



PERSONALVETARPROGRAMMET

# FLEXIBLE WORK ARRANGEMENTS: STRESS-BUFFERING OR STRESS- EXACERBATION?

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## Abstract

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Job control is traditionally considered a buffer against stress. To find out if there is any evidence to support this idea, I compared the perceived job stress levels among school principals in the public sector within the Gothenburg region with their degree of job control, more specifically, the possibilities to flexible work arrangements they experienced that their job provide. The data collected in the study is based on the principals' answers to a questionnaire which I created for this study. This thesis aim to find out if the school principals who perceived that they had high levels of flexible work arrangements, (i.e. arrangements that allows an employee to alter the time and/or place when, where and how work is conducted on a regular basis), had lower levels of work related stress than the school principals that experienced that their work arrangements was controlled to a higher degree and lacking flexible work structures. In the study the collected data is analysed to see if it is possible to find evidence for or against the traditional view of personal control as a buffer against stress, and examine if flexible work arrangement may sometimes instead function as a stress exacerbation for the employees. The results presented in this thesis suggest that a perceived flexibility regarding work arrangement in fact has a positive correlation with the well-being of employees by making the employees' experienced stress levels slightly lower. The results in this thesis provide evidence for participants with higher degree of flexibility in their work arrangement reported less stress than workers who perceived a lower level of job control in deciding work location,

work time, and work related tasks. The results presented in this thesis therefore support the traditional view of flexible work arrangement functioning as a buffer against stress.

**Keywords:** flexible work arrangements; job control; flex-time; job stress; well-being

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## 1.1 Introduction

Personal control is traditionally viewed in experimental psychology and organisational research as a buffer against stress, as it has been shown in a large number of studies that the higher degree of job control an employee has, the lower are the risks for adverse reactions to external threats and demands (Ganster and Fusilier, 1989). The perception that a high degree of control has a positive effect on job stress levels (i.e., lowering the amount of job stress) can be traced back to Karasek's (1979) Demand-Control Model. One form of job control is when the employee are able to choose when, where and how to engage in work-related tasks. The ability to exercise this form of control for the employee constitutes the core of flexible work arrangements (Hill et al., 2001).

The concept of flexible arrangement can differ in regard how you chose to interpret it. In this thesis the conceptualisation of flexible work arrangement is the type of flexibility the employee has in form of making own decisions in where, when and how to perform their work-tasks. The type of flexibility I mean with flexible work arrangements in this thesis is a flexibility in favour of the employee, and not necessary the employers flexibility in decision making regarding the employee. Flexible work arrangement, in this sense, is therefor for and most about the employees ability to exercise control over their work-tasks and where, when and how these are performed.

The concept of flexible work arrangement is being praised in modern organisations, but despite this it may involve some risks, since it has been argued that it can impair the individual's wellbeing (Allvin et. al, 2006). *Arbetsmiljöundersökningen* (2007), a nationwide study in Sweden, discovered that workers with little authority over decisions had an increased risk of being sick-listed for long periods (Theorell, 2007). The conclusion of the study performed by Arbetsmiljöverket was that lack of task control and authority over decisions increase the risks of suffering from physical- and psychological illness (Theorell, 2007). But, other studies show different results. The freedom to exercise control over your work may be a stressor instead of a coping strategy, especially when the demands are high or diffuse (Allvin et. al, 2006). Despite its shortcomings, with the possible effects of flexible work arrangement functioning as a stress exacerbation, the flexible work life being praised in modern organisations, and therefore I find it interesting to analyse the relation between flexible work arrange-

ment and stress, and see if a correlation between flexible work arrangements and stress truly exists. If such a correlation proves to exist, I will next examine if it is positive or negative.

The consequences of deregulating the control over the employees may not be completely positive. The danger is that a deregulation may substitute the previous strict control by the management with a lack of support, which results in higher levels of stress for the employee (Allvin et. al., 2006; Isaksson & Bellaagh 1999). Flexible work arrangement may also increase the difficulties for the employees to regulate their work schedule in an optimal way to make sure that the employees do not get an overwhelming workload. One possible consequences of having a large workload is that the employees can end up even worse off for well-being than if the work arrangement are controlled and restricted by management (Allvin et. al 2006). The demand for a higher degree of flexible work arrangement is a result of changes in society through globalisation, increased competition between companies, and a development in information technology. These changes have made society somewhat boundless, (Chandra, 2012). One respect in which society moves towards becoming increasingly boundless is that the boundaries between work life and private life have been blurred. This increases the individuals possibilities to work from a distance, so called off-site, for instance work from home. This new, boundless way to work is characterised by a more individualised approach regarding work arrangement (Allvin et. al 2006). This means that the capacity for the individual to exercise influence over their specific work situation and alter the work arrangement increases. It also suggests that the individual has a larger amount of personal responsibility regarding the planning and execution of work tasks (Allvin et. al 2006).

Flexible work arrangements effects on employees well-being is quite ambiguous. Some studies find a positive relationship between flexible work arrangements and well-being (e.g., Anderson et al., 2002). However, this is not the case in all studies. Even if their study do not focus on stress levels in particular, Epstein & Kalleberg (2004) has shown a negative relationship of flexible work arrangement on employees' well-being.

The reason why I wanted to investigate the correlation between flexible work arrangement and stress levels is that modern organisations today seem to have a common interest in flexible work arrangements, judging from the fact that the demand for flexible work arrangement is constantly increasing, and another reason is that it is considered mainly positive for both employers and employees to adapt to these flexible structures of work arrangement (Theorell,

2003). The well-being of employees is also something that I find appealing to investigate, hence my interest in investigating if there is a correlation between stress levels and flexible work arrangements. I wanted to analyse if flexible work arrangements have an effect on stress and the individuals' well-being, and if it enhances or decreases the perceived levels of stress.

## 1.2 Purpose and research questions

This thesis aim to investigate the relationship between flexible working arrangements and the perceived stress levels of employees, by testing the hypothesis that flexible working arrangements reduce work related stress and function as a stress buffer. It will also analyse the collected data to see if it is possible to find evidence against the traditional view of personal control as a buffer against stress, and examine if flexible work arrangement may instead actually function as a stress exacerbation for the employees.

The purpose of this study is to examine whether or not there is a correlation between the opportunity for flexible work arrangement given to the employees, and the level of job stress the employee experiences, i.e., to see if flexible work arrangement has a correlation with perceived stress levels. If there is such a correlation, this thesis will also investigate whether the correlation is positive and can be said to function as an stress-buffer, or if it may instead be negative and have an exacerbating effect on stress levels. If a correlation exists between flexible work arrangements and levels of job stress, this is an important factor for Human Resource departments to consider when designing job specifications, in order to lower the perceived amount of stress amongst the employees. This could be done by proposing more flexible work structures, and thereby also offering a higher degree of job control for the employees.

This study aims to answer the question "Does flexible work arrangement affect the perceived levels of stress?" and, if the results show that such a correlation does exist, "Is flexible work arrangement diminishing or amplifying the experienced stress levels?"



## 2. Theories and previous research

### 2.1 Conceptualising flexible work arrangement

A common way to conceptualise flexible work arrangement is to take on a worker perspective, and that is also the intention in this thesis. Conceptualising flexible work arrangement through a worker perspective emphasises individual agency in the context of organisational culture and structure. By using this perspective, this thesis conceptualises flexible work arrangements as to which degree the employees are able to choose the tasks they perform in their professions, and in particular the choices that decides where, when, and for how long work tasks is performed (The Centre on Aging & Work at Boston College, 2007; Workforce Flexibility 2010).

According to Hill et al. (2008, p.152), workplace flexibility can be described as "the ability of workers to make choices influencing when, where, and for how long they engage in work-related tasks". By using this definition of flexible work arrangement we get two main domains of work place flexibility. The physical location where the employees engage in work-related tasks is one domain that is addressed by this definition. In this domain the arrangement "remote work" is addressed. This type of work arrangement can also be called to work off-site. The other main domain which is referenced by Hill et. al., (2008) is when and for how long these work-related tasks are being performed. According to this definition of flexible work arrangements stated by Hill et. al. (2008), it is the temporal domains of workplace flexibility that are addressed. In this study, both domains are in focus, i.e., the study aim to investigate to what extent the workers themselves can influence the time they have to spend at work, as well as when the work tasks are conducted. These domains together conceptualise the definition of flexible work arrangement used in this study. Further, flexible work arrangements are divided into a few categories that is of relevance for the study: Flexibility and time, for example, someone may choose to work 10 hours one day, and maybe fewer hours the next day; flexibility and place of work, for example, someone may decide to work off-site (i.e., work occasionally from home) instead of from an office. The core of conceptualising flexible work arrangement in this thesis is by measuring to what degree the employees have an ability to choose when and where to engage in work-related tasks, and also to what extent.

These options related to flexibility are often referred to as schedule flexibility and flex place (Hill et al. 2001).

## 2.2 Demand-Control Model

Advocates of flexible work arrangement suggest that the possibility to execute the work tasks under flexible circumstances provides better health for the employees, and therefore by extension lower job stress levels. This can be linked to Karasek's (1979) Demand-Control Model, which conceptualises the work environment as a construction, created by humans, capable of change to an optimal active learning environment (Karasek, 1979, 1998; Karasek & Theorell, 1990). The Demand-Control Model theorises that the level of control the workers have on their environmental situation is an important factor in determining health. This Model suggests that jobs combining high — but not overwhelming — demands, with a high level of control — which flexible work arrangement provides (according to Karasek) — leads to new learning, and an active behaviour among workers, as well as self-efficacy, which is beneficial in reducing the workers' stress levels (Karasek & Theorell, 1990; Theorell & Karasek, 1996).

It is common to use the Demand-Control Model when trying to map out the workers' psychosocial working conditions (Theorell, 2003). This is because the Demand-Control Model explains the relationship between external demands and the amount of control and possibilities the worker has to affect her own work situation, i.e., the amount of flexibility the worker experiences (Jeding et al., 1999). The main factors of the model are demand, control, and support. According to the model the optimal work situation is, as stated, when the workers experience high demands alongside high levels of control, (Kindenberg & Wallin, 2000). High demands and a small amount of control and a lack of social support are, according to the Demand-Control Model, seen as the most common cause for work related stress (Karasek & Theorell, 1990).

The purpose of the Demand-Control Model is to analyse the reasons behind psychosocial problems in an organisations work environment, but it does not address the effects these work environmental issues may cause. The Demand-Control Model is focusing on the work environment and not the personalities of the individuals in this environment. The model is based

on the psychological demands and the working conditions that are experienced by the employee in relation to the degree of job control perceived by the same employee. This relation makes it possible to determine and identify factors in work life that effect the employee's well-being. One of the most central concepts in the model is the concept of stress (Karasek & Theorell, 2009).

## 2.3 Stress

Stress is a broad concept that can be defined in various ways (Ahlbrecht, 1980). Stress as a psycho-physiological concept was introduced by the endocrinologist Hans Selye (Ahlbrecht, 1980), after exploring that stress functions as a natural response to external demands. Some researchers determine stress as a factor which makes humans sick and/or tired, while other researchers also claims that stress is a relationship, between the individual and her environment, which according to the individual is a threat to her well-being, by exceeding her resources (Jeding et al., 1999).

Stress has been conceptualised by researchers as a natural reaction that is triggered when the individual is under psychological or physical pressure (Jeding et al., 1999). Stress is a natural survival instinct that is activated when something essential is missing. Being stuck in that type of environment, without the everything essential, under a longer period can trigger stress and then it becomes dangerous and strenuous for the employees well-being (Ahlbrecht, 1980). Common psychological reactions to long-term stress are depression, anxiousness, and anxiety (Kindenberg & Wallin, 2000). When the stress risk becoming chronic, it can have serious consequences in the form of depression, constant tiredness, disturbed metabolism, and memory disorder (Kindenberg & Wallin, 2000).

Nowadays we use stress as a concept when we address work-related problems, like high workload, time pressure or rush (Arbetsmiljöverket & Statistiska Centralbyrån, 2001). Research has showed that stress can be either positive or negative. Positive stress is characterised by being moderate and stimulating, and gives the individual a possibility to exercise control (Arbetsmiljöverket & Statistiska Centralbyrån, 2001). Negative stress can be described as the pressure that is put on the individual when the demands do not match the individual's capa-

bility. This type of stress is most frequent in situations when the individual lacks opportunity to exercise control. It is the negative form of stress I focus on to investigate in this study.

Stress, and in particular work-related stress, has in recent years aroused growing interest in Europe. Most work places have changed dramatically, due to globalisation of the economy, use of new information and communications technology, more diversity in the work place, and an increased mental workload (Kompier, 2002; National Institute for Occupational Safety and Health, 2002). Simultaneously with this process, employees are reporting an increasing level of mental health problems. Work-related stress was found to be the second most common work-related health problem across the EU15 in 2000 (European Working Conditions Survey). Moreover, work-related stress has also been associated with a number of other ill-health outcomes (Kivimäki et. al, 2002), and also absence from work (Houtman et al, 1999). The potential outcomes of stress at work are thus rather diverse, and do not only pertain to health but also to actual participation in the workforce. Because of the large impact stress has on well-being and also possible absence from work, this thesis aims to search for a correlation between flexible work arrangement and stress, and to see if flexibility can work as a stress buffer, which would be a helpful tool for Human Resources departments to use in order to increase the well-being of employees.

According to the European Foundation for the Improvement of Living and Working Conditions (2007), work-related stress is a pattern of reactions. These reactions occur when employees are faced with work demands that are too demanding for their knowledge, skills or abilities, and therefore challenge their ability to cope. These demands can for example be related to time pressure or work load, or to the difficulty of the presented work tasks.

Previous research about the impact that flexible work arrangements has on employees' well-being has been summarised by many researchers, among others Butler et. al. (2009). Butler et. al. (2009) state that flexible work arrangement is beneficial for both the employer and the employee. For the organisation the benefits of flexible work arrangement are connected to higher productivity, lower degree of sick leave, etc. For the employee the positive aspects of flexible work arrangement are mainly that it contributes to a higher level of job satisfaction, and make the conflicts between work and private life decrease. The empirical research done by Butler et. al (2009) looks at the employees perception of well-being and stress levels, and arrives at results similar to the data provided by this thesis.

## 2.4 Job control and authority over decisions

Previous research about flexible work arrangements are quite ambiguous, some research focus on flexible work arrangement that mostly focus on employer control, which can be a stressor for employees, always having to be flexible for the organisations benefit. But, the for of flexible arrangement that I mean when using the concept in this thesis means a flexibility that gives the employees freedom to, by themselves, exercise control over work related tasks.

Job control as a concept refers to the amount of authority over decisions the employee has regarding task control and skill discretion (Jeding et. al., 1999). Job control has according to previous research shown obvious positive effects on well being for employees. Previous research has presented a clear correlation between job control and lower sick leave, as well as psychological well-being (Jeding et. al., 1999). According to Arbetsmiljöverket and Statistiska Centralbyrån (2001), lack of control can actually increase the amount of negative stress. There is also previous research that implies that lack of control is the most common risk factor for work related illness (Sivik & Theorell, 1995). Stress can occur in many different circumstances, but as claimed earlier, it is particularly strong when the ability to control the work demands os threatened (European Foundation for the Improvement of Living and Working Conditions, 2007).

Karasek and Theorell (1990) purpose that the concept of control measures how great decision latitude (authority over decisions and skill discretion) the employees has in their work. This is referring to the amount of influence and possibilities to make decisions regarding your work time, location and tasks (Theorell, 2003). Job control can be referring to both control over deciding which work tasks to perform, and also how the work tasks should be done, in addition to where and when the work should take place (Theorell, 2003).

## 3. Method

### 3.1 Chosen method

In this chapter the method chosen for this thesis is presented and described. The thesis is based on quantitative research, with a survey questionnaire as its basis. Working with this thesis has also resulted in a study of literature regarding stress and the Demand-Control Model. In the beginning of the process making this thesis, I studied theories that I thought relevant for my study. After that, I constructed a questionnaire for my survey, and the participants answers were analysed based on the chosen theories, i.e., my questionnaire was created on the basis of earlier research and well known theories which suited the purpose for my survey. I made a survey to collect quantifiable data concerning the two variables of stress and flexible work arrangements, which I afterwards analysed in purpose to see if these two variables have any relation.

I was interested in examining which factors that are relevant for the well-being of employees, and in this study the participating employees was school principals. If we know what factors that reduces stress for workers, it can be easier to set up a good work environment. I also found it interesting to examine if the flexible work arrangement reduce stress levels to such a high degree that it is desirable for employers to make changes towards more flexible work arrangement. Modern organisations seem to think that such a correlation does exist, hence all praises for flexible work arrangements. I wanted to see if such a correlation exists, or if there is no correlation at all, or if flexible work arrangements sometimes might enhance stress levels because of the possibility that workers might feel that they lack support by the management and have too much to decide themselves. I have chosen to limit my study to school principals in the Gothenburg region, and the reason why I have chosen school principals is because they have some possibility for flexible work arrangement. They do not always have to be at a certain work place, they can sometimes work from home and they have some control in deciding how and when to do their job by themselves. If I had chosen an occupation that is more flexible than that in its work arrangement, it would have been to many other factors (private life, family issues , etc.) affecting their stress levels. An occupation with less flexibility would not be interesting to examine either, since I would not have any data to ex-

mine, because of the non-flexible work arrangements. Even though I have chosen a specific occupation for my study, school principals, the workload can differ. Some of the schools and units where the participants in my study work consist of a large amount of pupils and co-workers, whilst some principals have a much smaller amount of pupils and co-workers in their schools and units. The catchment area each school principal is in charge of can also differ, which makes differences in the workload. In addition to this, the organisation each principal is in charge of can differ, some of them are responsible for preschool to 3rd grade, some for preschool to 6th grade, some for 7th to 9th grade, and some for 4th to 9th grade, hence a possibility that the work load is diversely burdensome for each school principal. This is also something to take under consideration whilst analysing the data presented by the questionnaire.

### 3.2 Selecting the participants

I have chosen to use only one profession in my study. The profession I have chosen is school principals. I decided to use only one occupation in my study, because I thought it would help me get a solid result between the two variables stress and flexible work arrangements. For this thesis I had to choose a profession where some possibility for work flexibility and job control exist, and therefore my choice of school principals in the Gothenburg region within the public sector as occupation in this thesis. This thesis presents data from the answers I got from the survey questionnaire. The reason I chose principals is because they are sometimes bound to perform their work tasks at a specific work place, but sometimes they have the ability to work off-site, and work from home (or somewhere else they find appropriately). I also have an idea that there is plenty of school principals that has a very large amount of workload, and therefore I thought that they would make an exceptional profession to investigate in this study. If it would appear that some school principals has a much lower degree of flexible work arrangement and also higher stress levels, and/or vice versa, it would be important to know for a Human Resources-department, as they could redesign the work arrangement for those with higher stress levels and make the work arrangement more flexible and thereby decrease the employees stress levels.

I contacted approximately fifty principals in the Gothenburg region to hear if they had time to participate in a study. Most of the school principals I contacted did not have time to participate, but eleven of them were kind enough to take time to answer my questionnaire. The questionnaire was e-mailed to those who accepted to participate, alongside with some information about the subject of this thesis. Also information about consent and anonymity was provided, and the participants had the possibility to withdraw their answers from the study at any time. Fortunately, all participants that took interest in participating in the thesis also maintained their answers all the way through the work process. One disadvantage with self selecting, which was the case of selecting participants to this thesis, is that it is only those who show interest in the study that will participate (Troost, 2010). This may have consequences for the result the study provide, since one possible outcome is that you might have a high degree of job stress, and therefore find it interesting to participate in the study. Another possible outcome that may occur as a consequence of self selecting amongst the participants that they may agree to be a part of the study because they are so satisfied with their work arrangement and experiences a high degree of job control. The questionnaires were self-administered. Instructions on how to fill up the questionnaires were given to the participants. A survey like this can suffer from the possibility that the respondents would not think seriously through the questions before answering. There is also a possibility of bias when questionnaire is self administered (Jenkins et al., 1992).

### 3.3 Quantitative research

I chose to use quantitative research to perform this study since I wanted to get quantifiable factors, something that was possible to measure. This is why I did a survey with questions on an ordinal scale level.

In quantitative research you tend to use a deductive approach, hence the hypothesis proceeds from the theory in question, and thereafter is tested. Thus, a large part of the quantitative research does not include a specified hypothesis since the theory tend to serve mostly as a guidance towards the area of interest (Bryman & Bell, 2011). Quantitative research has in some ways incorporated the scientific model's norms and approach, and above all has the



positivistic approach and norms been important for quantitative research. Quantitative research take an apprehension about the social reality, consisting of an external and objective reality (Bryman & Bell, 2011). The four main focuses doing a quantitative study is measurement, causality, generalisation, and replication (Bryman & Bell, 2011). Benefits with using quantitative research, is first of all that it is easy to measure and see if the variables correspond with each other. Another advantage with quantitative research is its objectivity - it provides something that can be measured, and takes on an outside-perspective (Borg & Westerlund, 2007). To make a quantitative research dependable, it is important that the study shows high validity as well as high reliability. Validity is whether or not you can trust the result the survey shows. If the validity is good, the implications made is highly reasonable, and if the survey has bad validity, likely implications will be hard to establish (Borg & Westerlund, 2007). Reliability shows us to what degree the chosen assessment tool produces stable and consistent results. If the reliability is good, the results are stable and consistent, and the opposite if the reliability is low (Borg & Westerlund, 2007).

### 3.4 Deductive approach

The methodological approach I have chosen for my study is a deductive approach, which means that I have developed a hypothesis based on existing theory, and after that I have designed a research strategy that can help me test the hypothesis (Wilson, 2010). Deduction is when you adept the gathering for empiric research data after a chosen theory, in opposite to induction which is when the theory is modified by the empiric result (Patel & Davidson, 2011). This thesis has been done with a deductive approach, and accordingly to the chosen approach, the questionnaire for collecting data has been designed on basis of relevant theories. Abduction is according to Patel & Davidson (2011) a way to describe the relationship between empiricism and theory in scientific research and could be described as a mixture of induction and deduction. I have used the deductive method in my study, and I have contracted my questionnaire on basis of theories about stress and the effect job control has on stress levels, and Karasek's Demand-Control Model. Choosing a deductive approach means developing a hypothesis based on existing theory, and then designing a research strategy to test the hypothesis (Wilson, 2010).

### 3.5 Hypothesis and variables

The aim of this thesis is to study whether a high level of flexible work arrangement affects psychological wellness, and stress levels in particular. The hypothesis (H1) is that a high amount of flexible work arrangement possible for the employee increases the psychological wellbeing (i.e., decreases the stress levels). This hypothesis is formulated on the basis of Karasek's Demand-Control Model (1979), and previous research and theories about stress and job control conducted by Theorell (2003), and Jeding et. al., (1999). Underlying this hypothesis is an idea that too flexible work arrangement instead can become a stressor in itself, and therefor reduce the well-being and increase the stress. Therefore we can formulate a second hypothesis (H2), as an alternative to the main hypothesis, claiming that if the possibilities for flexible work arrangement is extended in a too high degree, it can make the positive effects of controlling work time and work place disappear, or it may even increase stress levels. The hypothesis is formulated based on Karasek's Demand-Control Model, alongside with previous research regarding stress, and the effect job control has on stress levels.

I formulated seven (7) questions that belonged to one or another of the two variables (stress or flexible work arrangement) to research if there exist any significant correlation between the two variables. The correlation this thesis aim to establish will measure in what extent the two variables covaries. A covary can — but does not have to, emerge because of a causation, which is important to consider when showing the results (Borg & Westerlund, 2007). The questionnaires seven question could all be answered on the same scale. For the purpose of statistical analysis, numbers were assigned to each anchor. The anchors used were: Always (=1); Often (=2); Sometimes (=3); Hardly ever (=4); Never (=5).

### 3.6 The sample and ethical considerations

This thesis is based on survey data I collected by constructing a questionnaire based on relevant theories about stress and Karasek's Demand-Control Model and my hypotheses (H1 & H2). Survey as a method is used to get desirable information from the participants, and later on find patterns and compare the collected data, and be able to analyse the data sampled from the survey (Bell, 2000). The questionnaire was given to eleven school principals within the Gothenburg region, with an intention that they would provide relevant data in form of answers to the questionnaire.

The ethical aspects of this survey meets the demands the Swedish Research Council (2002) has on confidentiality, usage, information and approval. The survey has kept the respondents anonymity, and all the school principals participating has done so voluntarily. Furthermore the data collected from the questionnaire has only been used for the purpose of this study, and will be maculated when the thesis is finalised. All principals approved to participate. Due to a relatively low influx of school principals participating in the survey, there are some risks that the data is limited, which might affect the validity in a negative way (Borg & Westerlund, 2007).

## 4. Results

My seven (7) questions in the questionnaire will be merged into two variables, one concerning flexible work arrangement, and one regarding perceived stress amount the participants in this study. The variables will be used as an indicator for any correlation between stress levels and flexible work arrangements. Using the data the questionnaire provide for the two variables, the two hypotheses about stress and flexible work arrangement was tested.

### 4.1 Flexible work arrangement

In the questionnaire there are three questions that deal with flexible work arrangement. The answers to these three questions indicates the amount of flexibility. The questions concerning this variable was as follows: "Do you feel that the organisations working arrangement is flexible in terms of working time and working location?", "Do you have a choice in deciding what to do at work?", How often do you work at home as part of your job?". These three questions together make one of the two variables; the one regarding flexible work arrangement. The participants could rate each question on a scale from one (1) to five (5), with one (1) representing always and five (5) never. All participants answered the first question with little differences; six (6) of them claim that they often (2 on the scale) feel that the organisation's working arrangement is flexible in terms of working time and working location, and five (5) of them answered the same question with "sometimes" (3 on the scale). The question about task control was also answered quite similarly by the the participants. The question was if they had a choice in deciding what to do at work, and two (2) of the participants answered the question with "often" (2 on the scale), whilst nine (9) of them answered the same question with "sometimes" (3 on the scale). The last question regarding flexible work arrangement in the questionnaire was about work location, and the participants had to answer how often they work at home, as part of their jobs. One (1) of the participants claimed always (1 on the scale) working from home, four (4) participants said that they often (2 on the scale) worked from home, three (3) participants works sometimes (3 on the scale) from home, whilst further three of the participants hardly ever (4 on the scale) works from home. The results show that all participants but one felt that the working arrangement often, or sometimes, was flexible in

terms of working time and working location, which indicate that work arrangements for a school principle is quite flexible in general. The results regarding the question about work off-site was a bit more scattered, and one of the participants in the research always worked from home, whilst three of them hardly ever worked from home. The answers do not show if the participant who stated that he or she always worked from home did this because of flexible work arrangement, hence working off-site, or if it is simply because the work tasks would not be done in time otherwise. Similarly, the questionnaire do not provide information regarding why the three participants who claimed that they hardly ever work from home do not work off-site because they lack the option in doing so, because of inferior flexible arrangement, or because they prefer to locate their work day to the work place.

Table 1.1

|                | Flexible work arrangement in the organisation - work time and/or work location | Work at home as part of the job | Choice in deciding work tasks | Have to neglect tasks because of too much work | Experiencing the job to be stressful | Feel pressure to work long hours |
|----------------|--|---------------------------------|-------------------------------|--|--------------------------------------|----------------------------------|
| 1. Always      |  | 9 %                             |                               | 18 %   |                                      |                                  |
| 2. Often       | 45 %   | 36 %                            | 18 %                          | 36 %   | 45 %                                 | 45 %                             |
| 3. Sometimes   | 45 %   | 27 %                            | 82 %                          | 36 %   | 36 %                                 | 27 %                             |
| 4. Hardly ever | 9 %  | 27 %                            |                               | 9 %  | 9 %                                  | 27 %                             |
| 5. Never       |  |                                 |                               |  |                                      |                                  |

The question regarding the participants possibilities for deciding their work tasks themselves, and exercise control over the content of their work tasks, all the participant seems to have quite flexible work arrangement, since all of them claimed that they often or sometimes have a choice in deciding what to do at work.

*Table 1.1: Shows the participants answers in percentage*

In Table 1.1 we can see the participants answers to all of the questions in percentage, besides the one question where the participants had to rate the level of their job stress on a scale from 1 (extremely stressful) to 5 (not stressful at all). This table shows that all participants often or sometimes have job control in deciding their own work tasks. Also 90% of the participants felt that their organisation often or sometimes had flexible work arrangement in form of flexible work time and/or work location. It was a bigger spread in the answers to the second (2) question, the one concerning work off-site, and in this case from home. The spread in this question can come from different interpretations of the question, because it can mean different things; both if there is a possibility to work from home, or it can be read as if they have to work from home (due to a massive and overwhelming amount of work load), for example.

## 4.2 Stress

To examine the experienced level of stress, I formulated four (4) questions regarding this variable in the questionnaire. The questions the participants had to form an opinion about was following: "Do you have to neglect some tasks because you have too much to do?", "How often do you find your work stressful?", "Do you feel pressured to work long hours?" and last but not least, "How would you rate the level of your job stress? (1 being extremely stressful, 5 is not stressful at all)." The first three questions were rated on the same scale as the questions about flexible work arrangement. When answering the first question, two (2) of the participants claimed that they always (1 on the scale) neglect some tasks because of a too heavy work load, four (4) of them stated that they often (2 on the scale) neglect some tasks, and four (4) other participants neglect tasks sometimes (3 on the scale), whilst one (1) said that they hardly ever do so (4 on the scale). The second question was about how often the participants found their job stressful, and six (6) of them answered that they often do (2 on the scale), four (4) that they sometimes do (3 on the scale), and one (1) that they hardly ever do. The third question with the purpose of examining the participants' stress level, was regarding the participants perceived pressure from management to work long hours. Five (5) of the participants claimed that they often (2 on the scale) felt that way, four (4) of them felt that they sometimes (3 on the scale) had a pressure to work long hours, whilst three (3) of the participants hardly ever (4 on the scale) felt that kind of pressure. When the participants had to rate the level of their job stress on a scale from 1 (extremely stressful) to 5 (not stressful at all), three (3) participants rated their stress at level 2, four (4) at level 3, and four (4) of the participants at level 4. The answer to the question regarding if the participants had to neglect some work tasks were quite scattered, since two of the participants stated that they always have to neglect tasks because they have a work load that is too heavy. This is indeed a stressor, but the opportunity to be able to choose which tasks to prioritize does actually show an indication that the participants have some amount of job control even though they have an overwhelming work load. One of the participants felt almost the opposite, and claimed to hardly ever having to neglect tasks. The context behind this is hard to tell from a questionnaire, but as explained earlier, school principals have different amount of responsible in practice, hence the difference in workload. When answering the question about how often the participants finds their jobs stressful, none of them answered the questionnaire with always, which is an indicator that even the participants with extremely heavy workload do not have a stupendous

amount of stress, and this can have something to do with the job control that flexible work arrangement provides.

### 4.3 Flexible work arrangement and its correlation with stress

The results I got from the participants did not differ that much, despite the fact that the participants' working situation in reference to the difference in number of co-workers and pupils under their responsibility, they seemed to have similar work experiences regarding both flexibility and stress. But, there were those who rated their job stress at level 4 (the second lowest degree of stress on the scale), which indicates that they are not that stressed because of their job. The participants who had the lowest job stress level, did in all cases but one also answered with quite high numbers (=low degree on the scale) in the other questions about stress, which amplifies the interpretation that they are not that stressed. The participants with the lowest levels of stress did also tend to feel that they had quite flexible work arrangements, which indicates that the control you get from flexible work arrangement do function as a stress buffer. The participants who scored the lowest on the questions related to work related stress, also tend to score quite high on the scale regarding the questions about flexible work arrangement. So, if the participants felt that they had the possibilities to flexible work arrangement and experienced that they had the opportunity to exercise some job control, they per se felt lower degree of stress related to their work. There was only one anomaly where the participant felt low stress, but hardly ever felt that the working arrangement were flexible in working time and working location. I do not know if this anomaly emerges because of lacking correlation between the two variables, or if it is because of other underlying reasons that the questionnaire did not reveal. The participant in question did not feel a pressure to work long hours either, and did not have to neglect tasks in a high degree, so there is a possibility that the anomaly rises because of the participant may have a lower workload (perceived or actual) than the other participants. This is something that the questionnaire did not answer, so this is only a speculation based on the collected data. The result that the research provides support the main hypothesis (H1), that flexible work arrangement increases the psychological well-being (i.e., decreases the stress levels). The research does not provide hypothesis two (H2) which stated that too large amount of flexible work arrangement can make the positive effects



of being able to control work time and work place disappear, or even increase stress, any relevant support. The anomaly indicates that flexible work arrangement is not necessary for obtaining low levels of work related stress, but it does not indicate in any way that flexible work arrangement is a stress exacerbation either.

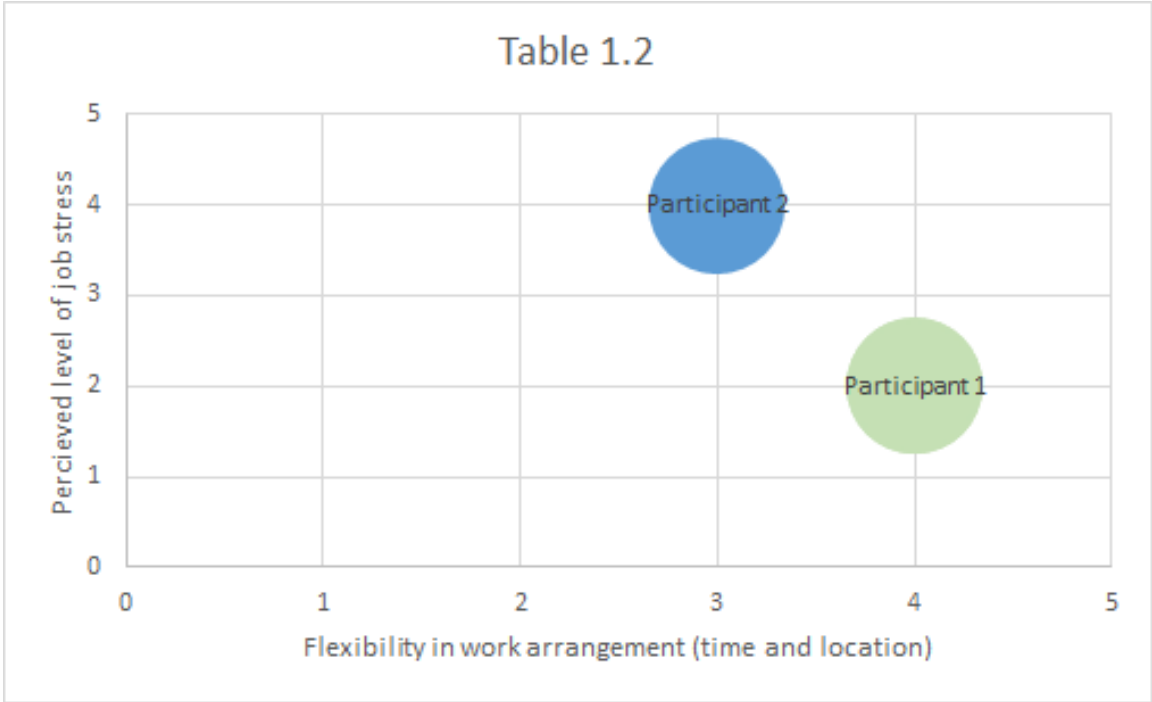


Table 1.2: Two examples of how perceived levels of stress correlated with flexible work arrangement.

Table 1.2 shows us two variables, one regarding stress and one regarding flexibility. Two of the questions from the questionnaire function as variables. The y-axis shows value, which here is regarding how stressful the participant rated their job to be. The x-axis shows us in which degree the participants felt that they had job control in form of flexible work arrangements. I have compared the answers from two participants, to show the difference in stress level, which may arise because of an indifference in possibilities for flexible work arrangement and the job control that amount to. Participant 1 has, as we can see in the diagram, a very low amount of job related stress. The level of stress was rated as four (4) by participant 1 (the second lowest degree of stress on the scale). Participant 1 also stated in the questionnaire that he or she often (2 on the scale) felt that the work arrangements regarding work location and work time is flexible. Participant 1 therefore function as an example that verifies the main hypothesis (H1), that a high degree of job control, presented in the thesis as flexible work arrangements, has an effect on well-being that decreases stress levels. Participant 2 answered

the question regarding the organisation's flexibility in work arrangement with number three (3) on the scale, which represents that the participant feel that he or she sometimes has the possibility to flexibility regarding work time and work location. When answering the question related to stress in the questionnaire, participant 2 rated his or hers level of job stress as two (2) on the scale. On the scale that has been used to collect this data, number two (2) is the second highest level of perceived job stress. The answers provided by participant 2 shows that the perceived level of job stress is quite high, and the possibility for flexible work arrangement is not always given. If we compare participant 2's answers with the data collected from participant 1, we can see that the participant with slightly more flexible work arrangement in concern of work time and work location (and therefore higher degree of job control) had a lower level of job stress.

#### 4.4. Analysis and interpretation of the results

The result of the questionnaire provides support for the main hypothesis (H1), which states that flexible work arrangement increases the psychological well-being (i.e., decreases the stress levels). The hypothesis is formulated based on previous research and theories about stress, and the Demand-Control Model by Karasek (1979). The findings in this thesis support the idea that flexible work arrangements, in form of employee control among others, is positive in relation to psychological well-being and can function as a buffer against stress. Thus, as Karasek expressed already in 1979, the claim of being able to make decision and practice judgement as a function of job control "enhances the individual's [...] ability to cope with the environment, it is not a source of stress" (Karasek 1979: 303). This thesis shows that Karasek's statement still is very much current. My research did not find evidence that contravene the common beliefs that flexible work arrangements can work as a stress buffer, instead it enhanced the idea that stress levels will be lower if the employees have possibility to exercise job control. Collectively, the results in this thesis provide evidence that participants that perceived that they had flexibility in their work arrangement reported less stress than workers who perceived a lower level of job control in deciding work location, work time, and work related tasks.

But, despite the fact that this study is supporting previous research and theories regarding job control and flexible work arrangement as a stress buffer, it also shows that the possibility to work flexible times and/or from flexible location may not be enough to reduce stress, by itself, for employees to an acceptable level. Even though flexible work arrangement led to a somewhat lower level of stress for the participants in the study, many of the participants still had stress levels above desirable levels. It would be desirable to have a lower degree of stress, since stress is a main problem regarding long time sick leave. This may be something that is significant within the profession that is researched in this thesis, and do not have to represent other occupational groups. The pressure to work long hours and the fact that many of the participants had to neglect some tasks indicated that it is quite a heavy workload for school principals in general.

Although I did not find any evidence supporting the second hypothesis (H2), that stated that high levels of flexible work arrangement can make the positive effects of job control disappear, or increase stress, in this study, this does not mean that lack of boundaries in flexible work is without problems. Jobs that demand much of the employee tend to spill over negatively into private life and family time, and this is something I noted in my study as some of the participants felt that they had to work from home, if the reason for working off-site was to be able to get their work done in time. If the work is done both during work hours at the office, and at home after the work day, this is something that will increase the work hours, and it is also possible that it may interfere with the participants leisure time and family life if — and when, they mentally carry work home. If the reason for working off-site instead is because of the participants have the possibility to do so, this may not be an issue. But, as stated, the data that has been collected in this study does not support that job control and flexible work arrangements may be less positive for the experienced amount of stress for the employees, or negative in any way.

Although the fact that the data supported theories and research about job control, and in this case especially flexible job arrangement, being a buffer against stress, there may still be a reason to discuss the impact of job control. Even though the study shows that flexible work arrangement can decrease stress in a small amount, it does not change the nature of job demands and the participants did not meet the increasing demands without having to increase job hours or cut down on doing some work tasks because of time limits. Therefore, it is not as

easy as the advocates of flexible work arrangement may propose; high level of job control and more flexible arrangement in work time, location, and task does not per se change the nature of job demands. Flexible work arrangement by itself does not change stressful work burden into stimulating work challenges. Despite that my research do not show any data regarding the participants work engagement, it do show that stress levels still remain relatively high even though the employees perceive that they have quite flexible work arrangements.

The results in this thesis indicate that perceived flexible work arrangements in fact have a positive correspondence with employees well being by making the perceived stress levels slightly lower. This finding fits with the theories that suggests that job control in form of flexibility regarding work arrangement may help individuals balance responsibilities and thus feel less stressed.

The purpose of the thesis was to answer the question "Does flexible work arrangement affect the experienced levels of stress?" and, if the result would indicate that it does exist a correlation, the next question was "Is flexible work arrangement preventing or amplifying the experienced stress levels?" The first question was answered with an affirmative answer event though the data affirming a correlation was quite marginal. The correlation that the survey found between flexible work arrangement and stress levels were positive, the perceived levels of stress were slightly lower among the participants who felt that they had flexible work arrangements.

## 5. Discussion and conclusion

Karasek's Demand-Control Model is suggesting that the level of control the employee has on their work situation is an important factor in determining their work related well being. This model suggests that jobs that offer high control, something that can be provided by flexible work arrangement, leads to new ways of behaviour amongst the employees which work in a beneficial way reducing stress levels (Karasek & Theorell, 1990; Theorell & Karasek, 1996). This study found no evidence against Karasek's and Theorell's claim, but rather empowered their statement, even though the variables effect on each other were marginal, and may have arisen from underlying variables that the research did not show. Demand, control, and support are the three core factors of the Demand-Control Model. This thesis only examines the correlation between the control factor and perceived stress levels amongst the participants, but these variables showed a positive correlation. According to the Demand-Control Model, an optimal work situation is characterised by high demands, alongside with high levels of control (Kindenberg & Wallin, 2000). Even though this thesis only examine in what degree the participants feel that they have the ability to control their work tasks, work time, and work place, by implications school principals work demands are quite high. According to the Demand-Control Model, high demands and a small amount of control and a lack of social support is seen as the most common cause for work related stress (Karasek & Theorell, 1990). In this research none of the participants stated that they perceived their job control to be extremely low, which may be one reason why this study did not find any support for or against the statement that claims low control function as a stress exacerbation.

Despite the fact that stress can be either positive or negative, this thesis only examines the correlation between negative stress and flexible work arrangement. Negative stress in work situations arises when the demands are too high and when the employee lack possibilities to exercise control. The result that could be measured by the answers from the questionnaire the participants responded to provides more evidence to this theory, since the participants who expressed highest stress levels in generally also felt that they had somewhat lower possibility to work under flexible arrangements.

The result this thesis present is similar to the findings Butler et.al (2009) discovered, namely that the degree of flexibility is connected to the employees perceived levels of job stress. In

this study none of the participants stated that they lacked opportunities to flexible work arrangement completely, which can be explained by the fact that all participants in my research has the same profession, and the profession in it self may demand some degree of flexibility regarding work arrangements. In the empiric study Butler et. al presented, they found that low flexibility produces a significantly higher degree of stress. This thesis has not find any data to dispute this statement.

The data this study provide about flexible work arrangements, functioning as a buffer against work related stress, is agreeing with the Demand-Control Model (Karsek, 1979). The conclusion this thesis draws is that high flexibility in work location, work time and work location provides the employees with an extended amount of job control, which is desirable according to the DCM, since high flexibility tend to decrease work related stress levels. The findings in this thesis has therefore support in theory, and flexible work arrangement is, or could be, something that employers and organisations should pay attention to as it has a positiver correlation with employees well-being and job stress levels.

This thesis differs from previous research regarding job control and its correlation with stress because it is restricted to the type of job control that flexible work arrangement provide, and its focus on school principals stress levels and flexible work arrangements. The contribution of this study must be interpreted by the context of its limitations; the number of people included in this thesis is rather small, they all have different amount of work load and their possibility to exercise job control differs even though they in theory has similar work specifications. In conclusion, the reported findings add to accumulating evidence of adverse effects on psychological well-being jointly produced by flexible work arrangement and the job control necessary for those arrangements.

The data sampled in this research indicate that organisations may benefit by creating a high (higher) level of control for the employees, because it can lower the levels of work related stress. To create a higher lever of job control it is crucial that the work arrangement are flexible regarding the employees possibilities to affect their work location, work time (be able to work off-site), and, to a certain extent, work tasks. This is something that Human Resource-departments may benefit from keeping in mind when job specifications are being drawn up. The factor job control constitute tend to, in accordance with the main hypothesis presented in this thesis, be an important factor for determine perceived work stress. A high (higher) level

of control may function as a stress buffer, thus alleviate the negative effect stress can have on well-being.

This study aimed to examine whether or not it exist a correlation between the flexible work arrangement the school principals experienced, and the amount of job stress levels. The data this thesis provides states that such a correlation do exist, even if the collected data had some limitations. The correlation between flexile work arrangement and the employees perceived stress level is according to this study, which support the Demand-Control Model and precious research regarding job stress, is positive. A positive correlation is an important factor for Human Resource departments to have knowledge about, because more flexible arrangement in work time, work location, and work tasks positive influence on employees well-being amount to positive result for the employers as well, with presumably lower degree of sick leave amongst the employees. By using the knowledge about a positive correlation between flexible work arrangements and stress levels, organisations may benefit proposing more flexible work structures, and by that, offering the employees a possibility to exercise job control.

The influence of flexible working arrangements on employees perceived stress levels was investigated in this thesis. Flexible working arrangements are often proclaimed as being a crucial mean in providing the employee with a feeling of job control; therefore it was anticipated that a flexibility in work arrangements would reduce the levels of job stress amongst the employees. There is a significant relationships between flexible working arrangements and stress levels, however it is possible that not all the effects are in the direction anticipated, even though this study only finds data which provide evidence for the benefits of flexible work arrangements.

## 5.1 Critical evaluation of theories and method

Although this thesis has reached its aim of finding out whether there is a correlation between flexible work arrangement and stress levels, there were some shortcomings as well as unavoidable limitations. First of all, the sample size investigated in my study was a lot lower than preferred. Because I used a survey to collect quantitative date, I would have gained a lot from a broader number of participants and the research would feel more reliant. Since the

sample size collected in this study was a bit too small, it made it more difficult to find significant relationships from the data. Statistical tests, as my questionnaire, normally require a larger sample size to be more reliable. So, I wished that more school principals would have agreed to participate in the study as it would have made it more credible. I reached out to approximately fifty (50) principals, but as my thesis shows, only eleven of them had time to participate in the study. I wanted a larger amount of school principals to participate in the study, because then my data would have been much more reliable and it would have been easier to establish a correlation between my two variables.

If I had known from the beginning of the research that the attendance of school principals would be so low, I may have considered doing a qualitative research instead. But, the fact that only a fifth of the school principals I asked to participate in the research felt that they had the time to do so, may indicate that there is a large number of school principals with high levels of stress, although this is not something that this thesis has been able to research. It would have been interesting to have more data to compare in order to have a more reliable outcome in my thesis. The response rate should be a lot higher to be representative, but this is something that was beyond my control unfortunately. I wish that I had more data regarding the different variables, so perhaps it would have been better to formulate a questionnaire with more questions for each variable, because then the margin for interpretation would have been smaller, and the result more exact. But, the participants only wanted to be a part of the research if the questionnaire was not too long, hence the limit of six (6) questions. The measure I used to collect the data should have been different if I had known from an earlier stage that the response rate would be this low.

I also wished that I had elaborated a longer questionnaire, and perhaps a few more questions regarding job control. After I completed my interpretation of the findings, I discover that the way in which I gathered data inhibited your ability to conduct a thorough analysis of the results. I regret not including a specific question in my questionnaire that, in retrospect, could have helped address the issue about job control and how the perceived amount of control correlates with the actual flexible work arrangements. In future research, the method for gathering data may be designed a bit different; either have more participants and a higher response rate or to do a qualitative research instead of quantitative research. The principals who did



not have time to even answer seven question in a questionnaire mailed to them would perhaps be the most interesting to investigate in a study concerning stress levels.

The fact that the questionnaire was mailed to the participants makes the data so called self-reported data, since they answered the questions all by themselves before mailing me the answers. Self-reported data is limited, and this is because it rarely can be independently verified. All participants have their own interpretation of concepts regarding stress, flexible work arrangement, and so on. They may also have different interpretation of the numbers on the scale even though I made an effort in making the scale very clear objective. The thesis has also been limited by longitudinal effects, and the time available to research and investigate the effects of flexible work arrangements affect on stress was constrained by some time limits.

In addition, another limitation in accomplishing this thesis has been because of my decision to examine it in English. English is not my first language, hence the difficulties with fluency in the chosen language. I chose to do the thesis in English because of its advantages, for example being accessible to read for a greater number. The disadvantages are quite obvious, it is more time consuming in writing in a language that is not your first language, and the risk for grammatical errors increases. Despite that, I do not regret my decision in writing this thesis in English, since it is very instructively and developing having to challenge your comfort zone.

## 5.2 Suggestions for future research

If there had been no time limits for the research, or if I would have access to a longer period of time for doing this research, it would have been very interesting to see if there would be changes in the participants stress levels over time if the Human Resource department made the work arrangements more flexible. Then I could have compared those results with the originally, which has been collected in this research. Then the results for correlation between the two variables; flexible work arrangement and stress levels, could be would be investigated under time and be more reliable. It would also be interesting to du this research as a qualitative study, and interviewing the school principals about how they perceived there work ar-

rangement, and maybe finding other underlying reasons that increases or decreases their stress levels.

Another aspect that I find interesting with flexible work arrangement is its interference with the private life, family, etc. It would be interesting to investigate the effects flexible work arrangement may have on employees' personal time, if there is an interference at all. And, if research shows that the limits between work and personal life gets blurred — how does that affect a persons well-being?

For future research regarding flexible work arrangement and the perceived levels of job stress, it may also be interesting in investigating if it exists any differences in the correlation between these two variables depending on gender. If my study would have had a higher range of participants, this would have been interesting to examine. Could it perhaps be more beneficial for one gender to have flexible work arrangement, because it decreases levels of job stress in a higher degree than for another gender? This is something that could be examined if more data was collected in the research.

It would also be interesting in investigating if there is differences between public- and private organisations. The school principals participating in this study all work within the public authorities, and future research might find interesting results if they compared public sector with schools in the private sector, to see if the correlation between flexible work arrangements and stress levels are the same in both public- and private sector.

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#### Flexitime and stress

|   |  | 1 Always | 2 Often | 3 Sometimes | 4 Hardly ever | 5 Never |
|---|--|----------|---------|-------------|---------------|---------|
| Do you feel that the organisation's working arrangements is flexible in terms of working time and working location? |  |          |         |             |               |         |
| Do you feel pressured to work long hours?   |  |          |         |             |               |         |

## Flexitime and stress

|  |  | 1 Always | 2 Often | 3 Sometimes | 4 Hardly ever | 5 Never |
|--|--|----------|---------|-------------|---------------|---------|
| How often do you work at home as part of your job?   |  |          |         |             |               |         |
| Do you have a choice in deciding what to do at work?   |  |          |         |             |               |         |
| Do you have to neglect some tasks because you have too much to do                                      |  |          |         |             |               |         |
| How often do you find your work stressful?   |  |          |         |             |               |         |
|  |  | 1        | 2       | 3           | 4             | 5       |
| How would you rate the level of your job stress? (1 is extremely stressful, 5 is not stressful at all) |  |          |         |             |               |         |

Attachment

