

Job crafting is defined as "the physical and cognitive changes individuals make in the task or relational boundaries of their work" (Wrzesniewski & Dutton, 2001, p. 179). Engaged employees actively change their work environment if needed and are not passive actors (Bakker et al., 2011). This will drive engagement in the sense of the employee creating/crafting his/hers own working environment and creating the resources necessary to handle the demands.

Sense of Coherence

Antonovsky (1996) refers to World Health Organizations (WHO) definition of health as "a state of optimal physical, mental and social well-being, and not merely the absence of disease and infirmity". This shows a clear direction towards the fact that health is more than just the absence of pathology, meaning health is also about quality of life. In the late 1970s Antonovsky introduced salutogenesis, meaning "the origins of health", by asking about what gives good health (Lindström & Eriksson, 2015). Antonovsky (1987a) emphasized that salutogenesis is more than the opposite of pathology, the two concepts are radically different and both of equal importance. Pathology focus on factors that are a threat to the individual's health, the things that create disease, and what protects against disease (Espnes & Smedslund, 2009). Both the pathogenic and the salutogenic approach is important, and they should be seen as complementary (Antonovsky, 1987a).

Antonovsky (1987a) points out how salutogenesis forces the development of a theory of coping, and this led to the development of the concept of SoC. The central assumption in the salutogenic model is that a strong SoC is crucial to be able to handle all the factors of distress in life in a good way, and therefore preserve health (Antonovsky, 1987a). A strong SoC makes the individual see the world as making sense (Antonovsky & Sourani, 1988). Antonovsky (1987a, p. 19) defined SoC as

> a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges worthy of investment and engagement.

SoC is a construct which refers to how the individual sees the world, it is all about how comprehensible, manageable and meaningful one sees the world (Antonovsky & Sourani, 1988). The dimension of comprehensibility, is the cognitive aspect (Feldt, Kinnunen & Mauno, 2000), and it refers to the extent internal and external stimuli is perceived as making cognitive sense, as information that is ordered, consistent, structured, and clear. This is the opposite of seeing the world as noise, as a chaotic, disordered, random, accidental, and inexplicable. An individual with a strong sense of comprehensibility will expect that stimuli is predictable, orderable, and explicable (Antonovsky, 1987a). The second dimension is called manageability and refers to which extent one sees the available resources as adequate to meet the demands from the stimuli one is met by. These resources can be under the individuals control, or they can be controlled by legitimate others whom one can trust. An individual with a strong sense of manageability will be able to cope and not grieve endlessly if they are confronted by difficult life events (Antonovsky, 1987a). This is the instrumental aspect of

SoC (Feldt et al., 2000). The third dimension is meaningfulness and this is the motivational aspect (Feldt et al., 2000), it refers to the extent one feels that life makes sense emotionally. It is about how the demands and problems one might meet is worthy of commitment and engagement, and how to find meaning in the challenges one faces during a life time (Antonovsky, 1987a).

The three dimensions can have different relations. It is not necessarily that an individual express all the three dimensions as either strong or weak, one could for example experience strong comprehensibility, strong meaningfulness and weak manageability (Antonovsky, 1987a). But, they are highly interrelated as constructs (Feldt et al., 2000).

It is different how people of the same environment manage life, and Antonovsky (1987a) argued that a person's SoC is one of the factors which decides if they manage life well or not. He recognizes that historical, sociocultural and physical conditions in the environment is of importance to health, but a strong SoC is what makes some people manage poor conditions better than others. However, Antonovsky (1987a) does not see SoC as a personality trait, because the attention is then directed towards each individual, and one might disregard the cultural and historical context the attitude occurs and develop within, and one might also overlook the social constructed situation the attitude is expressed in. Even though Antonovsky (1987a) emphasizes that individuals are affected by the contexts they live in, he also considers the individual to be an active agent.

SoC is all about how one perceives and handles the distress one experiences. A person with a strong SoC uses the coping strategy best suited to handle the specific situation one struggles with (Antonovsky, 1987a). The stronger SoC, the more adequate the individual will be to employ cognitive, affective and instrumental strategies to cope with the psychosocial

stressors posed by the internal and external environment (Antonovsky, 1987b; van der Colff & Rothmann, 2009). Meaning, they are flexible in their use of coping strategies (Feldt, 1997).

Work-related Sense of Coherence

In 1986 the Ottawa-charter stated that the work place plays an important role in preventing sickness and disease. It became an increased focus on health promoting in all the domains and levels in the society, from work and home to politics and personal lifestyle (Aarø, 2011).

The possible health promoting role of SoC in a working context has received little attention (Feldt et al., 2000). However, Antonovsky (1987a) described how work is an immense part of the adult life, and how SoC is an important part of the working life, and different working conditions creates life experiences which influences the strength of a person's SoC. Antonovsky (1987b) suggest four major reasons as to why one should have a salutogenic approach when dealing with health promoting factors at work. He sees it as essential that both the pathogenic and the salutogenic approach should accompany each other. First, all working environment consist of different types and numbers of stressors, and therefore the employees always have to cope (Antonovsky, 1987b). Second, the pathogenic approach sees stressors as a bad thing which exhaust the employee, but Antonovsky (1987b) considers some stressors to be positive and possible to overcome successfully, this is in line with the thought of some demands to be challenging and therefore positive (Crawford et al., 2010; Searle & Lee, 2015). Thirdly, there is a major focus on what the downsides about the job is, and Antonovsky (1987b) emphasizes the importance of also asking questions about what's good about the job, and figuring out what leads to management and health. Fourthly, it is missing a theoretical framework, so there is need of some empirical evidence to figure out

what will enable the job characteristics that enhance the capacity to cope (Antonovsky, 1987b).

Vogt et al. (2013) continued this way of thinking and came up with the more context-specific term work-related SoC (Work-SoC). They define Work-SoC as "the perceived comprehensibility, manageability and meaningfulness of an individual's current work situation" (p. 2). Meaning they put the original concept of SoC in a working condition, and connect SoC to work. Work-SoC is a more dynamic construct that is more sensitive to change than the general concept of SoC. Therefore, Work-SoC is more suited to be used as an indicator of the perceived health-promoting quality of working conditions (Vogt et al., 2013).

Feldt et al. (2000) argues how it can be assumed that SoC is a major determinant of the employee's health and well-being, because the level of SoC is shaped by the working environment. A weak SoC might lead to job stress, while a strong SoC might help the employees to understand stressors and see them as manageable and meaningful (van der Colff & Rothmann, 2009). Based on the empirical evidence of Feldt et al. (2000) a high level of job insecurity was related to a weak SoC, which was related to high level of psychosomatic symptoms and emotional exhaustion among the employees. Their results also indicated that employees who perceived the job insecurity as low and their organizational climate as good, where the employees with a strong SoC. These employees were also the ones with lower scores in psychosomatic symptoms and emotional exhaustion. This is in line with the hypothesis about a meaningful, comprehensible and manageable working environment will contribute to strengthen the employee's SoC (Feldt et al., 2000). Hence, the results of Feldt et al. (2000) indicate that a strong SoC is related to good organizational climate, low job insecurity, and occupational and general well-being.

Dimensions of Work-SoC. Comprehensibility is strong when the work environment fosters confidence and feelings of security, supports communication in social relations, and enables the employee to see the entire spectrum, including the employees place in it (Antonovsky 1987b; Feldt et al., 2000). Comprehensibility is when the work situation is perceived as structured, consistent and clear (Vogt et al., 2013).

Manageability is strengthened when the employee can take part in collective decision-making, this is because support and advise from colleagues or managers are often seen as social resources and therefore of important instrumental functioning to the employee (Antonovsky, 1987b; Feldt et al., 2000). This dimension is about perceived resources, and an employee with a strong sense of manageability manages to cope with problems because they feel they have adequate resources available to cope (Antonovsky, 1987b; Vogt et al., 2013).

Meaningfulness is strong in a work context when the employee has influence at work, and therefore gets to participate (Antonovsky, 1987b; Feldt et al., 2000). In addition, Antonovsky (1987b) emphasized the importance of freely chosen work, meaning the individual will experience joy and pride in the work if the employee feels ownership of the work, and it is something the employee wants to do. Also, work which is seen as worthy of commitment and involvement, and work that makes the employee wish to invest energy in the tasks will create a sense of meaningfulness (Antonovsky, 1987b; Vogt et al., 2013).

Work-Home Interaction

In 2003, Geurts and Demerouti suggest that work and non-work (e.g. family, community and religion), as they called it, are no longer separate domains, but rather highly interrelated. They considered the changes of gender roles to be a main reason as to why. Women are more likely to be working today, and therefore more people with care-giving responsibilities also have work responsibilities, and this create an interaction between the

work and home. People must combine obligations in the work domain and the domestic domain (Geurts & Demerouti, 2003). In this article, it will be referred to a Work-Home Interaction, and not a work/non-work interaction, seeing as non-work could mean so much, as to the home only refers to the domestic area in life. Work, especially wage work, refers to "a set of (prescribed) tasks that an individual performs while occupying a position in an organization" (Geurts & Demerouti, 2003, p 280).

Work-Home Interaction is defined as "a process in which one's functioning (and behavior) in one domain (e.g. home) is influenced (positively or negatively) by quantitative and qualitative demands from the other domain (e.g. work)" (Demerouti & Geurts, 2004, p. 287). This means that the interaction can go both ways, work can influence home and home can influence work. Geurts and Demerouti (2003) refers to empirical evidence showing "work negatively influencing home" is more prevalent than "home negatively influencing work", meaning it is more likely to bring work home than bringing issues from the home domain to work.

Antonovsky (1987a) refers to the sociological premise that experiences from such an important area of life as work is, will influence the attitude on other areas in life. Therefore, what you learn and experience at work will be transmitted to other areas in life. It can either be a spillover effect or a compensatory effect when work is transmitted over to the personal life (Geurts & Demerouti, 2003). Geurts and Demerouti (2003) emphasized that the boundaries between work and home are fading, meaning that one often works from home, and/or spend some of the working hours on personal activities (e.g. personal phone calls or emails). The fact that higher education has become important and a large part of society makes the jobs more based on intellectual knowledge, and this makes for a change in how work and home influences each other (Thuen, 2011). There is a growing agreement that work

can interfere both positively and negatively with home life and vice versa (Geurts &
Demerouti, 2003).

Work-Home Facilitation. Work-Home Facilitation suggests that skills and energy
in one domain, either work or home, will improve the individuals functioning in the other
domain (Geurts & Demerouti, 2003). Frone (2003) defines Work-Home Facilitation as "the
extent to which participation at work (or home) is made easier by virtue of the experiences,
skills, and opportunities gained or developed at home (or work)" (p. 145). The thought is that
participation in multiple roles can promote growth and better functioning in other roles in life
(Geurts & Demerouti, 2003). Involvement in one role could lead to personality enrichment
(Wayne, Musisca & Fleeson, 2004), and one can thrive by finding ways to turn stressful
situations into opportunities for personal growth (Maddi & Khoshaba, 2005).

Work-Home Facilitation occurs when involvement in work provides skills, behavior,
and/or positive mood which influences the family positively (Wayne et al., 2004). Hill (2005)
argues for Work-Home Facilitation to be positively related to job satisfaction and life
satisfaction, and negatively related to individual stress. If it is put the other way around,
Home-Work Facilitation, it implies that involvement in family creates positive mood, support,
and/or a sense of accomplishment, which will improve one's role at work giving more
confidence and energy to the employee (Wayne et al., 2004). This Home-Work Facilitation is
positively related to marital satisfaction, family satisfaction and life satisfaction, and
negatively related to organizational commitment (Hill, 2005).

Greenhaus and Powell (2006), explains two different mechanisms by which
facilitation could occur. The first process is an instrumental, where a resource could be
transferred directly from one role to the other role. While the second mechanism is an

affective, where a resource in one role could promote positive affect in the role and thereby produce positive affect in the other role.

Work-Home Conflict. Conflict is not merely the opposite of facilitation, and lack of facilitation does not mean conflict (Wayne et al., 2004). Greenhaus and Beutell (1985, p. 77) refers to a Work-Family Conflict and they define it as:

> A form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. That is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role.

In this paper, the definition will be transferred to the Work-Home Conflict, and when Greenhaus and Beutell (1985) refers to family it will be translated to home. The definition focus on interrole conflict, and Greenhaus and Beutell (1985) identifies three major forms of Work-Home Conflict, this is time-based conflict, strain-based conflict, and behavior-based conflict. The time-based conflict is when work or home takes up all the time, so it is difficult to find the time to fulfill requirements in the other role, an example is when the employee must work overtime or unfavorable hours and therefore have no time to spend on the home domain. Strain-based conflict is when strain in one role spills over to the other role, an example is when the work demands are high and the employee is drained at work and have no energy to use on the home domain. Behavior-based conflict is when the behavior at work is incompatible with expectations regarding behavior in the home domain, an example is when the employee has difficulties combining the professional attitude at work with a more sensitive attitude at home (Geurts & Demerouti, 2003).

Geurts and Demerouti (2003) refers to a survey among a representative sample of working people of the US which showed that 30 % reported to experience major conflict between demands at work and responsibilities from the family. This conflict can create

consequences on a physiological, psychological, behavioral, attitudinal and organizational level. One might experience headache, distress, increased smoking or drinking, decreased engagement and/or reduced performance (Geurts & Demerouti, 2003). This imply that Work-Home Conflict has a negative impact on the health in several different areas in the individuals' life.

Discussion

The aim of this paper is to examine Work Engagement and its relationship with Work-SoC and Work-Home Interaction. Vogt et al. (2016) saw SoC in relation to the motivational process of the JD-R model, and it is interesting how they imply that SoC might boost the effect of job resources, and therefore lead to positive outcome, like Work Engagement. In addition, experiences from the working life will affect other important areas in life (Antonovsky, 1987a; Geurts & Demerouti, 2003), and it is relevant to think that the Work-Home Interaction also plays an important role in gaining resources and being engaged at work.

Work Engagement and Work-related Sense of Coherence

Antonovsky (1987a) sees the similarity between his concept of meaningfulness and Kobasa's concept of commitment. He points out that both concepts are about self-involvement and low alienation, which is similar to the concept of engagement. Further, Vogt et al. (2013) highlight how high vigor and absorption at work is more likely when the employee perceives the working conditions as comprehensible and manageable. Similarly, employees who have a high level of dedication is likely to experience work as meaningful.

Results from Feldt et al. (2000) indicate that a working environment perceived as meaningful, comprehensible and manageable will contribute to strengthen the SoC of the

employee. In addition, Vogt et al. (2016) draw attention to how the experience of life as comprehensible, manageable, and meaningful, might foster the experience of vigor, dedication, and absorption at work. Meaning, a working environment supporting the development of SoC, will foster Work Engagement. Similarly, individuals with a strong SoC seems to be better protected from certain negative work characteristics (Feldt, 1997). Further, other studies indicate that a strong SoC predicts Work Engagement (van der Colff & Rothmann, 2009; Vogt et al., 2016).

Vogt et al. (2016) mentions three reasons as to why it is interesting to see SoC in the context of JD-R Model. First, SoC is the most prominent personal resource in the prediction of health and well-being, and it is important to know how SoC relates to the JD-R Model, one of occupational psychology most studied model. Second, SoC strongly emphasizes general resistance resources, which mirrors the JD-R Models emphasis on the importance of job resources for positive outcome, such as Work Engagement. Third, SoC might be seen as a particularly important personal resource because it is thought as a superior concept that includes other related constructs (i. e. hardiness or resilience). Feldt (1997) found results suggesting that a strong SoC leads some work characteristics (e.g. work demands and career rewards) to be salutary, but when accompanied with a weak SoC these demands could be pathogenic. This also implies the importance of how one perceives the demands, as either challenging or as a hindrance, to how one handle the demands. In addition, how engaged an employee is, will be affected by how they evaluate themselves (Airila et al., 2014). This shows the importance of perception, and how a situation is handled is all about how the individual considers and evaluate the situations. Showing it is based on personal characteristics to succeed in a variety of situations.

Similarly to Karasek's (1979) job strain model and his "high strain" and "passive" jobs, Antonovsky (1987b) discusses overload and underload in the dimension of manageability. He sees overload as when the employee doesn't perceive enough resources to solve the different tasks. Underload is when the employee is bored and the work is monotony, and it means the employee don't get to fulfill its potentials and that might decrease their confidence in being able to manage (Antonovsky, 1987b), this means that they don't get challenged. Neither are healthy in a working environment, and it is central that employees get challenged enough to not become passive, but also not too much so they risk burnout. The importance here is to find a balance which is suited for the employee.

The development of health-enhancing job characteristics is of crucial importance, and promotion of health is of equal importance as elimination of stressors (Antonovsky, 1987b). Vogt et al. (2013) emphasizes how the perception of SoC is influenced by the interaction between individual characteristics and the characteristics of the working environment. They see the employee's personality and experiences as individual characteristics, while work-related structures and processes are seen as characteristics of the working environment. This is in line with Antonovkys (1987a) thought about SoC being created by both structures and individual differences. It should be of great importance for organizations to facilitate for the development of the employee's SoC, seeing how individuals with a strong SoC cope better (Söderfeldt, Söderfeldt, Ohlson, Theorell & Jones, 2000), have lower levels of psychosomatic symptoms and emotional exhaustion (Feldt, 1997), have fewer stress symptoms (Albertsen, Nielsen & Borg, 2001), and general well-being (Feldt et al., 2000).

There are two possible mechanisms as to why SoC might affect the level of job resources. On one side, employees with a strong SoC might interpret, perceive, or appraise the level of resources more favorably than an individual with a weak SoC. On the other side,

employees with a strong SoC might behave in a way that lead them to activate and create more resources than employees with a weak SoC (Vogt et al., 2016). This is in line with Bakker et al. (2011) and their thought of engaged people to evaluate their tiredness in a different way than less engaged employees do. This could suggest that individuals with a strong SoC uses their ability to handle stressing situations with the adequate resources at work.

Work Engagement and Work-Home Interaction

One limitation of the JD-R Model is its dismissing of factors outside work, and the solely focus on psychosocial work environment (Hakanen, Schaufeli & Ahola, 2008). Therefore, it is important to include the Work-Home Interaction, so one could see if the interaction plays a role or not. In the JD-R Model, Work-Home Facilitation could be said to be a part of the motivational process. However, this is not consistent with the study of Hakanen et al. (2008) where the results indicate that home resources have no influence on Work Engagement. But, Voydanoff's (2004) results indicate that work resources explain 10 % of the variance in Work-Home Facilitation, suggesting that Work-Home Facilitation do belong in the JD-R Model.

Results from Goff, Mount and Jamison (1990) show that Work-Home Conflict is related to increased absenteeism, and seeing how engaged employees are not likely to report themselves ill (Schaufeli, Bakker & van Rhenen, 2009), it is possible that Work-Home Conflict is a part of the health impairment process in the JD-R Model. Further support for this is the results from Voydanoff (2004) which indicate that work demands explain 20 % of the variance in Work-Home Conflict. In addition, Innstrand, Langballe, Espnes, Falkum and Aasland (2008) found results suggesting that Work-Home Conflict have a negative relationship with disengagement, implying that disengaged employees distance themselves

from work and use it as a coping strategy to gain lower levels of Work-Home Conflict. Again, this indicate that Geurts and Demerouti (2003) gain further support for their thought of a spillover effect between work and home.

Conclusion

As Hobfoll (2002) emphasizes, resources lead to more resources. Employees who have personal resources will create job resources (van den Heuvel et al., 2010), and the presence of resources could lead to social advantages (Hobfoll, 2002). This is in line with results from Vogt et al. (2016) which indicate that the relationship between resources is reciprocal and dynamical, referring to findings like job resources leading to personal resources, and personal resources leading to job resources. In addition, job resources might strengthen the experience of comprehensibility, manageability and meaningfulness in the working context (Vogt et al., 2013). This could imply that engaged employees who have a strong SoC also will experience a good interaction between the work and home, because resources generate other resources. Results from Schaufeli et al. (2009) indicate that engagement leads to future resource gain, this show that there are reciprocal relationships in the JD-R Model, and the motivational process (Demerouti et al., 2001), and further support the thought of resources creating resources. This indicates that Work Engagement also is a part of the positive process of creating and gaining resources.

Wayne et al. (2004) points out how employees level of conflict and facilitation, is a result of more than work and home circumstances, they emphasize the role of personal characteristics. Since SoC is seen as something within the individual one could argue for the importance of Work-SoC as a personal characteristic and therefore affect the Work-Home Interaction. Antonovsky (1987b) points out how the perception of work enabling the

employee to be able to support the family is important for the sense of meaningfulness in the working context.

Work-Home Conflict is not only about time pressure or role conflict, it is also about a feeling of not being good enough and a feeling of not managing the conflicting demands and expectations from the different domains. This will again create worries, and a sense of failure (Thuen, 2011). This way of thinking could be seen in comparison to the SoC, and one might expect people with a Work-Home Conflict to have a weak SoC. Seeing how much work and home interrelate, and affect each other, it is also natural to assume that Work-SoC will be negatively affected by a conflict at either domain. Or, it could be that individuals with a weak SoC are less suited to handle stressors at home and work, so when the demands are too high in either both or one area in life, it creates negative effects of other areas in life.

Involvement in one role could lead to better functioning in other roles (Geurts & Demerouti, 2003), suggesting that individuals with a good functioning at work also will function good at home. This could imply that employees who have a strong Work-SoC also uses the right strategies to handle stressors and demands at work. Perhaps, those with a strong Work-SoC considers adequate resources to be available both at work and at home. More research is needed on Work Engagement and its relationship with Work-SoC and Work-Home Interaction to further examine these questions about what makes the individual thrive at work, and how these variables relate to each other.

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Article 2

Work Engagement across different Age Groups: How is it related to Work-related Sense of Coherence and Work-Home Interaction?

A Quantitative Study Using ARK

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Abstract

An engaged employee is positive for the individual, the society and the organization, which makes engagement an important issue to study. Gaining more knowledge on this subject makes it possible to develop interventions designed to create engaged and healthy employees. This paper examines Work Engagement across different age groups (below 30 years, 30-49 years and 50 years and older) and its relationship with Work-related Sense of Coherence and Work-Home Interaction in the context of the Job Demands-Resources Model. ANOVA and regression were used on data from 12 170 employees at Norwegian universities to see if Work-related Sense of Coherence and Work-Home Interaction have any relation to Work Engagement across different age groups. The results show that age groups do differ in their experience of Work Engagement, and older employees experiences more engagement. Results also indicate that Work-related Sense of Coherence has the strongest relationships to Work Engagement, and that Work-Home Facilitation have a relationship with Work Engagement. This expand previous knowledge by suggesting the importance of personal resources to gain further positive outcomes and other resources both at work and at home.

Key Words: Work-Related Sense of Coherence, Work Engagement, Work-Home Facilitation, Work-Home Conflict, Age, Knowledge Intensive Work Environment Survey Target (KIWEST), Arbeidsmiljø- og klimaundersøkelser (ARK).

In 1986 the Ottawa-charter stated that health promotion was important in all domains and levels of society, and it became an increased focus on health in the working area (Aarø, 2011). Work structures the everyday life, make meaning and contribute to a better self-esteem, and it is not only a source of income, but also a source to self-realization, social network and financial safety (Meld. St. 19 (2014-2015)). This makes work an important factor in employee's life, no matter the age. A healthy and strong employee means less absence, increased productivity and increased well-being at work (Aarø, 2011), while occupational stress could lead to impaired performance and effectiveness, health problems, and alcohol and drug usage (van der Colff & Rothmann, 2009). This implies that a healthy employee is good business, both for the individual, the organization, and the society. Studies show that employees in the academic sector work hard, are productive (Rothmann & Jordaan, 2006), find their job satisfying (Harman, 2003), and are motivated by autonomy and flexibility (Bellamy, Morley & Watty, 2003), implying intrinsic factors and personal resources to contribute to an experience of engagement. However, Kinman (2001) conclude with an increase in job demands and no corresponding increase in job resources for academic staff, implying the need for a greater focus on the working conditions for academics.

Barnes-Farrell and Matthews (2007) calls for research on workers to include age, and this is important seeing how health and functioning decreases with age (Rudolph & Baltes, 2017). The aim of this study is to explore the relationship between Work-related Sense of Coherence (Work-SOC), Work-Home Interaction and Work Engagement across different age groups among employees at Norwegian universities.

The idea of the importance of Work-SoC and Work-Home Interaction in relation to engagement is grounded in the Job Demands-Resources (JD-R) Model and the motivational process (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). This process links job resources

through engagement to positive organizational outcomes (Schaufeli & Bakker, 2004), and

these job resources play a motivational role where they foster employees' growth, learning

and development, and they are instrumental in achieving goals at work (Hakanen, Bakker &

Schaufeli, 2006; Schaufeli & Bakker, 2004). The main thought is that Work-SoC and Work-

Home Facilitation function like resources and bring positive outcomes like Work

Engagement. Working in a resourceful environment might help build personal resources

(Vogt, Hakanen, Jenny & Bauer, 2016), and job resources might strengthen the experience of

comprehensibility, manageability and meaningfulness in the working context (Vogt, Jenny &

Bauer, 2013). This is also consistent with Hobfoll's (2002) thought of resources generating

more resources and his conservation of resources theory. Likewise, Bakker, Albrecht and

Leiter (2011) described how engaged colleagues can influence each other, and they see

engagement as something contagious and a result of the combined effort of individual

employees. Similarly, enabling resources and psychological rewards have a positive

relationship with Work-Home Facilitation (Voydanoff, 2004).

The possible health promoting role of a strong Sense of Coherence (SoC) in the

working context has received little attention (Feldt, Kinnunen & Mauno, 2000). As a respond

to this lack of knowledge Vogt et al. (2013) came up with the concept of Work-SoC. The

concept of Work-SoC is based on the same three dimensions (comprehensibility,

manageability and meaningfulness) as the general concept of SoC (Antonovsky, 1987a;

Antonovsky, 1987b; Antonovsky & Sourani, 1988) and is defined as "the perceived

comprehensibility, manageability and meaningfulness of an individual's current work

situation" (Vogt et al., 2013, p. 2). Comprehensibility is when the work is perceived as

structured, consistent and clear (Vogt et al., 2013). Meaning, the working environment

support confidence and feelings of security, supports communication in social relations, and

enables the employee to see the entire spectrum (Antonovsky, 1987b; Feldt et al., 2000). The

dimension of manageability is about perceived resources, and an employee which experiences

that the adequate resources are available to handle different stressors and demands at work

will have a strong sense of manageability (Antonovsky, 1987b; Vogt et al., 2013). The third

dimension, meaningfulness, is strong when the work is seen as worthy of commitment and

involvement, and makes the employee want to invest energy in the tasks (Antonovsky, 1987b;

Vogt et al., 2013).

The concept of Work-SoC is more dynamic and sensitive to change than the general

concept of SoC, and therefore it is more suitable as an indicator of the perceived health-

promoting qualities at work (Vogt et al., 2013). Results from Feldt, Kivimäkis, Rantala and

Tolvanen (2004) suggest that SoC affects the ability to mobilize and generate social resources

at work. Additional, SoC is a cognitive style to handle stressors (Antonovsky, 1987a) and this

should lead to individuals with a strong SoC to cope better at work than individuals with a

weak SoC, and therefore SoC should have a protecting effect (Söderfeldt, Söderfeldt, Ohlson,

Theorell & Jones, 2000). Feldt et al. (2004) argues for SoC to be a predictor for other work

characteristics, and according to Muller and Rothmann (2009) a strong SoC will give an

increased ability to perceive the work characteristics as something positive. A strong SoC is

also related to good organizational climate, low job insecurity, occupational and general well-

being (Feldt et al., 2000), lower level of psychosomatic symptoms and emotional exhaustion

(Feldt, 1997), fewer stress symptoms (Albertsen, Nielsen & Borg, 2001), and it might help the

employees to understand stressors at work and see them as manageable and meaningful (Van

der Colff & Rothmann, 2009). While a weak SoC tend to give poorer physical and

psychological health (Kinman, 2008).

Like Work-SoC, Work Engagement also consists of three dimensions. Engagement is

defined as "a positive, fulfilling, work-related state of mind that is characterized by vigor,

dedication and absorption" (Schaufeli, Salanova, González-Romá & Bakker, 2002, p. 74).

Vigor is characterized by high levels of energy and mental resilience while working, the

willingness to invest effort in one's work, and persistence in the face of difficulties (Schaufeli

et al., 2002). Dedication refers to high identification, a sense of significance, enthusiasm,

inspiration, pride and challenge (Schaufeli et al., 2002), and one perceives the work as a

significant and meaningful pursuit (Bakker et al., 2011). Absorption is about being fully

concentrated and deeply engrossed in the work, time passes by quickly and it is difficult

detaching oneself from work (Schaufeli et al., 2002). Both Work-SoC and Work Engagement

is about being involved and persistent in one's work. According to Vogt et al. (2016) the

experience of the working life as comprehensible, manageable and meaningful could promote

the perception of vigor, dedication and absorption. Furthermore, Britt, Adler and Bartone

(2001) emphasizes how finding meaning in one's work is important for engagement.

Bakker et al. (2011) argues how engaged employees have a positive attitude and an

activity level making them create their own positive feedback, and they explain this by

emphasizing how engaged employees also feel tired after hard work, only they associate this

tiredness with a positive accomplishment. Thereby, they see the reason for their tiredness as

something constructive and in their own power. This might imply that engaged employees

have a stronger SoC, and manage to find meaning in their situation.

Hypothesis 1: Work-SoC is positively related to Work Engagement.

Engaged employees have psychological capital, create their own resources and

perform better (Bakker et al., 2011), but as Bakker et al. (2011) emphasizes, it could be too

much engagement as well, and "overengagement" is the negative side of engagement. This is

where the employee risk taking their work home, and it might lead to health problems since it

undermines recovery (Geurts & Demerouti, 2003). Similarly, Antonovsky (1987a) argues for

experiences at work influencing other areas in life. This interaction between work and home is defined as "a process in which one's functioning (and behavior) in one domain (e.g. home) is influenced (positively or negatively) by quantitative and qualitative demands from the other domain (e.g. work)" (Demerouti & Geurts, 2004, p. 287).

Work-Home Facilitation leads to improved functioning at work and home (Geurts & Demerouti, 2003) and is defined as "the extent to which participation at work (or home) is made easier by virtue of the experiences, skills, and opportunities gained or developed at home (or work)" (Frone, 2003, p. 145). Involvement in one role, can lead to personality enrichment (Wayne, Musisca & Fleeson, 2004), personal growth and better functioning in other roles in life (Geurts & Demerouti, 2003). Work-Home Facilitation is negatively related to individual stress, and is positively related to job satisfaction, life satisfaction (Hill, 2005), job control, job support (Demerouti, Geurts & Kompier, 2004), and mental and physical well-being (Whiston & Cinamon, 2015). In addition, studies indicate Work Engagement to have a positive effect on the home area (Culbertson, Mills & Fullagar, 2012; Hakanen & Peeters, 2015).

One limitation of the JD-R Model is the solely focus on psychosocial work environment and the dismissing of factors not related to work (Hakanen, Schaufeli & Ahola, 2008), therefore this paper has included the Work-Home Interaction to further explore how work might have a relationship with areas outside the working place.

Hypothesis 2: Work-Home Facilitation is positively related to Work Engagement.

Kelloway, Gottlieb and Barham (1999) refers to how a conflict between work and home is identified as one of the ten major stressors in the workplace. When work and home interact in a negative way, it is referred to as Work-Home Conflict, this is defined by Greenhaus and Beutell (1985, p. 77) as:

A form of interrole conflict in which the role pressures from the work and family

domains are mutually incompatible in some respect. That is, participation in the work

(family) role is made more difficult by virtue of participation in the family (work) role.

This type of interaction could have a negative impact on the health, and perception of conflict

might lead to consequences on a physiological, psychological, behavioral, attitudinal and

organizational level. Which have been linked to headache, distress, increased smoking or

drinking, decreased engagement and/or reduced performance (Geurts & Demerouti, 2003).

Job demands are strongly related to a Work-Home Conflict (Demerouti et al., 2004), and

demands explain 20 % of the variance in Work-Home Conflict (Voydanoff, 2004).

Conversely, results from Hakanen and Peeters (2015) indicate that engaged employees have

resources protecting them from conflict at home. Seeing how most of the research associate

Work-Home Conflict with negative outcomes, it is natural to assume it is negatively related to

Work Engagement as well.

Hypothesis 3: Work-Home Conflict is negatively related to Work Engagement.

Engaged workers, of any age, has organizational benefits such as higher productivity

and lower intentions to leave (Carse, Griffin & Lyons, 2017; Halsbesleben & Wheeler, 2008;

Schaufeli & Bakker, 2004). Avery, McKay and Wilson (2007) found results indicating that

perceived age similarity relates to Work Engagement among the older employees, and

according to results from Rudolph and Baltes (2017) older workers are more engaged than

younger workers. In addition, their study indicates that older workers rapport better health

than younger workers. However, other studies indicate no relationship between Work

Engagement and age (Bakker, Demerouti & ten Brummelhuis, 2012; Kühnel, Sonnentag &

Bledow, 2012). Considering this disagreement, and the need for more research including age

as a central focus (Barnes-Farrell & Matthews, 2007), it would be interesting to further examine this relationship.

Hypothesis 4: Levels of Work Engagement will differ across different age groups.

On one side, one can assume that employees with a strong Work-SoC will experience Work Engagement. Similarly, employees with Work-Home Facilitation are expected to have a positive relationship with Work Engagement. On the other side, a Work-Home Conflict is assumed to have a negative relationship with Work Engagement. In addition, the relationships between age and Work Engagement is uncertain. Based on these assumed relationships, the research question is "How is Work Engagement across different age groups related to Work-related Sense of Coherence and Work-Home Interaction?"

Method

Procedure and Participants

This study uses data collected by ARK intervention program and the corresponding Knowledge Intensive Work Environment Survey Target (KIWEST) questionnaire. The data was collected in the period between October 2013 to December 2015 in Norwegian universities and university colleges. Employees with a minimum 20 % position and with regular payroll were invited to participate via an e-mail including a link to the questionnaire online. A total of 12 170 participants answered the self-administered questionnaire.

Descriptive statistics of the participants show that 53.6 % are women, while the remaining 46.4 % are men. The age groups show that 9.6 % of the participants are below 30 years old, and 23 % are between 30 to 39 years old. A total of 26.9 % are between the age of 40 to 49 years, while 24 % are between 50 to 59 years old. A total of 15.3 % of the participants where above 60 years old.

Regional committees for medical and health research ethics (REK) and Norwegian Centre for research data (NSD) have approved the ARK intervention program, and the data are collected by using ethical standards such as providing information letters, assure anonymity and voluntary participation. Participant in this data material was only measured at one time, and the study is therefore cross-sectional (Ringdal, 2013).

Measures

The scales used in KIWEST are standardized and validated from acknowledged research communities. Work-SoC was measured using a seven point scale on nine different items, using the same question: "How do you feel about your present job and workplace in general?" These items measured the three dimensions of SoC, comprehensibility, manageability and meaningfulness, using scales like *"Structured – Unstructured"*, *"Controllable – Uncontrollable"* and *"Clear – Unclear"* (Vogt et al., 2013). High score suggests a strong SoC, and Cronbach's Alpha was .87, and an acceptable value on the reliability of the scale (Field, 2013).

Utrecht Work Engagement Scale (UWES) is a questionnaire developed to measure Work Engagement based on the three dimensions, vigor, dedication and absorption (Schaufeli, Bakker & Salanova, 2006). The data in this paper is based on a UWES with nine items, where the three dimensions of Work Engagement was measured with three items each. Examples of items measuring vigor is "At my work, I feel bursting with energy" and "At my job, I feel strong and vigorous". Examples of items measuring dedication is «My job inspires me» and «I am proud of the work that I do». Examples of items measuring absorption is "I am immersed in my work" and "I get carried away when I'm working". These items range from *"Never"* (0) to *"Every day"* (6). High score on these items suggests high degree of work

engagement. The internal consistency on this scale was .93 ($\alpha = .93$), which according to Field (2013) is a above the accepted value.

Work-Home Facilitation was measured by four items, "The things I do at work make me a more interesting person at home" and "The skills I use at my job are useful for things I have to do at home" are examples of items. The items range from *"Strongly disagree"* (1) to *"Strongly agree"* (5), and high score represents higher degree of facilitation (Grzywacz & Marks, 2000; Innstrand, Langballe, Falkum, Espnes & Aasland, 2009; Wayne et al., 2004). Cronbach's Alpha was .64, and a little low as compared to the recommended level of .70 (Field, 2013). Several studies have excluded the item "Having a good day on my job makes me a better companion when I get home" (Grzywacz & Bass, 2003; Grzywacz & Marks, 2000; Innstrand et al., 2009). This is also done in this paper, giving the scale an internal consistency of .70 ($\alpha = .70$), and thereby an acceptable value (Field, 2013).

Work-Home Conflict was measured by four items ranging from *"Strongly disagree"* (1) to *"Strongly agree"* (5). Examples of items are "My job reduces the effort I can give to activities at home" and "Stress at work makes me irritable at home". High score on this scale indicate an experience of more conflict (Innstrand et al., 2009; Wayne et al., 2004). Cronbach's Alpha was .82, which is a good value on the internal consistency (Field, 2013).

Age were divided in three groups: Group 1: below 30 years (9.6 %); Group 2: 30-49 years (49.8 %); Group 3: 50 years and older (39.3 %), similar to the dividing Anthun and Innstrand (2016) used. Gender were used as control variable because previous studies show a gender difference in engagement, where women are more engaged than men (Avery et al., 2007; Mauno, Kinnunen, Mäkikangas & Nätti, 2005; Mauno, Kinnunen & Ruokolainen, 2006).

Statistical Analysis

The data was analyzed by using SPSS version 25, and ANOVA and regression were used to examine the data closer. To handle missing values, a Little's Missing Completely at Random (MCAR) Test was conducted. The result of this test was non-significant ($p > .01$) and one could decline the null hypothesis and assume that the data is most likely missing at random, and therefore representative for the population. Based on this, and the fact that none of the scales missed more than 5 % of the values (Dong & Peng, 2013), the missing values in the scales were replaced with series mean to create a complete data material.

A one-way ANOVA with Tukey post-hoc was used to test the differences in levels of Work Engagement across the three age groups. Separate hierarchical multiple regression analysis was then conducted on each age group to test the relationship between Work Engagement and Work-SoC and Work-Home Interaction. In step 1, the control variable gender was entered, and in step 2, Work-SoC was entered. In step 3 and 4 Work-Home Facilitation and Work-Home Conflict were entered, respectively.

Results

Correlation

The means, standard deviations and results from the correlation is presented in Table 1, and it shows that all the variables correlate at a significant level ($p < .01$). The results show a negative correlation between Work-Home Conflict and the other variables, and the strongest negative correlation is between Work-Home Conflict and Work-SoC ($r = -.44$, $p < .01$). Otherwise, the correlation between Work Engagement, Work-SoC and Work-Home Facilitation is positive. In addition, Work-SoC and Work Engagement have the strongest positive correlation ($r = .50$, $p < .01$).

Table 1

Mean, standard deviation and correlation between the different study variables (N = 12 170)

	Mean (SD)	1	2	3	4
1. WE	4.60 (1.02)	-			
2. WHF	2.97 (.74)	.43**	-		
3. WHC	2.97 (.86)	-.25**	-.26**	-	
4. W-SoC	5.08 (1.00)	.50**	.38**	-.44**	-

WE = Work Engagement, WHF = Work-Home Facilitation, WHC = Work-Home Conflict, W-SoC = Work-related Sense of Coherence, **p < .01.

ANOVA

A one-way between-groups analysis of variance was conducted to explore the group differences of age on levels of Work Engagement. Participants were divided into three groups according to their age (Group 1: below 30 years of age; Group 2: 30-49 years; Group 3: 50 years or older). There was a statistically significance at the $p < .001$ level in Work Engagement scores for the three age groups: $F(2, 12020) = 28.53$, $p > .001$. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. The effect size, calculated using eta squared, was .005. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 ($M = 4.50$, $SD = 1.01$) was significantly different from Group 3 ($M = 4.69$, $SD = 1.02$). Group 2 ($M = 4.56$, $SD = 1.01$) was significantly different from Group 3. Group 1 and Group 2 did not differ significantly from each other.

Regression

Separate hierarchical multiple regression was used to test the relationship between Work-SoC, Work-Home Facilitation and Work-Home Conflict with Work Engagement in different age groups, after controlling for gender. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and

homoscedasticity. There was a slight skewed curve on the normal distribution of all the variables. This means one should take cautions when generalizing the results.

The results indicate partial support for the research question. On one side, Work Engagement have a relation to both Work-SoC and Work-Home Facilitation. On the other side, there is no significant relationship between Work Engagement and Work-Home Conflict. Also, it does not seem to be any differences in age groups across the different models. The results are presented in table 2, and one can further see that gender is not significantly related to Work Engagement. The total models as a whole across different age groups is significant, Group 1: $F(4, 1169) = 150.79$, $p < .001$; Group 2: $F(4, 6060) = 791.68$, $p < .001$; Group 3: $F(4, 4779) = 463.66$, $p < .001$.

Table 2
Separate linear hierarchical regression analysis for the variables and their relationship to Work Engagement across different age groups (N = 12 170).

	Work Engagement					
	Below 30 years		30-49 years		50 years and above	
	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1						
Gender	.00	.00	-.02	.00	-.01	.00
Step 2						
Gender	-.02		-.02		-.01	
W-SoC	.51***	.26***	-52***	.27***	.47***	.22***
Step 3						
Gender	-.02		-.01		.00	
W-SoC	.40***		.40***		.37***	
WHF	.30***	.08***	.30***	.07***	.27***	.06***
Step 4						
Gender	-.02		-.01		-.00	
W-SoC	.41***		.40***		.36***	
WHF	.31***		.30***		.26***	
WHC	.05	.00	-.00	.00	-.02	.00
	$R^2 = .34$		$R^2 = .34$		$R^2 = .28$	

β = Standardized beta; ΔR^2 = R Square Change; R^2 = R Square; W-SoC = Work-related Sense of Coherence; WHF = Work-Home Facilitation; WHC = Work-Home Conflict, ***$p < .001$.

Discussion

The aim of this study was to examine Work Engagement and its relationships with Work-SoC and Work-Home Interaction across different age groups. Summing up, Work-SoC and Work Engagement has the strongest relationship (Group 1: $\beta = .51$; Group 2: $\beta = .52$; Group 3: $\beta = .47$). In addition, the oldest participants (50 years or older) reported more levels of Work Engagement than both younger groups (30 years or below and 30-49 years). The control variable gender is not significant, and the results indicate that there are no gender differences in relation to Work Engagement. On one side, this is in line with previous findings where the conclusion was that gender have no significance in Work Engagement (Schaufeli et al., 2006). On the other side, others have found the opposite result, and report data showing that women experience more engagement than men (Avery et al., 2007; Mauno et al., 2005; Mauno et al., 2006).

Work Engagement and Work-Related Sense of Coherence

The first hypothesis was that Work-SoC is positively related to Work Engagement, and the results support this. As mentioned previously, this relationship is the strongest, and the R Square Change show that an additional 26 % (Group 1), 27 % (Group 2) and 22 % (Group 3) of the variance in Work Engagement is explained.

These results are consistent with Söderfeldt et al. (2000) and their argue for a strong SoC leading to better coping in the working life. Likewise, results from Rothmann and Jordaan (2006) indicate that psychological experiences at work could impact academics Work Engagement. Engaged employees associate tiredness after work with a positive accomplishment, meaning engaged employees could experience the same stress and pressure at work as less engaged employees, but they interpret it in a different way and doesn't let it bring them down (Bakker et al., 2011). This could be because of a higher SoC, seeing how

individuals with a high SoC mobilize and generate social resources at work (Söderfeldt et al., 2000), and they have a good cognitive style to handle stressors (Antonovsky, 1987a). The results of van der Colff and Rothmann (2009) show that a strong SoC could contribute to employees understanding the stressors at work and see them as manageable and meaningful.

The positive relationship between Work-SoC and Work Engagement, are in line with the JD-R Model. Work-SoC could be considered a personal resource, and it will therefore contribute in the motivational process of the JD-R Model. This is also in line with results indicating that personal resources influence the perception of job resources (Xanthopoulou, Bakker, Demerouti & Schaufeli, 2007). This suggests that employees with a strong Work-SoC might assess the available resources in a more adequate way. Also, the way people evaluate themselves will affect how engaged they are (Airila et al., 2014), meaning perception affect behavior.

Work Engagement and Work-Home Facilitation

The results support the second hypothesis about Work-Home Facilitation to be positively related to Work Engagement (Group 1: $\beta = .30$; Group 2: $\beta = .30$; Group 3: $\beta = .27$). Additionally, results indicate that Work-Home Facilitation could explain an additional 8 % (group 1), 7 % (Group 2), and 6% (Group 3) of the variance in Work Engagement.

Work-Home Facilitations relationship with Work Engagement further contribute to research, and support the findings of involvement in one role leading to better functioning in other roles (Geurts & Demerouti, 2003). Furthermore, if one considers Work-Home Facilitation to be a resource of the individual, these results further support the JD-R model and the importance of resources in the motivational process to achieve engagement. Albeit, it is not consistent with the findings of Hakanen et al. (2008), where they conclude with home resources to have no influence on Work Engagement. One explanation could be because of

methodological differences, seeing how Hakanen et al. (2008) had a longitudinal design over a 3-year period. In addition, their sample was of Finnish dentists, while the sample in this paper is cross-sectional and of Norwegian academics, therefore the results cannot be compared. In addition, other results show that work resources explaining 10 % of the variance in Work-Home Facilitation (Voydanoff, 2004), suggesting that there is a relationship between the variables.

Work Engagement and Work-Home Conflict

The third hypothesis about Work-Home Conflict having a negative relationship with Work Engagement was not confirmed by the results. Indications of no relationship with Work Engagement could be because Work-Home Conflict are related to increased absenteeism (Goff, Mount & Jamison, 1990), and engaged employees are not likely to report themselves ill (Schaufeli, Bakker & van Rhenen, 2009).

In accordance with the JD-R Model, these results further underpin the thought of the motivational process and resources to create engagement. Work-Home Conflict might rather have a relationship to the negative aspect of the JD-R Model, the health impairment process, and a relationship to burnout and other demands (Innstrand, Langballe, Espnes, Falkum & Aasland, 2008). In addition, Voydanoff (2004) found results indicating that work demands explain 20 % of the variance in Work-Home Conflict. This further suggest that Work-Home Conflict is a part of the health impairment process of the JD-R Model (Demerouti et al., 2001), and the experience of conflict is seen as a demand. Seeing how it can be demanding to experience such stress at home, it will most likely have a spillover effect, where it is a carry-over or generalization of alienation from work into alienation into home (Geurts & Demerouti, 2003).

Work Engagement and Age

The results indicate age differences in levels of Work Engagement, and the fourth hypothesis is supported. Results from ANOVA suggest that the oldest employees experience higher levels of engagement than the younger employees. This is further supported by other studies (Bégat, Ellefsen & Severinsson, 2005; Rudolph & Baltes, 2017).

Barnes-Farrell and Matthews (2007) considered several aspects of why age often was positively correlated to job satisfaction, and these points are transferable to why age is positively related to Work Engagement. First, it might be a covariation. The relationship between age and Work Engagement might be an artifact for other factors that comes through a long experience of working life. Second, it might be because of historical events. Seeing how older and younger employees have experienced and grown up in different times, it might affect how they perceive and experience their work. Third, the positive relationship might be because of the job change hypothesis, which state that over time workers will be drawn towards jobs that fit their needs and expectations, making them more prone to be engaged and satisfied. Fourth, age is associated with gradual lowering of expectations and aspirations, which gives older employees lower standards for what they find engaging. Fifth, older workers are more suited to recognize the good and let go of the bad, and according to Carstensen, Pasupathi, Mayr and Nesselroade (2000) positive emotional experiences are more likely to last among older people, while negative emotional experiences are less stable.

Work Engagement and its Relations

The research question suggested that Work-SoC and Work-Home Interaction have a similar relationship with Work Engagement across age groups. Overall, this study indicates that this is partly confirmed, and Work-Home Conflict is the only variable with no relationship. Otherwise, both Work-SoC and Work-Home Facilitation have a positive relationship with Work Engagement. In addition, the model as a whole explains 34 % (Group

1), 34 % (group 2), and 28 % (Group 3) of the variance in Work Engagement. Although this is only small differences, this could imply that older employees have other factors that are more important to explain Work Engagement than just Work-SoC and Work-Home Facilitation. Anthun and Innstrand (2016) suggests that older workers have different values and preferences than the younger workers based on their differences in life situations.

The fact that Work-Home Conflict did not have a relationship with Work Engagement, might be because it has a relationship with the negative side of engagement, disengagement. Work-Home Conflict is previously seen to have a negative relationship with disengagement, suggesting that disengaged employees distance themselves from work and therefore it function as a coping strategy and leads to lower levels of Work-Home Conflict (Innstrand et al., 2008).

If one considers the individuals with a strong SoC to be able to use their available resources in an adequate way, one could assume that these individuals also put in some effort to have Work-Home Facilitation, seeing how resources generate more resources (Hobfoll, 2002), and this would make a good foundation for Work Engagement. Academics are driven by autonomy and flexibility (Bellamy et al., 2003), and it would be interesting to further investigate if employees in the academic sector overall have a stronger SoC than employees in other sectors. Seeing how SoC is a personal resource the individual uses when handling stressors (Antonovsky, 1987a), it might imply that only individuals with already strong SoC searches for work at universities and other carriers demanding intrinsic motivation.

Limitations and Strengths

The limitations of this study include the use of a cross-sectional survey design, which only makes it possible to prove correlational relationships between the variables. Another limitation is the use of self-report measures, which makes the answers not as reliable as with

other methods of data collection, but the completing of a survey demands less commitment

from the participants (Nardi, 2014). Despite the strength of the large sample size (N =

12 170), the results can only be generalized to employees at Norwegian universities. Another

strength of this study is the use of well-known and recognized indexes, making the reliability

and validity more certain.

Implications

Work-SoC and Work Engagement had a significant relationship, and it would be

interesting for further research to consider the possible relationship between the three

dimensions of both concepts. Perhaps the relationship between Work Engagement and Work-

SoC could become clearer if one considers the relationships between vigor, dedication and

absorption to comprehensibility, manageability and meaningfulness. Work Engagement

shows a significant relationship to Work-Home Facilitation, but not to Work-Home Conflict,

which might suggest that these are two different concepts and one should take a closer look at

the relationship between facilitation and conflict to further develop the knowledge about this

interaction. This study shows how resources are important for workers and implications for

further research should be to continue examining what generates resources so that the

knowledge about what fosters engaged employees are further expanded and developed.

Practical implications might be the inclusion of age in the development of interventions

directed towards engagement among workers. In addition, one should try to strengthen

employees SoC to ensure stronger personal resources.

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Main Conclusion

This master thesis has discussed Work Engagement and its relationship with Work-related Sense of Coherence and Work-Home Interaction in light of the Job Demands-Resources Model. This further developed my knowledge about positive processes at work and I gained a deeper understanding of how important Work Engagement is.

The first article concluded that individuals who have a strong Work-related Sense of Coherence might consider adequate resources to be available both at work and at home, and therefore manage to solve their problems and difficulties in a good way without draining themselves for energy. The strategy the individual chooses is important for how good the demands are handled.

In the second article, age was included to further examine Work Engagement and its relation to Work-related Sense of Coherence and Work-Home Interaction across different age groups. This article concluded with confirming Work Engagement and its relationship with Work-related Sense of Coherence and Work-Home Facilitation, and that older employees experience more engagement than younger employees. The relationship between Work Engagement and Work-Home Conflict was not confirmed. Based on this the Job Demands-Resources Model is further supported, and the motivational process shows how resources is needed, both personal resources and job resources, to succeed instrumentally and emotionally at work.

The main conclusion must be that resources are gold, and employees are dependent on both their own personal resources and job resources.

Appendix: Questionnaire

Work-SoC

How do you feel about your present job and workplace in general?

- Seven point scale between: Manageable - Unmanageable

- Seven point scale between: Meaningless - Meaningful

- Seven point scale between: Structured - Unstructured

- Seven point scale between: Easy to influence - Impossible to influence

- Seven point scale between: Insignificant - Significant

- Seven point scale between: Clear - Unclear

- Seven point scale between: Controllable - Uncontrollable

- Seven point scale between: Unrewarding - Rewarding

- Seven point scale between: Predictable – Unpredictable

Work Engagement

Response alternatives from 0 (Never), 1 (A few times a year or less), 2 (Once a month or less), 3 (A few times a month), 4 (Once a week), 5 (A few times a week), 6 (Every day).

- At my work, I feel bursting with energy

- At my job, I feel strong and vigorous

- When I get up in the morning, I feel like going to work

- I am enthusiastic about my job

- My job inspires me

- I am proud on the work that I do

- I feel happy when I am working intensely

- I am immersed in my work

- I get carried away when I'm working

Work-Home Facilitation

The response alternatives ranged from 1 (strongly disagree) to 5 (strongly agree).

- The things I do at work help me deal with personal and practical issues at home

- The things I do at work make me a more interesting person at home

- Having a good day on my job makes me a better companion when I get home

- The skills I use at my job are useful for things I have to do at home

Work-Home Conflict

The response alternatives ranged from 1 (strongly disagree) to 5 (strongly agree).

- My job reduces the effort I can give to activities at home

- Stress at work makes me irritable at home

- My job makes me feel too tired to do the things that need attention at home

- Job worries or problems distract me when I am at home