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POTENTIAL BENEFITS OF A STRESS REDUCTION PROGRAM BASED ON RELAXATION METHODS

Master Thesis

Supervisor; Liina Randmann, PhD

I hereby declare that this thesis is entirely the result of my own work and submitted for the Degree of Master of Science at Tallinn University of Technology. For the present thesis no degree has been conferred on me at either TUT or any other university

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The work meets the stated requirements for a Master’s thesis

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ABSTRACT

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Jenni Pitkänen

In today's dynamic work life employees are expected to be healthy, dedicated and to work efficiently. How to maintain and increase employee's well-being is a crucial question, which has received a lot research interest in recent years. Positive psychology, mindfulness, meditation and relaxation practices have started to provide solutions to the question of how to increase employees' well-being and prevent stress. Corporations are implementing employee well-being practices focused on mindfulness and meditation methods. Are meditation practices effective in stress reduction and do they improve the well-being of the employees? Can employers boost productivity and competitiveness by investing in their employees' psychological and emotional well-being through these types of programs? The research theme of the current paper is founded on these questions.

The research is an experimental pilot study including 66 participants (35 in the test group and 31 in the control group). The test group practiced guided relaxation over 7 weeks by attending guided relaxation sessions at a relaxation studio in Finland, conducting home practice and writing a journal about the experience and effects. The research questions of the study are as follows: 1) Is psychological well-being improved by practicing guided relaxation? 2) Does the regular practice of the method have an effect on work-related phenomena such as psychological capital, work engagement or stress levels? 3) What are the potential benefits of the practice for the quality of life experienced by the individuals involved?

The results of the study indicate that the stress reduction program based on relaxation methods can improve psychological well-being. In a sample of professionally active adults in Finland a positive change occurred in the test-group participants' self-determination, independence and regulating behaviour from within. The stress-levels of the test-group participants decreased over the seven-week period of the experiment, their experienced quality of life increased, they felt more optimistic and perceived their work to be more meaningful.

***Keywords*; Psychological well-being, relaxation methods, stress, coping, work engagement, psychological capital**

KOKKUVÕTE

STRESSI VÄHENDAMISE VÕIMALUSED LÕDVESTUSMEETODI ABIL

Tänapäeva dünaamilises tööelus oodatakse töötajatelt, et nad oleksid terved, pühendunud ja efektiivsed. Kriitiline küsimus on, et kuidas säilitada ja tõsta töötajate heaolu ning see on uurijate tähelepanu köitnud viimastel aastatel. Positiivne psühholoogia, teadlikkus, meditatsioon ja lõõgastuse praktikad on hakanud pakkuma lahendusi küsimusele, et kuidas tõsta töötajate heaolu ja ennetada stressi. Ettevõtted on hakanud rakendama töötajate heaolu tõstvaid meetodeid, mis on keskendunud teadlikkuse ja meditatsiooni meetoditele. Kas meditatsiooni meetodi on efektiivsed töötajate stressi maandamisel ja kas nad parandavad töötajate heaolu? Kas tööandjad saavad tõsta produktiivsust ja konkurentsivõimet investeerides oma töötajate psühholoogilisse ja emotsionaalsesse heaolusse läbi seda tüüpi meetodite? Antud töö uurimus põhineb nendele küsimustele.

Käesolev töö on eksperimentaalne pilootuuring, kus osales 66 inimest (35 osalejat testgrupis ja 31 osalejat kontrollgrupis). Testgrupp praktiseeris juhitud lõõgastust 7 nädala jooksul, osaledes juhitud lõõgastuse tundides ühes lõõgastus-stuudios Soomes, kasutades samu praktikaid kodus ja täites päevikut oma kogemuste ja mõjude kohta. Antud töö uurimisküsimused on: 1) Kas psühholoogiline heaolu paraneb kasutades juhitud lõõgastust? 2) Kas regulaarsed antud meetodi kasutamised omavad mõju tööga seotud nähtustele, nagu psühholoogilisele kapitalile, tööga seotusele või stressi tasemele? 3) Mis on antud meetodite võimalikud kasutegurid elukvaliteedile, mida tundsid katses osalenud?

Uurimuse tulemused näitavad, et stressi maandamise programm, mis baseerub lõõgastusmeetoditel võib parandada psühholoogilist heaolu. Professionaalselt aktiivsete Soome täiskasvanute näitel toimusid positiivsed muutused testgrupis osalejatele nagu enesemääramine, iseseisvus ja seest tulenev reguleeriv käitumine. Testgrupi osalejate stressitase langes seitsme nädalase testperioodi jooksul, nende subjektiivne elukvaliteet tõusis, nad tundsid ennast optimistlikumalt ja tundsid, et nende töö on mõttekam.

Märksõnad: ***Psühholoogiline heaolu, lõõgastus meetodis, stress, toimetulek, tööga seotus, psühholoogiline kapital***

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INTRODUCTION

Nowadays working life is often described as stressful, hectic and demanding. Constant changes, downsizings as well as high-pressure and technologized work environments seem to make today's workplaces more stress-laden than before. In an atmosphere of constant unpredictability and uncertainty, long working hours are common characteristic of the work life of many individuals. The World Health Organization has declared stress a worldwide epidemic (Avey, Luthans, Jensen 2009). At the same time, employees are expected to be highly dedicated and efficient.

Organizations are struggling with how to prevent, deal with and combat occupational stress and how to make their employees more committed. Various types of interventions and organizational restructuring measures are used to decrease stress levels or minimize stress factors in the workplace. In addition, the importance of the individuals' own coping and stress management skills has been given some greater attention. Furthermore, the focus of the interventions has shifted to address the interpersonal and emotional needs of the employees. "In recent years, there has been a resurgence of interest in more integrative stress-reduction techniques that attempt to address not only a person's mental and physical ailments, but also his or her interpersonal, emotional and spiritual needs." (Jain, Shapiro, Swanick, Roesch, Mills, Bell & Schwartz 2007, p. 11)

Meditation techniques, such as mindfulness meditation, have been reported to be effective in reducing stress and increasing psychological well-being (e.g. Kabat-Zinn 1990; Shapiro, Schwarzt & Bonner 1998; Baer 2003; Brown & Ryan 2003; Williams, Kolar, Reger & Pearson 2001). International corporations have developed well-being programs based on different methods adopted from mindfulness and meditation practices. Google (Tan 2012), General Mills Inc. and Deutsche Bank have implemented mindfulness or meditation programs with the purpose of increasing well-being and decreasing stress levels among the employees. On the other hand, positive psychology and positive organizational behaviour approaches have become increasingly popular as means for solving today's challenges in the workplace.

Are meditation practices effective in stress reduction and do they improve the well-being of the employees? Can employers boost productivity and competitiveness by investing

in their employees' psychological and emotional well-being through these types of programs? Moreover, can positive psychology potentially contribute to the success of organizations? The research theme of the current thesis is founded on these questions.

Stress is an inevitable part of human life. Organizations can contribute to stress reduction by investigating the stressors in the workplace, modifying the conditions of work so that they are less stressful, and helping employees experiencing difficulties to adapt to those conditions that cannot be changed. What can be done at the individual level in order to decrease stress levels and increase the well-being is to focus on coping and stress management mechanisms and strategies. There are various ways to approach coping; it can be viewed from a problem-focused or an emotion-focused perspective. There is a range of practices and methods for the purpose of better managing and coping with stress.

The focus of the current thesis is on emotion-focused coping and, more specifically, on one particular method – guided relaxation. The study aims to outline the effects and benefits of the method for psychological well-being, psychological capital and work engagement. The main aim of the study is to establish the effects of guided relaxation for the different dimensions of well-being and work-related outcomes. The method studied is guided relaxation combining the techniques of mindfulness, effective breathing, guided imaginary script and autogenic training. Does the psychological well-being of individuals improve with the regular practice of these methods? If the method is effective, how can it be adapted to organizational settings?

The research is an experimental pilot study including 66 participants (35 in the test group and 31 in the control group). The test group practiced guided relaxation over 7 weeks by attending guided relaxation sessions at a relaxation studio in Finland, doing home practices and writing a journal about their experiences and the effects. The research questions are as follows: 1) Does psychological well-being improve by practicing guided relaxation? 2) Does regular practice of the methods have an effect on work-related phenomena such as psychological capital, work engagement or stress levels? 3) What are the potential benefits of the practice for the quality of life experienced by the individuals?

The structure of the thesis is as follows: I shall first introduce the concepts of psychological well-being, stress and coping. Secondly, I will focus on different types of

well-being enhancing and stress reducing interventions, and the concepts related to the guided relaxation method are brought out. The following two sections focus on the research methodology as well as the findings and limitations of the study. Finally, on the basis of the research findings, a proposal for how the guided relaxation techniques can be developed to better fit organizational settings will be presented and this is followed by discussion and conclusions.

1. PSYCHOLOGICAL WELL-BEING AND STRESS

This section outlines the concepts of well-being, stress and coping, and explores the concept of psychological capital. First, the concept of psychological well-being is defined and its connections and outcomes for organizations are explored. This is followed by a description of stress, i.e. one of the major challenges to the well-being of individuals and organizations. Coping with stress is presented through an emotion-focused approach, the role of positive emotions in coping is investigated and, subsequently, a solution based on positive organizational behaviour is discussed.

1.1 Psychological well-being

Well-being at work is a complex and broad construct. General well-being can be divided into physical, social and psychological dimensions. The key workplace factors – including resources and communication, control and autonomy, work-life balance and workload, job security and changes, work relationships and job conditions – are crucial and closely related to the well-being of individuals. However, the main purpose of the current thesis is to focus on the dimension of the psychological well-being of employees. Furthermore, in this paper, well-being is understood as a multidimensional construct, which includes affective (i.e. positive affective states, work engagement), health-related (i.e. self-rated health, musculoskeletal pain) as well as cognitive (i.e. life satisfaction) components.

Psychological well-being can be defined as "our ability to handle the stress of daily life and maintain a positive attitude and sense of purpose" (Robertson & Cooper 2011, p.4). Psychological well-being is important for individuals in many ways. Improved psychological well-being is associated with better health, career success and better relationships with others, and furthermore, it brings various benefits for organizations (Robertson & Cooper 2011). Psychological well-being can be approached from various perspectives, by focusing on either the subjective happy feelings brought on by something we enjoy, or the feeling of meaning and purpose in our lives. The term *hedonic* well-being is normally used to refer to the experiences of satisfaction and happiness. According to the hedonic view, well-being consists of pleasure or happiness. This includes an affective dimension (moods and emotions), and the cognitive evaluation of one's satisfaction (life satisfaction) in general (Airila 2015).

As argued by Ryan and Deci (2001); "the hedonic viewpoint focuses on subjective well-being, which is frequently equated with happiness and is formally defined as more positive affect, less negative affect, and greater life satisfaction. In contrast, the *eudaimonic* viewpoint focuses on psychological well-being, which is defined more broadly in terms of the fully functioning person and has been operationalized either as a set of six dimensions, as happiness plus meaningfulness, or as a set of wellness variables such as self-actualization and vitality". (Ryan & Deci 2001, p. 161) Subjective well-being has been shown to be directly related to various desirable workplace outcomes.

The feelings of satisfaction and happiness constitute an important part of psychological well-being. According to the eudaimonic view, however, well-being consists of much more than just happiness. *Eudaimonic well-being* is a term used to refer to the purposeful aspects and feelings, such as mastery of the environment, self-acceptance, autonomy, and other factors that enable us to feel that our actions have meaning. Consequently, psychological well-being includes an affective and cognitive component, combined with behavioural and motivational aspects of well-being (Airila 2015). According to Robertson and Cooper (2011), a number studies indicate that eudaimonic well-being may be more significant for health than the positive emotions associated with hedonic well-being (Robertson & Cooper 2011, p. 49). Lyubomirsky, King and Diener (2005) investigated a large number of longitudinal studies of psychological well-being. Their conclusion, based on these studies, was that "happiness precedes important outcomes and indicators of

thriving, including fulfilling and productive work, satisfying relationships and superior mental and physical health and longevity" (Lyubomirsky et al. 2005, p. 83).

Ryff (1989) has developed a model that breaks down eudaimonic well-being into six key elements as listed below in the table 1.

Table 1. Eudaimonic well-being

Self-acceptance	The capacity to see and accept one's strengths and weaknesses.
Positive relations with others	Having close, valued connections with significant others.
Autonomy	The strength to follow personal convictions, even if they go against conventional wisdom
Environmental mastery	Being able to manage the demands of everyday life.
Purpose in life	Having goals and objectives that give life meaning and direction.
Personal Growth	Continual change, development and psychological growth.

(Source: Ryff, Singer, Love 2004, p.1384)

The components of the model define psychological well-being both theoretically and operationally, and they specify what promotes emotional and physical health (Ryff & Singer 1998). Lyubomirsky et al. (2005) found in their extensive research that psychological well-being is connected to number of desirable outcomes, behaviours and psychological processes. For example to positive self-perceptions, performance of complex mental tasks, creativity and flexibility.

Furthermore, psychological well-being is associated with biochemical benefits. The research of Ryff, Singer and Love (2004) highlighted that there are links between certain bio-chemicals, such as cytokines, which are important for the functioning of the immune system and related to a range of health outcomes. There are also links with neuroendocrine functions, such as the levels of cortisol (the stress hormone), and psychological well-being.

According to Ryff et al. (2004); "Those with higher levels of eudaimonic well-being had lower levels of daily salivary cortisol, cardiovascular risk and longer REM sleep compared with those showing lower levels of eudaimonic well-being" (Ryff et al. 2004, p.1383). In addition, in a survey of 35 separate longitudinal studies examining the relationship between psychological well-being and mortality (Chida and Steptoe 2008) concluded that positive psychological well-being has a favourable effect on survival, in both healthy and diseased populations (Chida and Steptoe, 2008, p. 741).

1.2 PWB and organizational outcomes

As discussed in the previous sub-section, psychological well-being is clearly linked to health, the immune system, various desirable behavioural outcomes and, for example, the ability to cope with stress. Based on these findings, we can state that psychological well-being is connected with work-related outcomes, such as sickness absence levels, levels of employee turnover and productivity.

Psychological well-being has been linked to a very wide range of important outcomes for organizations. Research has proved that psychological well-being is directly correlated with performance. Meta-analytical findings provide substantial support that psychological well-being is positively related to unit-level productivity, employee retention, customer satisfaction, safety and ultimately the profitability and stock value of the company (e.g. Buckingham & Clifton 2001; Buckingham & Coffman 1999). Based on studies conducted in organizations, there is greater correlation between job performance and well-being than between performance and job satisfaction (Wright & Cropanzano 2000).

Kinder, Hughes and Cooper (2008) summarize the reasons for why psychological well-being matters from the organizational perspective by bringing out four key aspects.
1) Psychological well-being is the main motivational force for individuals. Simply, individuals want to feel good.

2) “People with higher levels of PWB learn and problem-solve more effectively, are more enthusiastic about change, relate to others more positively and accept change more readily” (Kinder, Hughes, Cooper 2008, p. 43).

3) Psychological Well-Being is not stable or fixed, it is dynamic and changing.

4) “A final reason, perhaps the most compelling, is that the research evidence shows that when people are higher on PWB their organizations do better” (Kinder et al. 2008, p. 43).

Another interesting research finding has been presented by Moliner, Martinez-Tur, Ramos, Peiro and Cropanzano (2008), who found that in service organizations where employee well-being is higher, members of staff are more likely to go the extra mile (Moliner et al. 2008). This refers to the engagement of the employees. The concept of engagement is vital; it has been proven that when employees are more engaged their organizations are more successful. Robertson and Cooper (2011) summarize this as follows: “from the available evidence it seems that organizations with more engaged employees provide a better return for investors, have customers who use their products more, have customers who are more satisfied, lower staff turnover rates, lower absenteeism and perform better financially” (Robertson & Cooper 2011, p. 28).

1.2.1 Work engagement

There is consensus among researchers and practitioners that employee engagement is a crucial topic to be investigated, although there seems to be little agreement on what exactly is meant by the concept. Several definitions exist. Schaufeli and Bakker (2003) view engagement as “…a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption” (Schaufeli and Bakker 2003, p. 4). Other authors (Macey & Schneider 2008) propose a wider view, seeing “engagement” more as an overarching umbrella term containing different types of commitment.

The view from Schaufeli and Bakker (2003) connect the concepts of eudaimonic well-being and work engagement. Thereby, engagement is characterized “by vigor (work is experienced as stimulating and energetic and something to which employees really want to devote time and effort), dedication (work is a significant and meaningful pursuit), and absorption (work is engrossing and something on which the worker fully concentrates)

(Robertson & Cooper 2011, p.30). Improving the psychological well-being of employees generates various positive outcomes, and statistics show that improving employee engagement has similar effects. Work engagement is not only a phenomenon relating to individuals, but a collective one as well, as it is passed on through interpersonal interaction. Those employees who experience work engagement spread it by positive interaction, conveying their energetic and enthusiastic attitude to the other members of the team, and this affects the collective atmosphere of the team and organization (Hakanen 2009, p.13).

Job resources, personal resources, positive interventions and recovering from the workday have been proven to facilitate work engagement. Based on a journal study, Sonnentag (2003) discovered that recovering from work has a positive connection with work engagement and proactive activity at work. Sonnentag, Arbeus, Mahn and Fritz (2014) argue that the lack of psychological detachment from work during off-job time contributes to an increase in employee exhaustion, and low levels of psychological detachment lead into poor individual well-being. In addition to recovering from work after the working day, micro-breaks during the work day have been found to have an effect on work engagement.

1.3 Stress

Stress affects nearly every system in the body – the immune, cardiovascular and respiratory systems – and it is linked with a higher risk of mortality (Moskowitz 2011). Stress is a major threat to the well-being of individuals and organizations, and this has been noticed by researchers and practitioners. In recent years, the field and research of psychological stress and coping have grown rapidly. In 2007, as described by Aldwin (2007), there were over 186,000 studies of stress and 36,000 studies of coping. There are a number of factors that have contributed to the extensive research on the field. "New technologies, new multidisciplinary approaches, scientific curiosity, and popular demand have all contributed to the growth in stress, coping and health research enterprise over the past 30 years" (Folkman 2011, p.3).

The concept of stress can be discussed from various points of views. In this thesis, I shall focus on job-related stress, or workplace stress, and emotion-focused coping. The

concept of eustress will not be discussed further, as the main focus of the current thesis is negative stress (distress). Job related stress can be defined in the following way; "as the change in one's physical or mental state in response to workplaces that pose an appraised challenge, or threat to that employee" (Colligan, Higgins 2005, p. 89). Emotion-focused coping can be defined as the cognitive, intra-psychic and behavioural efforts that are directed at managing and reducing emotional distress (Folkman & Lazarus 1980).

It can be said that research literature on psychological stress has had two central themes: (1) the damaging effects of stress on mental and physical health, and (2) well-being and resilience in the face of stress (Folkman 2011). The first theme emerged with the publication of Richard Lazarus's (1966) *Psychological stress and the coping process*. He defined the concept of stress in the following way: "stress occurs when an individual perceives that the demands of an external situation are beyond his or her perceived ability to cope with them" (Lazarus 1966). Through extensive research, Lazarus demonstrated that the way people evaluate what is happening with respect to their well-being, and how they cope with it, influences whether or not psychological stress will follow, and if so, its intensity. The process of appraisal (interpreting events as harmful, threatening or challenging, and determining whether one has the resources to effectively cope with the event) is therefore a crucial part of the stress process. The stress process comprises three processes: primary appraisal (the process of perceiving a threat to oneself), secondary appraisal (the process of bringing to mind a potential response to the situation) and coping.

Studies have produced a considerable amount of evidence of the harmful effects of stress. It has been found that "employees experiencing chronic work stress have been shown to develop unstable blood pressure, increased cholesterol levels, muscle tension, diabetes, hypertension, ulcers, headaches, substance abuse, and clinical depression" (Colligan, Higgins 2005, p. 90). Furthermore, significant anxiety, irritability and anger, as well as decreased capacity to focus and retain information, are common problems related with stress. Lower productivity and increased absenteeism are consequences of stress in the workplace (Colligan, Higgins 2005).

1.4 Coping

After establishing the harmful effects of stress, the question of how to reduce these effects of stress, how to cope with stress, became the dominant focus of research into stress. An important reason for studying the field of coping is that coping has a strong effect on psychological stress and emotional states (Folkman & Lazarus 1988).

Lazarus and Folkman (1984) defined coping as "constantly changing cognitive and behavioral efforts to manage, [that is, to master, tolerate, reduce, minimize] specific external and/or internal demands [and conflicts among them] that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman 1984, p.141). Coping is a multidimensional, complex process. Folkman and Moskowitz (2004) emphasise that "coping is sensitive to the environment, its demands and resources and to personality dispositions influencing the appraisal of stress and the resources for coping" (Folkman & Moskowitz 2004, p.747).

Coping strategies can be broadly categorized into two groups: those directed towards resolving the stressful situation (problem-focused coping) and those palliating event-related distress (emotion-focused coping). Another way to classify coping is by dividing it into avoidant coping (ignoring, distorting, escaping threatening stimulus) and approach coping (cognitive, emotional and behavioural turning toward the stressful situations). Coping has also been divided into the following strategies: active-cognitive, active-behavioural and avoidance coping. Examples of active-behavioural strategies include praying for strength, trying to see the positive side of the situation or accepting that nothing can be done. Active-behavioural strategies can be demonstrated through exercising more, talking with a friend about the situation or making plans of action. Correspondingly, avoidance strategies are about actions such as keeping feelings to oneself, smoking to reduce tension or avoiding being with people (Billings & Moos 1981).

As the best known author in the field of stress states, "Coping is central to the stress process and its adaptational outcomes. It is influential, via the appraisal process, in immediate emotional reactions, in how the person acts, and in the person-environment relationship. It also most probably affects long-term adaptational outcomes, such as subjective well-being, social functioning, and somatic health". (Lazarus 1995, p. 7) Coping can intervene between stress and the mental and physical outcomes. When the individual's coping is effective, it has the potential of reducing tensions and the mental and physical health risks of stress. In turn, this helps to reduce employee turnover and sickness absence. Effective coping is beneficial for individuals and organizations (Havlovic & Keenan 1995).

More recently, Compas and Andreotti (2001) defined coping as "conscious volitional efforts to regulate emotion, cognition, behavior, physiology, and the environment in response to stressful events or circumstances" (Compas & Andreotti 2001, p. 89). This and other recently formulated definitions have broadened the field of coping, since the earlier work of Lazarus and Folkman, to include more than the management of stressful demands. "The regulation of a wider range of functions, including emotion, behavior, cognitions, physiology, and the environment, is now included within the sphere of coping" (Compas, Jaser, Dunbar, Watson, Bettis, Gruhn, Williams 2014, p. 3).

1.5 Emotion-focused coping and emotion regulation

According to Folkman, Chesney, McKusick, Ironson, Johnson and Coates (1991), emotion-focused coping includes meaning-making, positive reframing, seeing the brighter side of things, using social comparisons, use of humour, relaxation, meditation, religious and spiritual coping, emotional support and substance use coping. Emotion-focused coping strategies aim to decrease negative emotion experiences. These strategies can be categorized into different types, which include both avoidant and approach oriented strategies. Ironson and Kremer (2011) suggest that emotion-focused coping can be broken down into the following components: cognitive (reframing, positive outlook), activities to improve mood (relaxation, meditation, exercising), emotional expression, spirituality and substance use.

Emotions are a crucial part of the coping process. Emotions focus the attention towards an event and speed up the search for adaptive actions. According to the theory by Lazarus (1984) described in the previous sub-section, the coping process includes a two-stage appraisal process. In the second stage, the individual evaluates his or her capability to deal with the event. If the individual believes he or she has the adequate resources, he or she is more likely to respond actively, but if he or she feels lacking the resources, the approach might be passive-avoidance. (Hartel, Zerbe, Ashkanazy 2005, p. 297)

The coping processes are affected by several factors, but one crucial factor is the individual's coping resources. As Taylor and Stanton (2006) explain; "Intra-individual factors, including coping resources and cognitive appraisals, also affect coping processes. Some research suggests that people high in optimism or with high self-esteem use less avoidant and more approach coping, which are tied to better mental and physical health" (Taylor & Stanton 2006, p.384). Optimism, psychological control or mastery and social support are a few of the coping resources which improve the ability to manage stressful events and are related to less distress. Stanton and Taylor (2006) argue that coping resources are not only regarded as helpful in managing stress, but as having a direct effect on mental and physical health. Furthermore, the coping resources have indirect effects on mental health through their effects on coping processes and stress-reducing capacities. And research suggests that the coping resources may foster more positive appraisals of potentially stressful situations. (Stanton & Taylor 2006, p.380)

In the empirical literature on stress and coping, emotion-focused coping has been associated with untoward psychological outcomes and distress. Stanton (2011) views and criticizes these findings and highlights, through a comprehensive body of evidence, the potential value of emotion-focused coping. He suggests that due to several flaws in the way emotion-focused coping is measured and analysed, it has been associated with higher levels of distress. Emotion-focused coping is a broad construct, which involves a variety of behaviours ranging from avoidance and approach-oriented. Moreover, Santrock (2005) argues that "…most studies of emotion-focused coping have considered different dimensions together, when in fact, the effects of the dimensions may be different" (Santrock 2005, p.158). Another problem is that the effectiveness of coping needs to be evaluated in the context the strategy occurs: a strategy might be effective in one situation but not in another. For example, when nothing can be done, distancing is an appropriate coping

strategy, while it is inappropriate when action is needed. Sometimes the strategies may be adaptive, but in other circumstances emotion-focused coping is maladaptive.

"Experimental research and functionalist theories point out the organizing, effective elements of emotions, and highlight the potential value of processing and expressing emotions for health and well-being" (Stanton 2011, p.370). The literature on coping outcomes suggests that emotion-focused coping is effective in situations where the individual has little to no control over stressors. For example, in situations where one does not have opportunities to alter conditions in the workplace, or when there are no means of minimizing the stressors. Furthermore, emotion-focused coping works in the short term.

Emotion regulation consists of "processes that individuals use to influence which emotions they generate, when they do so and how these emotions are experienced or expressed" (Ochner & Gross 2005, p. 243). Eisenberg, Hofer and Vaughn (2007) describe emotion regulation as the "processes used to manage and change if, when, and how (e.g. how intensely) one experiences emotions and emotion-related motivational and physiological states, as well as how emotions are expressed behaviorally"(Eisenberg et al.2007, p. 288). Gross (2001) has described two widely used strategies for down-regulating emotion reappraisal and suppression. Reappraisal takes place at the beginning of an emotional experience; it consists of changing how we think about a situation in order to decrease its emotional impact. Suppression is about inhibiting the outward signs of emotions. Despite sharing several elements, there is a distinction between the concepts of coping and emotion regulation. While emotion regulation is an on-going process, coping is seen as a special case of emotion regulation under stress.

1.6 The Broaden-and-Build theory of positive emotions

The Broaden-and-Build (Bab) theory (Fredikson 2011) states that "positive emotions such as happiness, joy and love broaden people's thought-action repertoires, build their enduring physical, intellectual, social and psychological resources, and consequently lead to better well-being" (Airila 2015, p. 35). Fredrikson, Mancuso, Branigan, Tugade (2000)

describe it in the following way; "Positive emotions appear to have a protective effect by both broadening our range of responses and behavior and also building our psychological resources, enabling us to cope more effectively. As well as providing a protective effect, positive emotions also help people to bounce back after experiencing adversity and they also help to undo the detrimental effects of negative emotions" (Fredrikson, Mancuso, Branigan, Tugade 2000, p. 238).

In this way, the Bab theory suggests a much larger role for the positive emotions than traditional views, which claim that positive emotions signal well-being and possibly guide behaviour in the moment (Fredrikson 2011). This theory provides a possible explanation for the mechanisms that link positive affective states and employee well-being. The Bab theory has two hypotheses; the broaden hypothesis claims that positive emotions broaden people's awareness and thinking, which helps them to draw on a wider range of new ideas. As Airila (2015) explains; "For example, joy broadens people's thinking and action by encouraging the urge to play and be creative. Over time, this broadening of thoughts and attention leads to discovering and building new personal resources (i.e. build hypothesis) and consequently to improved well-being." (Airila 2015, p. 35)

The proposals emerging from Bab theory are supported by research: "…the empirical evidence indicated that positive emotions are associated with fewer symptoms, less illness, less pain and injury, and better health, even in the long term" (Airila 2015, p. 36). In a seven-year follow up study among dentists, work engagement – as an affective well-being state – had a positive effect on life satisfaction (Hakanen, Bakker, Schaufeli 2006). A recently conducted meta-analysis focusing on the effects of 51 interventions targeted at positive affect outcomes found that the interventions are associated with significant increases in well-being and decreases in depression. If we consider the Bab theory in the context of stress, positive affect may prevent the individual from feeling overwhelmed, lead to more flexibility in coping efforts and help build resiliency to the stress (Moskowitz 2010).

1.7 Psychological capital

Through extensive research, stress has been proven to constitute a major challenge with regard to the health of individuals and organizations. Over the years, researchers have focused on various aspects of stress. Despite extensive research, however, methods for preventing and combating stress remain elusive (Avey, Luthans, Jensen 2009). According to Luthans (2002), there is a need for new perspectives and approaches. As Lazarus and Folkman (1984) demonstrate, people suffer stress when they believe they lack the resources to deal with difficult events. The process of stress consists of complex interactions between the individual and the environment, including appraisal and coping, as well as intervening variables. Avey et al. (2009) state that "psychological capital may turn out to be one of the critical resources that Lazarus and Folkman (1984) said were needed for employees to cope with stressful events or conditions at work, thus minimizing symptoms of stress" (Avey et al. 2009, p. 680).

Avey et al. (2009) suggest the concept of psychological capital (PsyCap) to be a critical resource in stress-filled workplaces. The concept of PsyCap draws from positive organizational behaviour. Positive organizational behaviour is "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement" (Luthans 2002, p. 59).

Luthans (2009) proposes that the key to not only understanding individuals coping with stress but also organizational success, lies in the development of and investment in psychological capital. PsyCap has been defined as "an individual's positive psychological state of development and is characterized by 1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed in challenging tasks; 2) making a positive attribution (optimism) about succeeding now and in the future; 3) persevering towards goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and 4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success" (Luthans, Youssef , Avolio 2007, p. 3). Psychological capital consists of these four positive psychological resources of hope, optimism, efficacy, and resilience, which, when combined, have been empirically determined to be a second-order core

construct. A second-order construct is the shared variance between the four first-order constructs (Luthans, Avolio, Avey & Norman 2007).

The capacities mentioned above are state-like, which means they are open for development and improvement. According to Luthans, Avey and Norman (2006), through brief training programs, on-the-job activities and short highly focused micro-interventions, it is possible to develop psychological capital. Other characteristics of PsyCap include that each construct is grounded in theory and research with valid measures and has a positive impact on attitudes, behaviours and performance (Avey, Reichard, Luthans, Mhatre 2011). Psychological capital and its effects on work-related outcomes have been investigated. Avey et al. (2011) found in their meta-analysis (N=12.567) a significant positive relationship between PsyCap and desirable employee attitudes and behaviours such as job satisfaction, organizational commitment and psychological well-being. Their research findings also demonstrate a significant negative relationship between PsyCap and undesirable employee behaviours such as job stress and turnover intentions. As Luthans, Avolio, Avey and Norman (2007) comment on psychological capital and today's dynamic and global work environments, the employees who demonstrate "…a hopeful, optimistic, efficacious and resilient attitude may be considered more likely to better withstand the type of dynamic, global environmental contexts confronting most organizations today compared to their counterparts with lower PsyCap" (Luthans et al. 2007, p. 568).

2. INTERVENTIONS

2.1 Stress-management interventions developed for organizational settings

A *stress-management intervention* is defined as "any activity, program, or opportunity initiated by an organization, which focuses on reducing the presence of work-related stressors or on assisting individuals to minimize the negative outcomes of exposure to these stressors" (Ivancevich, Matteson, Freedman, & Phillips 1990, p. 252). Stress-management interventions in organizations vary in respect to structure, type, objectives and target group, and they can be broadly grouped into three categories – primary, secondary and tertiary interventions depending on their objective. According to Liukkonen, Cartwright and Cooper (1999), primary level interventions focus on identifying sources of stress in the workplace and adjusting the work environment in order to disarm its effect on the individuals working there. At the secondary level, the interventions focus on the individual and through awareness building and physical and psychological resources to equip them with the tools necessary for managing stress. Finally, tertiary interventions work with individuals who are already suffering from serious stress-related ill health by providing techniques for treating the negative outcome of stress at work (Liukkonen, Cartwright, Cooper 1999, p. 35).

Other ways of distinguishing different stress-management programs or interventions have also been defined. For example, DeFrank and Cooper (1987) categorize interventions and the targets of the programs on the following three levels: organization, individual-organization interface and individual. The focus of the stress-management programs can be directed towards individuals, working teams, the daily organization of work or the organization as a whole. Often workplace management programs focus on working conditions (redesigning tasks or providing flexible work schedules). These interventions, however, are not necessarily the most effective. "Nelson and Sutton's (1990) longitudinal study indicates the importance of recognizing dispositional as well as situational effects on work stress. Their findings suggest, that personal characteristics may predispose a person to stress, thereby limiting the effectiveness of such environmental interventions as job redesign and company programs" (Avey, Luthans, Jensen 2009, p. 687).

Van der Klink, Blonk, Schene and van Dijk (2001) explored the benefits of interventions for work-related stress in their quantitative meta-analysis. They focused on cognitive-behavioural interventions, relaxation techniques, multimodal programs and organization-focused interventions. Cognitive behavioural approaches encourage individuals to apply the coping skills they already have to start re-shaping their daily working conditions. Relaxation techniques work with the physical and/or mental aspects of the individual, and the multi-model interventions suggest that passive and active techniques should be practiced to help overcome the results of stress (Van der Klink et al. 2001, p. 269). The fourth type of intervention focuses on the organization as a whole. In the meta-analysis (Van der Klink et al. 2001), a small but significant overall effect was observed: "A moderate effect was found for cognitive-behavioral interventions and multimodal interventions, and a small effect was found for relaxation techniques. The effect size for organization-focused interventions was non-significant". (Van der Klink et al. 2001, p. 270)

The general conclusion in the reviews of interventions aiming to reduce occupational stress is that the interventions are effective. Approaches that aim to change an individual's cognition and reinforce active coping skills (cognitive-behavioural) may prove to be the most effective in reducing stress, enhancing coping strategies and improving perceived quality of work life. (Van der Hek & Plomp 1997; Van der Klink et al., 2001) The findings of Richardson and Rothstein (2008) and Hätinen and Kinnunen (2002) on the effectiveness of various types of stress interventions confirm these results; cognitive-behavioural programs have a greater impact than other types of interventions. As Hätinen and Kinnunen (2002) discovered in their research, employees benefit from stress interventions and even more from interventions focused on individuals than on organizations.

Similar to the research on stress and coping, the development of interventions has also shifted away from an exclusive focus on the negative effects. Moskowitz (2011) discusses studies related to interventions aimed at increasing the positive affect and concludes that, "the research shows that positive affect interventions are feasible, acceptable, and in many cases efficacious" (Moskowitz 2011, p. 407).

2.2 Relaxation

Almost any stress-management intervention includes relaxation as one component. Relaxation, self-hypnosis and meditation have been described as the most cost-effective stress management methods, because they are not difficult to practice and it is relatively easy to motivate individuals to learn the techniques (Shea 1980). There are several different relaxation methods and combinations of them. For example, autogenic relaxation, progressive relaxation and biofeedback are techniques that comprise methods and activities that help a person to relax and attain a state of calm and reduce levels of stress. Benson (1975) has defined relaxation as "a state of decreased psychophysiological arousal: a calming state" (Benson & Kipper 1975). Relaxation methods operate in multiple ways, and different methods have given similar effects and results. Generally speaking, for most of the methods to trigger positive results, the practice needs to be regular (Toivanen 1994).

In this paper, the focus is on relaxation techniques which combine dimensions of autogenic relaxation, guided imaginary, mindfulness and breathing exercises. These techniques have been widely used in multiple settings, such as in psychological treatment (for example, to treat various disorders) and in preventative and rehabilitative programs. Smith (2007) describes the potential relaxation goals as follows: "Psychological relaxation theory proposes four groups of potential relaxation goals; negative goals (enhancing sleep, managing stress, enhancing the healing process), positive-practical goals (enhancing health and energy; calm, and directed action; productivity, and effectiveness), positive-expressive goals (spontaneous enjoyment, creativity, and insight) and transcendent goals (god-based spirituality, meditation, and mindfulness)" (Smith 2007, p. 41).

Autogenic relaxation "is based on passive concentration on bodily perceptions (e.g. heaviness and warmth of arms, legs and abdomen; rhythm of breath; and heartbeat) that are facilitated by self-suggestions" (Stetter & Kupper 2002, p.45). As a rule, the technique should be practiced regularly. To enhance learning the technique, a practice journal has been suggested to be added as part of the process (Krampen 1991). Autogenic relaxation has been called the legitimate daughter of hypnosis. However, Linden warns against equating autogenic relaxation with hypnosis (Linden 2007, p. 152). What is similar to these two methods is that both hypnosis and autogenic relaxation use hypnotic suggestions that aim at positive behavioural changes. In comparison with actual hypnosis, autogenic relaxation is

self-hypnotic, and the emphasis is on self-control. In hetero-hypnosis "the hypnotic trance is induced by another individual who will typically make relaxation and trance suggestions, followed by suggestions for behavioral changes" (Linden 2007, p. 153).

Guided imagery is a common dimension of the various relaxation methods; it can be defined as "a technique that helps individuals to focus on mental images and scenes that evoke relaxation. The principle behind guided imaginary is to provide a relaxing image for the mind to focus on, thereby interrupting stressful thoughts and images and replacing them with relaxing ones" (Mizhari, Reicher-Atir, Levy, Haramati, Wengrower, Israeli & Goldin 2012, p. 1467).

Taylor and Stanton (2007) explain the effects of stress on the nervous system by mentioning: "a) activation of the sympathetic nervous system, which leads to increases in anxiety, heart rate, and blood pressure, among other changes; and b) activation of the hypothalamic-pituitary adrenal (HPA) axis, which leads to the production of corticosteroids, including cortisol, which are necessary for energy mobilization, but are implicated in both mental and physical health risks" (Taylor & Stanton 2007, p. 378). The main function of the relaxation methods is to decrease these stress symptoms by balancing the autonomic functioning. Dacher (1991) describes mental and physiologic relaxation as counteracting the suppression of the immune system caused by stress: "When practiced on a regular basis, relaxation techniques reduce an individual's susceptibility to stress and, at the same time minimize the effects of existing stress" (Dacher 1991, p.114–115).

Many studies have shown that relaxation does decrease stress, increase the ability to focus and to study and learn more effectively (e.g., Newsome et al. 2006; Credit & Garcia 1999; Cabot 1997). Toivanen (1994) investigated the effects of the regular practice of relaxation on occupational stress. In the study, the test group practiced relaxation methods regularly during a six-month period (15 minutes every day). The results were that regular practice decreased sickness-absence and strain at work. Moreover, relaxation improved stress-management and coping skills, normalized stress-hormone levels and decreased muscle tension. Various types of aches and pains and sleeping problems were alleviated or diminished, and there was less need for medicines. Another study among teachers (Ahvenniemi 2014) showed that regular relaxation had positive effects on work ability, and the participants reported new ways of thinking, better self-confidence and improved ability

to calm down in situations of stress and nervous tension. In their meta-analysis of autogenic relaxation methods, Stetter and Kupper (2002) also found autogenic relaxation to be effective in the case of anxiety, depression and functional sleep disorders.

2.3 Meditation and mindfulness

In recent years, there has been a considerable increase in interest in various meditation and mindfulness practices. Commonly viewed as a way to reduce stress, meditation can be defined as "a system of mental exercises that help the individual to attain bodily or mental control and well-being, as well as enlightenment" (Santrock 2005, p.162). Mindfulness practices refer to techniques which encourage mindfulness, including breath awareness, mindful-movement and body awareness. Mindfulness has been used in the treatment of various disorders, in mental and physical rehabilitation, and as a stress-management intervention method. Google (Tan 2012) and General Mills Inc. are examples of corporations implementing meditation and mindfulness practices in the well-being programs created for the employees.

Deriving from Buddhist and other contemplative traditions, meditation and mindfulness are ancient practices. In recent years, there has been an increasing interest in implementing these methods in the modern workplace setting in order to increase the well-being and decrease the stress-levels of employees. Modern research has presented several possible definitions for mindfulness, starting from *constant awareness*, which comprises consciously paying attention to the present moment and including internal and external stimuli in a non-judgmental and non-reactive way. (Bakker 2013) Kristeller (2007) views meditation as a cognitive process and argues that "… it is the development of stable attention and non-judgmental awareness that mediates the much wider range of effects, including physical relaxation, emotional balance, behavioral regulation, and changes in self-judgment, self-awareness, and relationship to others" (Kristeller 2007, p. 395).

Overall, findings about mindfulness confirm that "performing mindfulness exercises reduces levels of nervousness, worry, and emotional distress and increases levels of muscular relaxation, emotional calmness, and overall well-being" (Franco, Manas,

Cangas, Moreno, Gallego 2010, p. 656). For example, evidence indicates that one of the best known mindfulness stress reduction programs, Mindfulness-Based Stress Reduction (MBSR) developed by Kabat-Zinn (2003), is effective for reducing stress and enhancing well-being in individuals with a variety of medical and mental-health issues (Shapiro, Oman, Thoresen, Plante, Flinders 2008, p. 841).

The effects of mindfulness are widely researched, but the processes which produce the positive effects have received less research attention. Weinstein, Brown and Ryan (2009) propose two processes through which mindfulness can produce the salutary effects: "First, mindfulness may promote a less defensive, more willing exposure to challenging and threatening events and experiences, which may reduce negative cognitive appraisals of those situations, thus rendering lower levels of perceived stress. Second, mindfulness may foster an enhanced capacity to adaptively cope with situations perceived as challenging, threatening, or harmful." (Weinstein et al. 2009, p. 375)

Mindfulness is associated with heightened self-knowledge, a key element of self-regulation: "Mindfulness may be important in disengaging individuals from automatic thoughts, habits and unhealthy behavior patterns and thus could play a key role in fostering informed and self-endorsed behavioral regulation, which has been long associated with well-being enhancement" (Brown & Ryan 2003, p. 823). Brown and Ryan (2003) describe how theories of self-regulation often include the importance of awareness in improving psychological health and behavioural effectiveness (Brown & Ryan 2003, p. 824). For example, the self-determination theory states that an open awareness may be especially valuable in enhancing the choice of behaviours that are consistent with one's needs, interests and values. In this way, mindfulness may enhance well-being through self-regulated activity and the fulfilment of the basic psychological needs (Brown & Ryan 2003, p. 824).

2.4 The method investigated in the study

The described relaxation and mindfulness techniques were explored in the setting of a relaxation studio. The relaxation studio involved in the study provides a specialized and focused place for daily, guided relaxations. The studio offers daily guided relaxation sessions for individuals and groups and it has approximately 3–6 relaxation lessons per day. The main idea is that there should be a designated place for the maintenance of mental health, with specialized professionals guiding the relaxation exercises. In addition, relaxation sessions can be organized at workplaces (commissioned by companies or teams, or as a part of training sessions) and designed according to the needs of the customer.

The sessions combine methods from different relaxation and meditation techniques, such as autogenic relaxation and mindfulness, in a unique way. More precisely, techniques such as deep breathing, paying deliberate and conscious attention to one's experience, hypnotic and positive suggestions, visualization and imagination are combined in two different types of guided relaxation sessions offered at the studio: muscle relaxation and relaxation combining imagery and mindfulness techniques. The difference with purely autogenic relaxation is that the sessions offered at the studio are based on the principle of hetero-hypnosis, as they are always guided.

Each relaxation session offered in the studio aims to produce a relaxed state of mind and body, which is characterized by decreased muscle tension, lower blood pressure and slow heartbeat and breathing rate. Each session lasts one hour, and the relaxation is done lying down on a comfortable divan. The length of the relaxation and the amount of positive and hypnotic suggestion differentiate the method from pure mindfulness-meditation. Furthermore, mindfulness and other meditation practices are often practiced in a sitting position. In addition to the actual guided relaxation, the studio combines techniques such as positive writing, goal setting and self-reflection with the services provided.

The basic muscle relaxation exercises are focused on relaxing the whole body from head to toe. The lessons combining mindfulness and imagination techniques have various themes that they focus on, including themes arising from positive psychology and mindfulness (such as gratitude and happiness, optimism, motivation, success, attaining goals, personal strengths). After the relaxation of the body, positive and hypnotic suggestions

are used in order to enhance happiness, gratitude, motivation, or other themes related to well-being and stress management. The primary aim is to create positive emotions and changes by introducing hypnotic, positive suggestions after bodily relaxation.

3. METHODOLOGY

3.1 Background of the research

The relaxation studio ordered the study in order to establish the effects of a regular practice of guided relaxation and to investigate how the guided relaxation exercises could be developed to better meet the needs of organizations and companies. The starting point was to investigate professionally active individuals, who had not previously practiced the methods regularly, and the time-frame of the experiment was set for seven weeks. The relaxation studio aimed at finding out, not only the effects to the well-being at the individual level, but also to establish effects that can also be seen at the organizational level. Moreover, the studio wished to have more than one or two measures and it suggested to approach the concept of well-being as a multidimensional construct, which includes affective (i.e. positive affective states, work engagement), health-related (i.e. self-rated health, musculoskeletal pain) as well as cognitive (i.e. life satisfaction) components.

Therefore, the concepts of psychological well-being, experienced quality of life, stress, work engagement and psychological capital were chosen for the study. The concepts have a connection with working life and organizational outcomes, and for each concept, appropriate, applicable, theory-based measures have been developed and permission to use the questionnaires was gained. The research questions of the study are as follows: 1) Does psychological well-being improve by practicing guided relaxation? 2) Does the regular practice of the methods have an effect on work-related phenomena such as psychological capital, work engagement or stress levels? 3) What are the potential benefits of the practice in terms of the quality of life experienced by the individuals?

The chosen approach of the research was mixed methods research. The approach can be described in the following way: "Mixed methods research is an approach to inquiry involving collection of both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks" (Creswell 2013, p.4). It was assumed that this type of inquiry, combining both approaches, would provide a more comprehensive understanding of the research questions. As the concept of well-being is a multidimensional construct, it requires an approach

combining quantitative and qualitative data. The use of both of the methods was determined and planned in the beginning of the study, and the procedures were implemented as planned. The appropriate research design was a convergent parallel design, where parallel data was gathered at the same time and then compared, related and analysed. According to Clark and Creswell (2011), "[t]his design is used when the researcher wants to triangulate the methods by directly comparing and contrasting quantitative statistical results with qualitative findings for corroboration and validation purposes" (Clark & Creswell 2011, p. 77).

The research is a pilot study, investigating the effects of the regular practice of guided relaxation on factors of mental well-being, quality of life and work engagement by means of quantitative and qualitative research methods. The data were gathered using questionnaires as well as practice journals and an additional feedback form. The study is experimental and comprises 66 participants (31 in the control group, 35 in the test group). The test group participants practiced guided relaxation for seven weeks by attending relaxation lessons in a relaxation studio in Finland, and by doing home exercises and writing a journal about the experiences.

3.2 The sample

The study sample comprised 66 people (35 in the test group and 31 in the control group). The participants were professionally active adults, who worked with people in different professions (such as social worker, psychologist, teacher, team-leader, head of customer service, manager, kindergarten teacher and nurse) and reportedly experienced stress in their job. There were no significant differences between the test group and control group with regard to gender or profession. Participant age ranged from 25 to 50 years, and 60% of the test-group participants were 31–40 years old, 26% were 25–30 years old and 14% were 41–50 years old. In a case of the control group, the ages were; 33% were 31–40 years old, 34% were 25–30 years old and 33% were 41–50 years old.

The participants were recruited via social media. The notifications of the study were published including a link to preliminary questions, which were then expanded for candidates meeting the inclusion criteria. The inclusion criteria for the test group were the

following: the participant had to be in working life, have an interest in the regular practice of the relaxation methods, have no previous experience of regular guided relaxation and be working with people and reportedly suffering from stress. The same inclusion criteria concerned the control group, with the exception of an interest in practicing the relaxation methods.

A total of 96 people answered the preliminary questions for the test group and 35 people answered the preliminary questions for the control group. The candidates meeting the inclusion criteria were selected and their readiness to commit themselves to the regular practice of guided relaxation for seven weeks and writing a journal of their experiences was confirmed. Finally, 35 participants were selected for the test group. A total of 31 participants were selected for the control group. (See Appendix 1. Recruiting the test-group)

3.3 Data collection

The questionnaires used in the study were Quality of Life (WHOQOL-BREF), Psychological Well-being (Retrieved from https://www.karger.com/ 20.08.2014), Work Engagement scale; UWES-17 (Schaufeli, Bakker 2003), Stress-level (International Stress Management Association, Retrieved from isma.org/uk 10.08.2014), and Psychological Capital (Luthans, Avolio, Avey 2007). In addition, the test-group participants wrote a journal about their experiences and completed a separate feedback form at the end of the experiment.

Quality of Life (WHOQOL-BREF) is a questionnaire from the World Health Organization, examining the quality of life using 26 questions divided into four domains: *physical health* (seven items), *psychological health* (six items), *social relationships* (three items) and *environment* (eight items) and the subject's overall experienced health and quality of life (two items). The questionnaire is a shorter version of the extensive WHOQOL-100 questionnaire. Usually, the questionnaire is used so that instead of calculating overall scores, the focus is on the scores of each dimension, their internal variation and correlation with the experienced overall quality of life (WHO 1996). The permission for the use of the questionnaire was gained from the Finnish National Institute for Health and Welfare

(Appendix 3). In the current paper, the main focus is on the psychological dimension of the questionnaire.

The Psychological well-being questionnaire (Medical and Scientific Publishers, retrieved from karger.com 20.08.2014) is a theoretically grounded instrument (Ryff 1989, 2014) that especially focuses on measuring multiple facets of psychological well-being. It contains 42 questions relating to six components of psychological functioning: *self-acceptance, positive relations with others, autonomy, purpose in life, environmental mastery* and *personal growth*. The questionnaire is self-assessed on a 6-point Likert scale (1= strongly disagree, 6= strongly agree). The questionnaire was translated into Finnish language with the help of two separate, independent translators.

The Stress-level questionnaire (International Stress Management Association, retrieved from isma.org.uk 10.08.2014) comprises 25 questions assessing stress levels. The questionnaire is a self-rater version, where the questions are formulated as statements and the respondent has to choose either yes or no, depending on whether or not the statement applies to him or her. The higher scores indicate a serious stress condition, with physical and psychological symptoms, and lower scores refer to a state without stress. The questionnaire was translated into Finnish language with the help of two separate, independent translators, with permission from the International Stress Management Association.

The most widely used method for work engagement, the Utrecht Work Engagement Scale (Schaufeli & Bakker 2003), is a validated instrument including 17 items relating to three dimensions of work engagement: *vigour* (six items), *dedication (*five items) and *absorption (*six items). The questionnaire assesses how often respondents experience different aspects of work engagement, on a scale from 0 to 6 (0=never, 6= every day). The questionnaire was retrieved from its original source in Finnish language (Schaufeli & Bakker 2003).

The Psychological Capital questionnaire (Luthans, Avolio, Avey 2007) contains 24 questions on the four dimensions of psychological capital; *self-efficacy, hope, resiliency* and *optimism*. Each dimension is evaluated using six items on a 6-point Likert scale (1=strongly disagree, 6= strongly agree). The questionnaire and permission to use it in the study was gained from Mind Garden (Appendix 4).

The test-group participants received instructions for writing a journal about their relaxation experiences. After each relaxation session, they were to write down what kind of guided relaxation they did, how long it lasted and what effects they felt (physical, emotional, psychological). Every week they received a question to be answered in their journal. The questions were related to the effects of the guided relaxation practice and different aspects of the participant's well-being.

As additional data collection material, the test-group participants were asked to complete a feedback form. The form included separate questions related to the experienced effects and benefits of the relaxation exercises.

3.4 Structure of the experiment

A seven-week program was designed for the study. The program combined guided relaxation practices with journal writing. The participants were free to select one lesson per week on the schedule of the studio. Every week, the participants gained access to a new guided relaxation recording for home practice; they also received a weekly e-mail with a question to be elaborated upon in the journal. The weekly questions were meant to enhance the self-reflection and support the process of learning and practicing the methods. Online material for the test-group participants included information about the relaxation methods offered, the themes of the research (psychological well-being, work engagement, psychological capital and stress) and the guided relaxation practices.

The data was collected over eight weeks. One week prior to the first intervention, the test-group completed the Psychological well-being and Psychological capital questionnaires in online format. Each participant received a personal code to be added to the questionnaires in order to maintain anonymity, and make it possible to match the data gathered in the pre and post-tests.

The participants started the study on the same week in October 2014 in four small groups, each group in a similar way. The first intervention began with an introduction to the

idea and structure of the research and continued with an explanation of the methods used at the relaxation studio. Each participant signed a document which confirmed their participation in the research, their anonymity as well as the confidentiality of the study. It stated that the participant gave permission to the researcher to use the data gathered through the questionnaires and the journal. The participants completed questionnaires on stress-level, Work Engagement and Quality of Life. The need for frequent practice and the regular timing of the home exercises were emphasized along with instructions for the journal entries. Participants received access to online material created for the research.

The material consisted of instructions for home exercises, five different kinds of guided relaxation, information and material about the relaxation methods, and a weekly question related to the effects of the methods and the learning process. After the first intervention, each participant (using their personal code) booked one weekly guided relaxation session of their choice for seven weeks at the relaxation studio. Participants were encouraged to do home practice as much as possible, at least twice a week. Each week, the participants received an e-mail message from the researcher presenting the question of the week and encouraging guided relaxation and journal keeping.

After seven weeks of practicing, the participants completed the questionnaires again (two in online format and three as a paper version) and submitted a copy of the practice journal. A second post-test was conducted in February 2015, when the participants completed the questionnaires again. (See Appendix 2.Structure of the research) The control group received personal codes and completed the questionnaires online (pre-test and post-test) during the same weeks as the test-group participants.

3.5 Data analysis

The data analysis was performed in two stages. The first stage focused on a statistical analysis of the questionnaires, while the journals and the additional qualitative data were analysed in the later stage. The statistical analysis was based on the questionnaires assessing Work Engagement, Quality of Life, Psychological Well-being and Psychological capital.

The analysis began with calculating the means and standard deviations of the variables. The reliability of the scales used in the questionnaires was calculated with Cronbach's alpha. A generally accepted value for Cronbach's alpha (α) is 0.70 which indicates an acceptable level of reliability. Values of 0.80 or greater indicate a very good level of reliability, but values higher than 0.95 are not necessarily good. (Panayides 2013)

The differences between the test-group's and the control group's mean scores for questionnaire items and scales were determined using t-tests. In addition, the Pearson correlation coefficient was used to establish the correlations between psychological well-being, psychological quality of life and work engagement. The analysis was performed using the SPSS 21 statistics software.

The second part of the data analysis focused on the practice journals of the participants. Content analysis was selected to be the method of analysis. Elo and Kyngäs (2008) describe the goal of the content analysis as follows: "the aim is to attain a condensed and broad description of the phenomenon, and the outcome of the analysis is concepts or categories describing the phenomenon. Usually the purpose of those concepts or categories is to build up a model, conceptual system, conceptual map or categories". (Elo & Kyngäs 2008, p. 108)

In the case of the current paper, the aim was to identify which kinds of effect the test-group participants described in their journals and to categorize these into themes. The content analysis proceeded along the following three stages: preparation, organizing and reporting. The journals were read through several times, in order to become immersed in the data. The approach was selected to be inductive content analysis, where the next steps in the process are open coding, creating categories and abstraction (Elo & Kyngäs 2008).

Notes and headings were added to the journals while reading them. Subsequently, the headings were collected into coding sheets and the categories were generated. To ensure the reliability of the analysis, two separate individuals reviewed the journals and formed the categories, which were then compared and harmonized. Following the open coding, the lists of categories were grouped into higher order headings to ensure that the categories were not overlapping each other. This was followed by an abstraction process which focused on formulating and generating categories answering to the research questions.

In the additional material, the feedback questionnaire included further questions about how the participants experienced the seven-week program, and how they evaluated, for example, their coping with stress or their mood compared with the situation before the relaxation intervention.

4. RESULTS

The sample group comprised 66 participants (35 test group, 31 control group). Most of the participants in both groups were women. There were five men in the test group and four men in the control group. There were no significant differences between the test group and control group with regard to gender or profession. The drop-out rate in the test group between the pre-test and first post-test was 8.5% (3 people). In the control group, the drop-out rate was higher 25% (8 people). In the second post-test for the test group, the drop-out rate was higher, 37%, which decreases the reliability of the results from the second post-test.

The results will be presented by first bringing out the quantitative findings. This is followed by the qualitative findings and remarks on the presented results.

4.1 Quantitative results

The quantitative results are presented in the following way; first part establishes answers to the first and third research question; does psychological well-being improve by practicing guided relaxation, and what are the potential benefits of the practice in terms of experienced quality of life. The second and third part focuses on the question does the regular practice of the methods have an effect on work-related phenomena such as psychological capital, work engagement or stress levels.

4.1.1 Psychological well-being and Quality of life

Psychological well-being was measured using the Psychological well-being questionnaire (Retrieved from https://www.karger.com/ 20.8.14). The participants indicated their responses on a 6-point Likert-type scale, with higher scores on each scale indicating greater well-being on each dimension. The scores were calculated in accordance with the instructions, by recoding negatively phrased items and adding together the final degree of agreement in each of the six dimensions. For each category, a high score indicates that the respondent has a mastery of that area in his or her life, and a low score indicates the opposite.

The reliability of the scale was calculated using Cronbach's alpha. For the overall scale, the calculated reliability was $\alpha = 0.902$, and for the sub-scales it was $\alpha = 0.700$ (for *Autonomy*), $\alpha = 0.83$ (for *Environmental mastery*), $\alpha = 0.66$ (for *Positive Relations with others*), $\alpha = 0.68$ (for *Personal Growth*), $\alpha = 0.74$ (for *Purpose in life*) and $\alpha = 0.71$ (for *Self-acceptance*). According to these figures, the data gathered can be said to be reliable. Cronbach's alpha coefficients for the sub-scales *Positive Relations with others* and *Personal Growth* are low, which may be due to the small sample size.

The analysis for pre-test results did not reveal any significant differences in mean scores for the psychological well-being dimensions between test-group and control group. Both groups indicated their psychological well-being to be on a relatively good level. In the test group, *Self-acceptance* (m=4.17, SD=0.66) and *Autonomy* (m=3.84, SD=0.58) received the lowest scores and *Personal Growth* (m=4.97, SD=0.50) and *Positive Relations with others (*m=4.57, SD=0.70) received the highest scores.

The t-test revealed no significant differences between the mean scores of the control-group's pre-test and post-test (Appendix 5). However, the analysis of the test-group revealed significant differences between the mean scores of the pre-test and post-test result. The results are summarized in Appendix 5. The difference of group means between the test group and the control group in the second post-test were statistically significant for the dimensions of *Personal Growth* (respectively m=5.13 and m=4.69,t=0.377, p= 0.004) and *Positive Relations with others* (m=4.95 and m=4.56, and t=2.46, p=0.01), showing higher scores for the test group.

The results indicate that during the relaxation intervention period, a positive change occurred in psychological well-being of the test-group participants with regard to three dimensions: *Autonomy*, *Environmental mastery* and *Positive relations with others*. Higher scores (respectively m=3.48 SD=0.58 and m=4.22 SD=0.73, t=-2.3, p=0.02) in the dimension *Autonomy* reflect a positive change in self-determination, independence, regulating behaviour from within and evaluating self by personal standards. Higher scores in *Environmental Mastery* (respectively m=4.36 SD=0.70 and m=4.83 SD=0.64 , t=-2.7, p=0.007) indicate growth in the sense of mastery and competence in managing the environment and being able to choose or create contexts suitable for personal needs and

values. A positive change in the scores for the dimension *Positive relations with others* (respectively m=4.57 SD=0.70 and m=4.95 SD=0.59 , t=2.36, p=0.02) reflects warmer, more satisfying and trusting relationships with others, including greater concern about the welfare of others, and stronger empathy, affection and intimacy (Ryff, Singer 2013).

The other three dimensions did not show statistically significant differences. Nonetheless, the means of these dimensions were higher in the test-group's post-test, in comparison with the control group, where the means for the majority of the dimensions were lower in the post-test than in the pre-tests. However, in the second post-test, the means of each dimension had lowered and the results were not anymore significantly higher than the pre-test.

The Quality of Life (WHOQOL-BREF) is a questionnaire from the World Health Organization, assessing Quality of Life using a set of 26 questions, divided into four domains: Physical health (seven items), Psychological health (six items), Social relationships (three items) and Environment (eight items) as well as overall health and quality of life (two items). The participants were instructed to assess their situation in each item on a 5-point scale (1 = not at all/ very bad and 5=a lot/excellent). The questionnaire produces a profile with four domain scores, and two individually scored items about an individual's overall perception of quality of life (WHO 1997). According to instructions from the WHO (1997), the four domain scores were scaled in a positive direction with higher scores indicating a higher quality of life. Three items were reversed before scoring. After item recoding, a raw score was converted to transform the scores to a range between 0–100.

Cronbach's alpha for the whole scale was α=0.86, and for the Psychological sub-scale was α=0.79, for other subscales the alphas were lower than commonly accepted: α=0.55 for physical, α=0.60 for social, α=0.60 for environmental. According to these calculations, the data gathered about the Psychological dimension are reliable. The reliability level of other dimensions are lower and did not reach the accepted alpha value (α=0.70). The low Cronbach's alpha coefficients for the other scales may be due to the small sample size.

The mean scores given for the quality of life domains in the pre-test were rather low in both groups, when compared with the Finnish norm-scores (Vaarama, Moisio, Karvonen 2010); the comparisons are presented in Table 1. The norm scores are from 2009. There are

scores for men and women, and different age groups calculated separately (Vaarama et.al 2010), but due to the small sample size, the scores are not divided in this way, but the scores representing the overall Finnish population are used.

Post-test results reveal that the evaluations of the test group improved for all items, while the control group manifested an opposite trend. The main purpose of the current paper was to focus on the psychological dimension of the Quality of Life. The t-tests revealed significant differences in the pre-and post-test's mean scores for the test-group on other dimensions as well (physical and social domains). But as mentioned, Cronbach's alpha did not reach an acceptable level, so the results will only be described for illustrative purposes (Appendix 7 and Appendix 8)

Table 2. The means for Quality of Life for the Finnish population and the sample

Sample	**Physical mean (sd.)**	**Psychological mean (sd.)**	**Social mean (sd.)**	**Environmental mean (sd.)**	**Experienced Quality of life mean (sd.)**
Finnish population (N=4306)	77(17.4)	74 (14.5)	79 (16.8)	77 (12.9)	4 (0.8)
The test-group (N=35)	68 (12.5)	60 (15.5)	61 (20.3)	73 (12.1)	3.6 (0.77)
The control group (N=31)	69 (11.6)	61 (14.4)	70 (15.0)	67 (9.15)	3.6 (0.80)

(0=lowest, 100=highest except in the experienced Quality of Life 1=lowest, 5=highest)

The Psychological domain includes six questions related to the following themes: bodily image and appearance, negative and positive feelings, self-esteem, spirituality, thinking, learning, memory and concentration. The results are summarized in Appendix 6.

Statistically significant changes in the test group's scores occurred in the items "To what extent do you feel your life to be meaningful?" (respectively m=3.7, SD=0.89 and m=4.5, SD=0.80, t=-2.32, p=0.02) "How well are you able to concentrate?" (respectively

m=3.1, SD=0.69 and m=3.7, SD=0.73, t=-3.45, p=0.001) and "How satisfied are you with yourself?" (respectively m=3.5, SD=0.80 and m=4.0, SD=0.84, t=-2.86, p=0.009). Comparing the means of the post-test for the test group and control group, a statistically significant difference can be seen in *satisfaction to oneself* (respectively m=4.06, SD=0.84 and m=3.4, SD=1.0, t=2.47, p=0.01) and in the question about *feeling your life to be meaningful* (respectively m=4.25 SD=0.80 and m=3.63 SD=0.90, t=2.62, p=0.01), the test group showed higher scores.

The item related to negative feelings ("How often do you have negative feelings such as blue mood, despair, anxiety or depression?") was a reversed score item and the higher scores indicate fewer negative feelings. This did not improve significantly during the relaxation intervention (respectively m=3.2 SD=1.0 and m=3.5 SD=0.9, t= -1.1, p=0.2). However, in the second post-test the difference with the pre-test was statistically significant; the test-group participants experienced less negative feelings.

The Social domain scale had three questions related to personal relationships, social support and sexual activity. The items ("How satisfied are you with your personal relationships?", " How satisfied are you with your sex life?") indicated significant differences between the pre-test and post-test means for the test group, post-test showing higher scores referring to higher satisfaction (Appendix 7).

The Physical domain scale contained seven items related to activities of daily life, dependence on medicinal substances and medical aids, energy and fatigue, mobility, pain and discomfort, sleep and rest, and work capacity. The items "How satisfied are you with your sleep?" and "How satisfied are you with your capacity to work?" showed a significant difference in the means of the test group when comparing the pre-test and post-test scores, post-test showing higher scores, referring to higher satisfaction (Appendix 8). In addition, there was a significant difference between the test group and control group in the post-test, with higher scores in the test group (Appendix 9). All the three domain scores of the test-group and control group are presented in Appendix 9.

In a conclusion, with regard to the psychological well-being and experienced quality of life, it can be said that the relaxation intervention had a positive impact to both of these variables. According to the results of the second post-test, the positive changes prevailed

two months after the experiment from the point of view of the experienced quality of life, but psychological well-being was not anymore as high as in the first post-test. The results for psychological well-being indicate that during the seven-week period, the changes which occurred were mainly in domains which can be described as behaviourally controlled. The self-related beliefs, self-esteem, self-acceptance and purpose of life did not change during the experiment or post-test period. It seems that the relaxation intervention helped test-group participants in self-regulation, regulating behaviour from within, choosing and creating contexts suitable for personal needs. The seven week period was, however, probably too short to create changes on a deeper level, such as self-related beliefs. As the second post-test results show, the effects did not prevail until the second post-test.

The results for quality of life showed changes in several dimensions and items. Items from the psychological and physical dimensions indicated most clearly that the test-group participants were more satisfied with themselves and their relationships, they gave higher ratings for their ability to concentrate, their capacity to work and their quality of sleep.

4.1.2 Stress-levels and work engagement

The stress-levels were measured using a questionnaire from the International Stress Management Association (ISMA). The questionnaire includes 25 statements describing the psychological, emotional, physical and behavioural signs of stress. The participant had to evaluate if the statement is applicable to him/her by answering “yes” or “no”. Every “yes” answer gives one point, and the higher the scores (Max. 25) the higher the level of stress.

According to the Stress-level questionnaire, the stress levels among the test-group participants were relatively high (total scores in the rage from 4 to 17, m=12, SD=3.5) compared to the control group (total scores in the rage from 0 to 21, m=5.6, SD=5.6). The post-test revealed that the number of participants with low stress level had increased in the test-group (total scores ranging from 2 to 17, m= 9.3, SD=4.8). The stress levels of the control group stayed at the same levels (total scores in the range from 1 to 21, m= 12, SD=5.5). The stress levels of the test-group participants in the second-post-test continued to be lower (m=8.3, SD=4.2, p=0.44).

Work engagement was measured using a work engagement questionnaire (UWES17-version). The reliability of the scales was established with Cronbach's alpha; for the whole scale this was α=0.93, and for the *Vigour* sub-scale α=0.84, α=0.85 for *Dedication*, α=0.90 for *Absorption*. According to these coefficients the data gathered gives reliable information about work engagement levels in the sample.

There were no significant differences between the test group and control group in the pre-test scores for any of the dimensions of work engagement. Both of the groups indicate their overall work engagement to be somewhat low (respectively for the whole scale m=4.25, SD=0.98 and m=4.33, SD=1.02) when compared with the Finnish norm scores (N=8361, m=4.40, SD= 1.05), compiled by the Finnish Institute of Occupational Health (Hakanen 2009). The results of the sample seem to follow the same trend with the sample of the Finnish Institute of Occupational Health: dedication showing the highest scores and absorption showing the lowest. Analysis revealed no significant differences in the control group's pre-test and post-test results (Appendix 11). However, there was a difference between the pre-test and post-test scores of the test-group for *Dedication* (respectively m= 4.58 SD=0.93 and m=4.82, SD=1.04, t=-2.28, p=0.02) and *Vigour* (respectively m=4.25, SD=0.96 and m=4.71, SD=0.90 t=-2.02 p=0.04). The difference for the dimension *Dedication* is statistically significant.

When comparing the means of the test-group's pre-test and post-tests, we can see that the mean of the post-test was higher for every dimension. The results are summarized in Table 3.

Table 3. Work engagement of the test-group

(mean, SD)

DIMENSION	Pre-test	Post-test	2nd post-test	Pre - Post	Post - 2nd post	2nd post – pre-test
Vigour	4.25 (0.96)	4.71 (0.90)	4.71 (0.94)	t=1.81 p=0.07	t=-0.01 p=0.98	t=-1.81 p=0.05*
Dedication	4.58 (0.93)	4.82 (1.04)	5.13 (0.86)	t=-2.28 p=0.02*	t=-1.17 p=0.24	t=-2.28 p=0.07
Absorption	3.98 (1.28)	4.31 (1.12)	4.48 (1.1)	t=-1.54 p=0.12	t=-0.56 p=0.57	t=1.54p=0.02*
Total work engagement	4.25 (0.90)	4.60 (0.96)	4.75 (0.90)	t=-1.97 p=0.54	t=-0.59 p=0.55	t=-1,97 p=0.12

(**p=significant at the 0.01 level, *p=significant at the 0.05 level)

The table shows that there was no statistically significant difference in the overall scores for work engagement. However, a significant difference was found in the mean scores of the dimension *Dedication,* close to a significant difference on the dimension *Vigour*. *Dedication* is assessed by items which refer to deriving a sense of significance from one's work, feeling enthusiastic and proud of one's job and feeling inspired and challenged by it. Higher scores for *Dedication* (respectively m=4.58 SD=0.93 and m=4.82 SD=1.0, t=-2.28, p=0.02) refer to strongly identifying with one's work and experiencing it as meaningful, inspiring and challenging (Schaufeli, Bakker 2003). Higher scores for the dimension *Vigour* (m=4.25, SD=0.96 and m=4.71 SD=0.90, t=-1.81 p=0.07) refer to energy, zest and stamina when working. *Vigour* is assessed by items which refer to high levels of energy and resilience, the willingness to invest effort, not being easily fatigued, and persistence in the face of difficulties. (Schaufeli & Bakker 2003).

According to the data, the test-group participants experienced their work as being more meaningful, inspiring and challenging at the end of the experiment. Moreover, they felt in the post-test that they have more energy, they are more resilient and they feel more vigorous than at the beginning of the experiment. The work engagement levels were similar in the first and second post-tests; no changes occurred two months after the relaxation intervention.

Pearson correlation coefficient was used in order to see the correlations between psychological well-being and work engagement (see Appendix 12, Appendix 13), and psychological quality of life (Psychological domain from WHOQOL-BREF) and work engagement. According to the results, work engagement is positively and significantly related with psychological well-being and psychological quality of life. The correlations with psychological well-being were significant on the dimensions *Autonomy, Environmental Mastery* and *Self-Acceptance*. The correlations of these dimensions with the work engagement ranged from r= 0,37 to r=0,52 and the p-values were strong (p=0,00). The overall work engagement seemed to be significantly positively correlated especially with the psychological well-being dimension *Self-Acceptance* (r=0.52, p=0.00).

From the dimensions of work engagement (*Vigour, Dedication and Absorption*) a strong correlation was established with the *Dedication* and *Self-acceptance* (r=0.58, p=0.00). These results indicate that when participant possessed a positive attitude toward the self, he or she was also strongly involved in one's work and experienced a sense of significance and inspiration.

Work engagement and psychological domain of quality of life (WHOQOL-BREF) were as well positively correlated. The correlations ranged between r=0.34 to r=0.52, and the p-values were high on each item (p=0.00-0.001). It was found that the work engagement was strongly positively correlated with the item *to what extent do you feel your life to be meaningful* (r=0.52, p=0.00). Furthermore, especially when the *Dedication* was high, the item *to what extent do you feel your life to be meaningful w*as also very high (r=0.61, p=0.00). This signifies that when the participants were dedicated in their work, they felt life to be more meaningful. We cannot make profound conclusions of these correlations, but we can say that these two variables are high together, they are positively correlated and more specifically, it seems that meaningfulness (feeling one's life to be meaningful and have a purpose) and work engagement go hand in hand.

4.1.3 Psychological capital

The Psychological Capital questionnaire included 24-questions on the four dimensions of psychological capital: *Self-efficacy, Hope, Resiliency and Optimism*. Each dimension was evaluated on a Likert-scale 1–6 (1=strongly disagree, 6= strongly agree). The reliability of the scales was calculated with Cronbach's alpha and for the entire PCQ-24 it was α= 0.900 and for the four subscales: *Efficac*y α=0.879, *Hope* α=0.846, *Resiliency* α=0.706, *Optimism* α=0.731. According to these coefficients the data gathered gives reliable information about the psychological capital levels in the sample.

There were no significant differences between the test-group and the control group in the pre-test on any dimension. According to the pre-test, the psychological capital of the test-group was at a relatively good level (Table 3), the *self-efficacy* (m=4.7, SD=0.73) dimension showing the highest scores and *resiliency (*m=4.3, SD=0.83) showing the lowest scores. In the case of the control group, there were no differences in any of the dimensions between the pre-test and post-test. Each dimension mean was lower in the post-test than in the pre-test (Appendix 10).

Table 4. Psychological capital of the test-group

(mean, sd)

	Self-efficacy	**Hope**	**Resiliency**	**Optimism**	**PsyCap**
G1T1	m=4.7(0.73)	m=4.3 (0.82)	m=4.4 (0.53)	m=4.4 (0.63)	m=4.4 (0.56)
G1T2	m=4.9(0.36)	m=4.7 (0.76)	m=4.7 (0.61)	m=4.80 (0.60)	m=4.7(0.57)
G1T3	m=4.9(0.72)	m=5.03(0.54)	m=4.89(0.52)	m=4.81 (0.76)	m=4.95(0.53)
G1T1-G1T2	t=-1.13 p=0.2	t=-1.84 p=0.07	t=-1.87 p=0.01**	t=-2.43 p=0.01**	t=-2.08 p=0.04**
G1T2-G1T3	t=-0.47 p=0.6	t=-1.62 p=0.1	t=-0.98 p=0.3	t=-0.06 p=0.9	t=-1.05 p=0.29
G1T1-G1T3	t=-1.47 p=0.1	p=3.38 t=0.001**	t=-2.94 p=0.005**	p=-2.08 p=0.04**	t=-3.08 p=0.003**

(G1=test-group, T1=pre-test, T2=post-test, T3=2nd post-test, **p= significant at the 0.01 level, *p=significant at the 0.05 level)

The t-test revealed a significant difference in the mean scores for *Optimism* (m=4.4 SD=0.63 and m=4.80 SD=0.60, t=2.43, p=0.01), *Resiliency* and overall *PsyCap,* when

comparing the pre-test and the first post-test values of the test-group. When the pre-test values were compared with the second post-test a statistically significant difference on the same dimensions was found.

The results indicate that the test-group participants were making more positive attributions about succeeding now and in the future (*Optimism*), and their capacity to rebound or bounce back from adversity, conflict, failure (*Resiliency)* was stronger at the end of the experiment and their overall positive psychological state of development was at a higher level. Moreover, when comparing the t-test results of the control group and test group, a statistically significant difference could be established on the overall *PsyCap* ($t=2.61$, $p=0.01$) and *Optimism* ($t=5.03$, $p=0.00$), which confirms that the positive changes did not occur for the control-group, and the difference between the test-group and control group was significant.

It can be concluded that the stress-levels of the test-group participants were significantly lower in the post-test than in in the pre-test, the *Work engagement* of the test-group improved on the dimension of *Dedication* and mildly on the dimension *Vigour*. The overall *Psychological capital* improved and the dimensions *Optimism* and *Resiliency* improved significantly. Therefore, according to the quantitative data, the test-group participants were less stressed at the end of the experiment, and had gained energy, optimism and resiliency during the period of the relaxation intervention. And their overall positive psychological state of development was at a higher level. Two months after the intervention, these effects were still seen on the results of the second post-test.

4.2 Qualitative results

The qualitative analysis description combines data from the content analysis of the journals and the separate feedback forms.

4.2.1 Journals

Participants kept a journal of their relaxation practice. The guidelines for writing were explained at the beginning of the study and the instructions were available online throughout the study period. The participants were instructed to write down their relaxation practices every week: what kind of relaxation they did, how long it lasted and what kinds of observations they made in relation to the effects of the practice. Furthermore, every week a focus question related to the practice was sent to the participants, who elaborated on the question in the journal.

Twenty-four test-group participants handed in their journal. According to the journals, the participants did approximately three relaxation exercises per week, one in the studio and two at home. There were participants who did more exercises at home (20–35 times during the period), and there were participants who did not do home practice almost at all.

The journals were analysed using content analysis, following the three-stage, inductive content analysis process of open coding, categorizing and abstraction. The following five categories were finally selected as the main themes answering to the research questions: mood and feelings, stress-related symptoms, attitude towards encountered stressors, and sleeping. The author decided to have sleeping as a separate category from stress-related symptoms, because it was widely described, and as a separate theme from the other stress symptoms. The themes are discussed in the following sections.

4.2.2 Stress-related symptoms

At the beginning of the study, most of the participants described their need for guided relaxation by referring to a very stressful working life. The motivation for the relaxation practice was examined in the first weekly question. Most of the participants mentioned "negative goals", such as enhancing sleeping, managing stress or enhancing healing from burnout or depression (N=20), as a motivation for the practice. Other participants also described positive-practical and positive-expressive goals, such as enhancing health or concentration, energy, positive feelings and creativity (N=12). The participants' descriptions of their motivation to engage in relaxation practice can be seen below.

"*I have realized that when life is so hectic, relaxation is necessary. My life feels very hectic, even chaotic, and I wish that through relaxation I can get some peace of mind and ability to focus on things."*(Participant 19)

"The continuous customer service job is draining. During the past few years, recovering from work has become more demanding and it requires more time. Weekends are not enough for recovery and even after holidays I feel often that I am not recovered. Continuous hurry and busy schedule of mine, changes in the workplace and negative atmosphere at work puts even more weight on my shoulders. I wish relaxations could help me to recover and just relax." (Participant 40)

*"There is so much work to do. It is demanding to let go of work issues and have peace of mind. My thoughts are running around negative things and bothering issues and it is difficult to sleep. I wake up many times a night and can't get back to sleep. I wish to get more positive thoughts and feelings and I hope to gain trust that I will get enough sleep and rest". (*Participant 56)

Many participants reported changes in the stress symptoms during the seven week period. The described stress symptoms included migraines, back and shoulder pain, muscle tensions, and different kind of aches and pains as well as difficulty focusing or concentrating. The effects of the relaxations on the physical stress symptoms were described, for instance, in the following ways:

*"I really feel that my migraine has decreased during this period of regular relaxations, which is amazing for me!"(*Participant 61)

"I have realized that my muscle tensions have diminished. Somehow my upper body is more flexible, not so tense anymore. Also the muscle tensions in my legs and calves have decreased. I haven't done any stretching or other things than relaxation, so the relaxations must have affected." (Participant 40)

*"Regular relaxations have helped me in stress management. Physical symptoms such as increased heart rate and some kind of anxiety attacks have disappeared almost completely." (*Participant 38)

Problems with concentration and focusing on work tasks or sport performances were one stress symptom reported in the journals. Participant 28 describes her thoughts and ability to focus at the end of the journal; "*My thoughts are much clearer, and I have been able to focus on unpleasant work tasks that I have been avoiding for some time."* Relaxations were also found to function as a tool for taking a break from work issues in the middle of a working day which helped to focus again on the work at hand: *"I have visited the relaxation studio in the middle of my working day and it feels good. It suits my timetable and it gives me a chance to detach from work. There I have a moment for just being, gathering my thoughts, and then I can focus better." (*Participant 29)

In conclusion, it can be said that it seems that the relaxation intervention had a positive effect on the stress symptoms experienced by many of the participants. Changes in the physical symptoms of stress and in the ability to focus were reported.

4.2.3 Attitude towards stressors

Participants described not only a decrease in the above-mentioned stress symptoms but a change in their attitude towards stressors and stressful situations. It seems that the relaxations have enhanced a calm and peaceful approach to stressors and stressful situations. The participants reported the changes in their attitudes in two realms, in relation to their work or tasks, and in relation to everyday life troubles. Below are a few examples from the former category.

"*The relaxations create a feeling that all is well, and I have all I need. During the workday this was exactly what was needed. And now I feel like…I have been able to keep part of this peaceful feeling at work nowadays." (*Participant 6)

"*The research occurred during a time when there is a negative and tense atmosphere at my workplace. I feel that the relaxations helped me to detach from the work issue and stay calmer. When the body was relaxed, my mind stayed more in peace as well. Relaxation was for me a supportive tool when tense and negative feelings were taking over." (*Participant 56)

"*I went to the relaxation studio in the middle of the working day, to see how well I can relax at this time of the day. I was very tense and irritated by certain work issues, and I thought this is not going to work out. Surprisingly, I relaxed very deeply and I felt very recovered and fresh afterwards. And, I was able to focus on work with a much better attitude, when the unnecessary irritation was gone!" (*Participant 9)

The following descriptions represent the latter category, i.e. the effects in relation to the participant's attitude towards stressors in everyday life:

"*Somehow, through the relaxations I have accepted that sometimes I just don't sleep so well, but I don't let this disturb my thinking, I encourage myself that it is fine, all is well, and things will be alright. I keep myself more calm and don't let my mind create negative circles of thoughts. So, nowadays I can more easily control my thoughts in a more positive and calm direction.* " (Participant 40)

*"Relaxation has helped me to encounter the stressful situations with a more peaceful attitude. I have sort of realized that there is no need to fuss and stress about things. I have been able to be more "present" with people, and for example, when I am walking on the streets, I have realized that I am not in such a hurry all the time; I have time to see and experience things." (*Participant 7)

*"The negative and bothering thoughts have not taken over as they usually do. Feeling that whatever comes to mind can come and go and I don't get stuck on the negative thoughts so easily." (*Participant 29)

According to the journals, the relaxation intervention helped the participants cope with stress at work and in everyday life. The participants described the relaxations as helpful in regulating their emotions and approaching stressful situations.

4.2.4 Mood, emotions and sleeping

According to the journals, the practice of the guided relaxations enhanced and increased the amount of positive emotions and the overall mood of the participants. Their quality of sleep also improved: participants described that they fall asleep quicker with the help of the guided relaxations, and they found the sleep to be deeper. The positive emotions and overall mood were described in two ways: firstly, the descriptions focused just on the relaxations that gave the participants pleasant and positive experiences and emotions at the moment when they were carried out; and secondly, the overall mood and feelings during the seven-week period were described to be brighter or lighter. Some of the participants reported their feelings after the relaxations:

*"When I do the relaxation, I fall into some kind of "deep breathing-stage", where I feel absolutely good, physically and mentally. Physically after the relaxation I feel very calm but not phlegmatic. This could be described as a gently recharged state; "batteries" are full of energy but in a peaceful way. Everything is in control and stable, in my mind and in my body." (*Participant 9)

*"After the relaxation I felt good and happy, I found myself smiling while walking on the street and my evening presentation went well." (*Participant 70)

*"After the relaxation I felt so very good; somehow so peaceful and clear." (*Participant 11)

"I came to the relaxation in a hurry, I had a busy day behind me and I was afraid I will get a migraine. I relaxed very deeply and the rest of the evening was so peaceful. The good feeling from the relaxation continued at home, I was peaceful, relaxed and satisfied." (Participant 61)

The following descriptions relate to how the positive feelings from the relaxations affected the participants' overall mood:

"A relieved and relaxed feeling took over after the relaxation session. The following night I slept well, and saw pleasant dreams. Overall, the relaxations have brought joy and pleasure to my everyday life, and my energy levels have been higher." (Participant 40)

"During the past few months, my mood has been bright and each morning I have gone to work feeling happy."(Participant 28)

Two of the test-group participants stopped using sleeping drugs during the intervention period. They described that the relaxation recordings had been helping them to fall asleep better and the sleep has been deeper. "*I have left behind the sleeping medicines, because the relaxation recordings have been a good sleeping medicine for me. So, in that sense, the effects of the recordings have been very significant for me personally*" (Participant 84). At the onset of the study, participant 83 reported suffering from stress and sleeping problems: "*I am working as a manager. I have almost 300 employees and multiple tasks and responsibilities. Even though I truly enjoy my work, I am constantly stressed out, and this has a strong effect on my sleep. I have suffered from insomnia for 14 years*." In the last weeks of the study, the comments related to sleep were brighter: "*At the moment, I feel amazing! The period of learning to relax has been very useful for me. During this sixth week I have seen an improvement in the quality of my sleep. It has been deeper and more solid. This is so important for me, I am happy*!"

Furthermore, other participants reported changes in the sleeping, or falling asleep in the following ways:

"I have noticed that after relaxation I feel very refreshed and awake, but in the evening it is easy to fall asleep."(Participant 82)

"I have felt that the relaxations have had an impact on my sleeping habits. I trust more that I will get the needed sleep. Moreover, if I wake up in the night, getting back to sleep has been relatively easy." (Participant 56)

*"Overall, during the 7-weeks I have slept better and especially on those nights when I have listened to the guided relaxation during the day" (*Participant 33)

As the examples brought out, the relaxation interventions seemed to affect the emotions and overall mood of the participants positively. The participant did not just enjoy the

feelings which occurred when experiencing the intervention, but as well, felt that it affected their overall mood during the weeks of the experiment. The relaxations helped many participants to fall asleep quicker and sleep better.

4.2.5 Additional qualitative data

At the end of the seven weeks, the participants commented in their journals on how well they had accomplished the goals they had set at the beginning of the process, and if they had benefited from the relaxation practice. Most of the participants were seeking help for their stress management, and physical or psychological stress symptoms. In addition, the participants completed a separate feedback form, where they could give feedback on the relaxations and the structure of the research. The form included questions about how the participants evaluated the effects of regular relaxation in relation to their coping at work or coping with stress.

For the most part, the participants wrote positively about their accomplishment of the goals. A few participants were dissatisfied with the amount of relaxations they managed to do (they were aiming to practice relaxation more, but were unable to do so due to busy schedules). Two participants commented that there was too much to do in the experiment (relaxations at the studio, home exercises and keeping a journal). All participants were planning to continue the relaxation practice and they also reported that they had benefited from the practice in one way or another. Figure 1 and figure 2 present the results for two items on the separate feedback form.

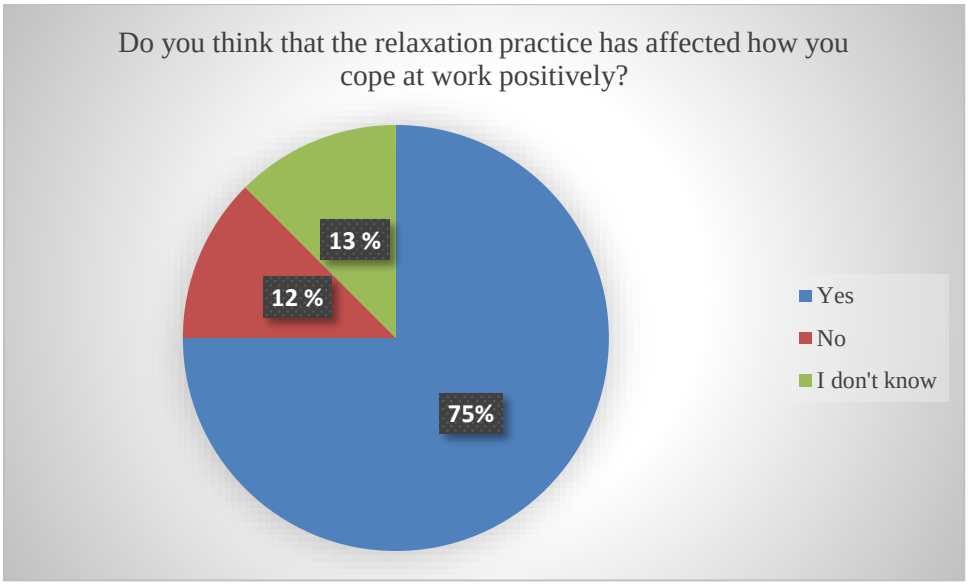

Figure 1.Coping at work

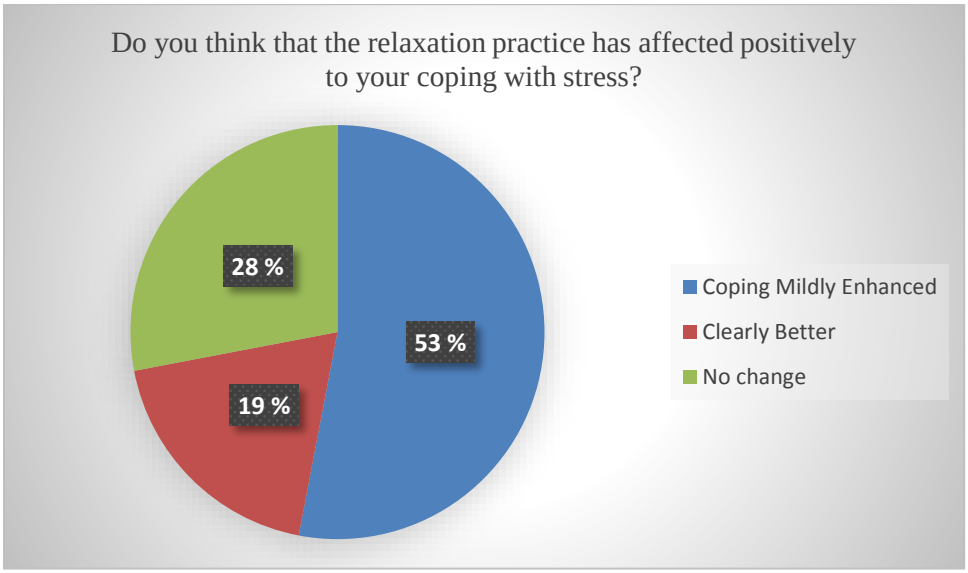

Figure 2. Coping with stress

According to 75% of the participants, the regular practice of relaxation had a positive effect on their coping at work. Based on the answers submitted on the feedback form, 72% of the test-group participants think that their coping with stress improved during the seven-week period, either somewhat or clearly. No one reported their coping with stress to be worse or slightly worse than at the beginning of the study. Moreover, 44% of the participants answered that their mood after the intervention was slightly better, 31% stated it to be clearly

better, 16% reported no change in their mood and 9% reported their mood to be slightly worse.

4.3 Remarks on the results

The quantitative results indicate that the relaxation intervention had a positive effect on dimensions of psychological well-being, quality of life, work engagement and psychological capital. However, before making profound conclusions about the differences between the test-group and control-group scores and the test-groups' improved dimensions and items, it has to be considered that during the relaxation intervention period the test-group participants did not only do relaxations, but were also encouraged to engage in self-reflection through journal writing. Furthermore, the participants became more aware of the concepts and issues related to their well-being due to the information given, and they were in this sense more capable of making evaluations of the items than the control group. Therefore, the effects are not only related to the guided relaxations but also the information given and the heightened self-reflection and analysis of questions of well-being.

Moreover, the qualitative results are based on the twenty-four journals which were handed in and the additional feedback forms handed in by each participant. Eleven journals were missing. This is one of the limitations of the qualitative result analysis. Another limitation is that the results are sensitive to the influence of external factors, such as extracurricular activities. As an example we can assume that the participants who got involved in to the relaxation intervention are most likely to pay greater attention to their health and well-being. Due to the nature of the study these external factors could not be eliminated.

5. IMPLEMENTATION OF GUIDED RELAXATIONS

This section summarizes the key points about the development needs in relation to the question how the relaxation studio can develop the interventions further to meet the needs of organizations or companies better. More precise information and the detailed program designed for the studio are not presented in the thesis because of the intellectual property rights.

5.1 How to develop the interventions

In order to meet organizations' needs better, the guided relaxation interventions need to be further developed based on the themes of the relaxations and the implementation of these interventions. The main aim in identifying the development needs is to make the guided relaxations cost-effective and more beneficial for organizations, work teams or companies. Three main points for the development are suggested, and the first two are presented in this sub-section. The third is described in the following sub-section.

Firstly, at the moment, organizations can either book a lesson at the studio for a work team, or arrange for guided relaxation in their premises. The theme of the relaxation is chosen by the person ordering the lesson (often a manager, team leader or CEO), and the lessons are modified accordingly. After the implementation, no evaluation of the effects of the impact of the program is offered. It is suggested that the modification of the lessons should be based on analysing what is needed in the organization or work team, and by the employees, and there must also be an evaluation of the effectiveness of the intervention.

The content or themes of the relaxations should be modified according to the needs of the employees and organizations. Each stress intervention must be based on diagnosing and evaluating what exactly is needed in the organization. The guided relaxation interventions are not meant to be comprehensive stress-audit type interventions; instead, the aim is to offer a tool for stress management and coping. On the other hand, there are a number of questions – such as what types of guided relaxations, what themes and topics would be relevant for the people involved, and when and where the guided relaxation could be

implemented – that should be addressed before implementing the relaxation intervention. In order to create cost-effective and beneficial interventions, a needs-assessment is required. An evaluation of the impact of the program is also necessary if the organization wants to know if it is getting any return on its investment.

Secondly, guided relaxations practiced regularly can be effective in decreasing stress levels and increasing overall mood and experienced quality of life. Furthermore, due to the effects of relaxations, they can be an effective tool for psychological detachment and recovery from work, and in this way, work engagement can be influenced as well. In order to benefit from the effects related to psychological capital, the guided relaxations could be designed specifically on the basis of the dimensions of PsyCap.

Psychological capital can be developed through short micro-interventions, and the cognitive-behavioural approach has been found to be effective in stress management interventions. A program based on the cognitive-behavioural approach, involving guided relaxations and incorporating the dimensions of psychological capital, was developed for the relaxation studio in question to be modified to suit different organizational settings. The program is a combination of three different components – relaxation, cognitive-behavioural and psychological capital dimensions- and its duration is eight weeks. The program's effectiveness should be investigated by a pilot study with a broad sample.

One way to develop guided relaxation practices is by combining them with themes from positive organizational behaviour. Concepts such as psychological capital and work engagement could be useful in the context of guided relaxations, and they could offer helpful theoretical guidelines for assessing the needs of organizations and employees. By providing not only guided relaxations but also information for employees in relation to the concepts related to, for example, psychological well-being, stress and work engagement, it is possible to raise awareness and self-reflection. This can also have a positive effect on personal well-being as well as organizational outcomes.

As the results of the study indicate, the guided relaxations do not improve work engagement or psychological capital significantly. However, statistically significant improvements occurred on the dimensions *Dedication* and *Optimism*. There is potential that,

if the interventions are developed further with the described suggestions, and a pilot study on the effects of the developed program is created, the guided relaxations can be developed to be an effective and useful tool for organizations and individuals in the question of how to maintain and increase well-being and psychological capital of organizations.

5.2 Need for a separate, permanent place for relaxation

A program based on psychological capital, guided relaxations and the cognitive-behavioural approach can be effective in developing psychological capital, and thereby, in influencing the stress levels experienced and stress management. To maintain psychological well-being and to offer a permanent tool for stress-management, however, more than short-term interventions are needed. As the results of psychological well-being indicated, the seven weeks program was not enough to increase the well-being or to reach changes on deeper level.

One of the major issues mentioned in the practice journals compiled by the test-group participants was the importance of having a separate place for relaxation. The participants found the relaxation studio's environment as such relaxing. At home or at work, focusing the mind on the practice was reported to be challenging, and there were no suitable places for the practice. A part of the relaxation experience was the studio itself, being in a place specially designed only for relaxation. One participant describes her need for this type of place in the following way:

"*My life is full of stressors. I am a manager with a lot of responsibilities, and I two children. I feel I can't recover and detach from work fully, and at home I feel drained. This studio's relaxations emphasize that there is no need to do anything, no need to try to achieve or do something, this is what I need; a place where no one asks anything from me, and I can just be.*" (Participant 7)

Even another participant emphasizes the importance of the place for her:

"*At work I am an effective, engaged, active, organizing person, and the one who always takes care of everything. In my free-time I have been very active in sports. I am constantly*

*focusing on doing something, achieving something, being effective. I have thought that sports are the only way to reduce stress. But I need to learn to relax and just be, I need to understand that I don't need to achieve and do something all the time, I need to rest and recover. This place helps me in this process."(*Participant 51)

On the other hand, individuals differ in many ways when it comes to the question of when the guided relaxations are appropriate and useful. On the wrong day or at the wrong hour of the day, guided relaxation may not provide any support in stress management. Guided relaxation sessions provided for an individual by someone else may not be provided at the right time; therefore, they may not be as effective as in a situation where the individual can choose the best time for the practice.

Due to a stressful and achievement-oriented life as well as individual differences, it seems that a separate and permanent place for relaxation is a helpful tool for stress management and maintaining overall well-being. Many participants described having difficulty in recovering and detaching from work; this applied both to those who enjoyed their work fully and experienced work engagement and to those who were very stressed in their work, faced multiple problems related to it and did not have high work engagement levels.

Being able to mentally detach from work is crucial for everyone's well-being and work engagement, regardless of the work engagement- or stress levels. Guided relaxation can provide a useful tool for the necessary psychological detachment from work. Therefore, it is suggested that with a permanent, designated place for the relaxations, it is more likely that the practice will take place and will be regular. The designated place in an organization could offer a place to have "micro-breaks" during the work day, as well as longer relaxations in the end or beginning of the work day.

By providing the required separate, permanent place for breaks and relaxation, employers can significantly influence the work environment, working culture and individual well-being. Instead of offering only course interventions (e.g., mindfulness courses), short term interventions (e.g., stress-management programs) or other temporary solutions, permanent solutions for maintaining psychological well-being are needed in today's hectic working life.

By investing in offering a separate place and time for relaxation, companies invest not only in the employees' individual well-being, but in the organization as a whole – in its work environment and operational culture.

DISCUSSION AND CONCLUSIONS

The thesis aimed to bring out the importance of psychological well-being from the point of view of the individuals and organizations. It introduced one method, guided relaxation, for affecting psychological well-being and proved that it was beneficial for the sample of working adults. The study proposed the following questions: 1) Does psychological well-being improve by practicing guided relaxations? 2) Does the regular practice of the methods affect work-related phenomena such as psychological capital, work engagement or stress levels, and 3) What are the potential benefits of the practice for the experienced quality of life?

Firstly, to answer to the first research question, it can be stated that according to the quantitative data, the overall psychological well-being of the test-group participants did not improve significantly during the guided relaxation intervention period. However, there were clear positive changes in the dimensions of *Autonomy, Environmental Mastery* and *Positive Relations.* This indicates that a positive change occurred in the test-group participants' self-determination, independence and regulating behaviour from within. The test-group participants evaluated their ability to choose or create contexts suitable for their personal needs and values as being higher at the end of the intervention. These results support the findings about the connection of mindfulness and heightened self-knowledge and self-regulation, which propose that mindfulness may enhance well-being through self-regulated activity and the fulfilment of basic psychological needs (Brown & Ryan 2003). If you look at the results in the light of emotion-regulation, it can be stated that the guided relaxations helped the participants to regulate their emotions: the relaxations were used in order to overcome negative emotions, those were also helpful tools in calming down and staying peaceful in stressful situations. On the other hand, the positive effects which were seen in the first post-test did not prevail until the second post-test.

Secondly, to answer to the second and third research questions, it can be said that psychological capital, work engagement, stress levels and experienced quality of life were affected by the seven-week intervention. There were significant improvements in psychological capital with regard to the dimension of *optimism* and *resilience,* and in work engagement with regard to *dedication*. However, the overall work engagement did not

improve. Therefore, according to the quantitative data, the test-group participants were less stressed and had gained energy, optimism and resilience during the period of the relaxation intervention. And their overall positive psychological state of development (PsyCap) was in the end of the experiment at a higher level. Two months after the intervention, these effects were still evident through the results of the second post-test. *Optimism* as a separate construct has been considered to be one of the coping resources which improve ability to manage stressful situations. Taylor and Stanton (2006) argue that people with high optimism use less avoidant- and more approach oriented coping, which are tied to better mental and physical health (Taylor & Stanton 2006, p.384). Furthermore, Avey et al. (2011) emphasise, high psychological capital can have profound effects on both, individual and organizational level. Their research established (Avey et al.2011) a significant positive relationship between PsyCap and desirable employee attitudes and behaviours (such as job satisfaction, organizational commitment and psychological well-being). Therefore the results and their relation with stress management and coping at work is relevant and significant.

The positive correlations established between psychological well-being, psychological quality of life and work engagement are meaningful, but in order to make profound conclusions and analysis, further research is needed. However, the study suggests that work engagement can possibly be affected by increasing the psychological well-being and psychological quality of life. Moreover, it states that psychological detachment from work is crucial for work engagement and well-being, and guided relaxations may offer a tool for the psychological detachment, but in order to have profound, long-term effects, practice needs to be regular. As Sonnentag et al. (2014) pointed out in their research, recovering from work has a positive connection with work engagement and proactive activity at work and lack of psychological detachment leads to poor individual well-being.

The stress levels of the test group decreased during the relaxation intervention and remained low in the second post-test as well. The quantitative findings were supported by the qualitative data. They were reflected in the journals and additional feedback form. According to the practice journals, the symptoms of stress decreased and the test-group participants experienced an overall better mood and were coping better with stress and they evaluated their coping at work to be better in the end of the intervention period than in the beginning of it.

These results support the findings of Ahvenniemi (2014) and Toivanen (1994), which propose that relaxation improves stress management, coping skills and work ability, and it can improve the ability to calm down in situations of stress. Furthermore, there were significant positive changes in the experienced quality of life, especially in the psychological domain. The positive changes in the psychological dimension indicated that the test-group participants were able to focus better, they were more satisfied with themselves, experienced less negative feelings, and felt their life to be more meaningful at the end of the experiment in comparison to the beginning of the experiment.

Moskowitz (2010) states that positive affect may prevent the individual from feeling overwhelmed, lead to more flexibility in coping efforts and help building resiliency to the stress. This might give one explanation in a question of why the participants' coping enhanced: their stress-levels lowered due to the physical effects of the relaxations but perhaps also due to the increased positive emotions and feelings which relaxations gave for them.

Profound conclusions cannot be drawn from these results due to the small sample size and limitations of the study. However, this sample of professionally active adults benefited from the relaxation intervention in multiple ways. The improvements in psychological well-being, experienced quality of life, work engagement and psychological capital are important from the point of view of the individuals and organizations. Decreased stress-levels and improved overall mood and quality of sleep were reported and the period of relaxation intervention was significant for several participants. Many of them approached the author personally to thank for the stress intervention and for the benefits they gained.

The study suggests that the guided relaxation interventions should be further developed in order to meet the needs of organizations and to be applied in multiple working settings. As described, relaxation methods can offer a potential tool in the psychological detachment from work. The importance of the psychological detachment, relaxation and positive emotions has been recognised by the researches. The study suggests that practical implications which combine these concepts should be developed and conducted in organizations aiming to maintain and increase psychological well-being of the employees.

The study included several concepts, multiple measures and it gave a broad picture of the effects of the relaxation intervention. Further research with a broader and larger sample, short and long-term follow-up but more limited subjective and objective measures is recommended. Moreover, research is needed to refine the effects of the created stress intervention program based on guided relaxations and psychological capital.

The results of the pilot study are encouraging. However, the study has limitations which have to be considered before making any profound conclusions based on the results. The limitations of the study include the sample size, unequal gender distribution, limited background information on the participants as well as control of the settings. First, the sample population was small and the test-group included only participants who reported experiencing stress at their work. How the method would have worked for individuals who do not experience any stress could not be analysed. Second, the amount of men in the study was limited, and so a further study with equal amounts of men and women might provide information about the possible differences between men and women with regard to the effects of the method. Third, given the fact that the background information concerning the participants is relatively limited, it is suggested that future studies could include factors such as personality variables and coping styles. In the future studies it would be possible to explore links between these variables and the effects of the intervention on people with different types of coping styles and personalities.

Fourth, the control of the study can be viewed as a limitation. The test-group participants were instructed and reminded every week about the home practice. It was emphasized that at least two guided relaxations had to be performed every week. Moreover, the importance of the practice journal was stated clearly and the weekly e-mail message focused on motivating the participants to practice and to write their journals. Despite this, not all participants performed the home exercises or completed their journal according to the provided instructions. And on the other hand, eliminating the external factors affecting the results, such as extracurricular activities, was not possible in this type of setting of the study. Fifth, one can argue that the measures used in the study were focused on subjective evaluations of one's own well-being, and for example, physical measures on stress-levels were not used. The question of the reliability of the information provided by the participants, and how truthfully they responded to the questionnaires was not elaborated in the study.

However, these limitations were partly due to the wishes of the relaxation studio and eliminating them was not possible. All in all the study gathered comprehensive quantitative and qualitative data which was based on widely used theory-based questionnaires. The questionnaires can be said to be reliable. The practice journals provide insights into the experiences of the participants, and these were viewed by two separate individuals in order to avoid biases and ensure the reliability of the analysis. In the second post-test, the drop-out rate was 37%, and this can be seen as a limitation of the study. It is possible that in the second post-test only the most motivated participants responded and the results of the less motivated were not then recorded. Only 63% of the test-group participants responded to the second-post-test.

SUMMARY

The aim of the thesis was to find out the effects of guided relaxation on psychological well-being and work-related outcomes. Furthermore, the quality of life and the stress-levels were measured and the question of how to develop relaxation methods in order to meet the needs of organizations better was elaborated. Subsequently, a cognitive-behavioural stress-intervention program based on guided relaxations and psychological capital was developed.

Why is the research in this domain essential? The essence of meditation, mindfulness and positive psychology attracts scientific attention because they are considered as one of the most effective stress prevention techniques that contribute to the maintenance of the overall psychological well-being. One might argue that the methods do not hold scientific image or basis, and they don't have potential for solving any problems of the dynamic and achievement oriented working life. However, several researches have reported meditation techniques to be effective in reducing stress and increasing psychological well-being (e.g. Kabat-Zinn 1990; Shapiro, Schwarzt & Bonner 1998; Baer 2003; Brown & Ryan 2003; Williams, Kolar, Reger & Pearson 2001).

Moreover, a recently conducted meta-analysis focusing on the effects of 51 interventions targeted at positive affect outcomes found that the interventions are associated with significant increases in well-being and decreases in depression. Moskowitz (2011) states that stress interventions aimed at increasing positive affect are in many cases efficacious. The trend of using these methods in organizational settings, and multiple workplaces is at the moment more common in United States than Finland, but these practices are getting more and more popular here in Northern Europe as well. It is important to investigate what kind of outcomes these methods lead to, and whether the methods can be developed in order to meet the needs of organizations.

According to some researches, the effectiveness of organization focused stress interventions is non-significant (Van der Klink et.al 2001) Which means that the job re-design- and company programs might not be as relevant as the psychological resources, stress management and coping skills of the employees. The psychological capital of the

employees might turn out to be one of the most important characteristic of today's hectic and dynamic organizations.

The study tried to provide answers to three questions; 1) Does psychological well-being improve by practising guided relaxation? 2) Does regular practice of the methods have an effect on work-related phenomena such as psychological capital, work engagement or stress levels? 3) What are the potential benefits of the practice for the quality of life experienced by the individuals? The theoretical part of the thesis brought out the concepts of psychological well-being, stress and coping. The first part is focused on the investigation of the meaning of psychological well-being, its importance for individuals and organizations, and types of threats the stress poses on it. The role of positive emotions and psychological capital in the process of stress was shortly elaborated. The second part discussed the stress-interventions developed for organizational settings and explored the guided relaxation and meditation methods.

The answers on the research questions were found through conducting a seven weeks stress-reduction program intervention including pre-test, two post-tests measuring the psychological well-being, work engagement, psychological capital, stress-levels and quality of life, and journal writing component. The approach of the study was a mixed methods research therefore the gathered data included quantitative and qualitative components. The study included control group and test-group. The test-group participants were individuals working with people and were reporting to experience stress. Many were reporting serious signs of stress, some even on a level of burn-out and depression.

The results of the study indicate that the stress reduction program based on relaxation methods can improve psychological well-being. In a sample of professionally active adults in Finland the stress-levels of the test-group participants decreased over the seven-week period of the experiment, their experienced quality of life increased, they felt more optimistic and perceived their work to be more meaningful. As the study was a pilot one characterized by the small sample size, no profound conclusions can be made.

However, the results of the study indicate that the stress intervention programs based on guided relaxations can mildly increase psychological well-being of professionally active adults, if practiced regularly. It can have various meaningful outcomes for organizations,

and there are certain benefits for the experienced quality of life as well. Moreover, guided relaxations can be a helpful tool in the psychological detachment from work, when those are developed further by having taking into consideration these positive organizational behaviour concepts as a theoretical framework.

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APPENDIXES

Appendix 1. Recruiting the test group

Time		Content
September 2014	Notifications in social media about the study.	Notification included: 1) Information about the idea of the research, timetable and need for commitment. 2) A link to preliminary questions about the candidate's profession, age, experienced occupational stress, previous experience of regular practice of guided relaxation.
October 2014	Selecting participants who met the inclusion criteria. Emailing the selected candidates.	The e-mail message included a link to questions about the candidate's readiness to commit to the research (attending lessons once a week and doing home exercises).
October 2014	Sending e-mails to those candidates who confirmed their readiness to commit themselves to the study.	The e-mail message included: participation number / username, timetable and structure of the research and a link to the first questionnaires.

Appendix 2. Structure of the research

Time	Event
20–26 October 2014	**<u>PRE-TEST</u>** **Test-group** 1) Participants complete the psychological well-being and psychological capital questionnaires in online format before coming to the information session. 2) Start of the program with a information session, where participants receive information about the research and fills out the Stress-level, Quality of life and Work Engagement questionnaires on paper. + (informed consent) **Control-group participants** fill out all the questionnaires in online format.
27 October–7 December 2014	**Test-group** participants 1) use the services of the relaxation studio once a week; 2) do home exercises regularly with the materials provided; 3) write a journal about the experiences and the effects; 4) receive weekly e-mails with reminders about frequent practice and a question of the week to be analyzed in the journal.
7–14 December 2014	**<u>POST-TEST 1.</u>** **Test-group** 1) Participants fill out the stress level, quality of life, work engagement questionnaires on paper. 2) Participants complete online questionnaires on psychological capital, psychological well-being and a separate feedback form. 3) The journal (or a copy of the journal) is submitted by e-mail to the researcher. **Control-group** 1) Participants fill out the questionnaires in online format
7–14 February 2015	**POST-TEST 2.** **Test-group participants** fill out the questionnaires in online format.

Appendix 3. Permission to use the WHOQOL-BREF

WHOQOL-BREF –mittarin KÄYTTÖOIKEUSHAKEMUS

Päivämäärä	6.9.2014
Hakijaa edustava organisaatio	Tallinnan Teknillinen Yliopisto
Hakijan nimi/yhteyshenkilö	Jenni Pitkänen
Hakijan osoite	K**********
Hakijan puhelinnumero	*** ******
Hakijan sähköpostiosoite	jennipitkan134@gmail.com

Mikä tulee olemaan mittarin käyttötarkoitus ja kohderyhmä?	M******y –yrityksen kanssa toteutettu tutkimus suggesto –rentoutumisen vaikutuksesta elämänlaatuun
Lisätietoja	

WHOQOL-BREF -mittarin käyttöoikeus <u>on myönnetty</u> esittämäänne käyttötarkoitukseen
Mittarin tekijänoikeusmerkintä tulee liittää siihen kaikissa käyttövaiheissa/tilanteissa.

13.10.2014, Helsingissä
Marja Vaaraman puolesta

Heli Valkeinen
Koordinaattori, Toimia
heli.valkeinen@thl.fi, 029 524 7137

Appendix 4. Permission to use PsyCap questionnaire

mind garden

To whom it may concern,

This letter is to grant permission for jenni pitkänen to use the following copyright material:

Instrument: ***Psychological Capital (PsyCap) Questionnaire (PCQ)***

Authors: ***Fred Luthans, Bruce J. Avolio & James B. Avey.***

Copyright: ***"Copyright © 2007 Psychological Capital (PsyCap) Questionnaire (PCQ) Fred L. Luthans, Bruce J. Avolio & James B. Avey. All rights reserved in all medium."***

for his/her thesis/dissertation research.

Three sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Mind Garden, Inc.
www.mindgarden.com

Appendix 5. Psychological Well-being (Over all min.-max scores given for the dimension, mean, SD, 6= lowest score, 42=highest score)

	Autonomy	Environmental Mastery	Positive Relations	Personal Growth	Purpose in Life	Self-acceptance
G1T1	20-38 m=3.48(0.58)	21-41 m=4.36 (0.70)	22-42 m=4.57(0.70)	27-41 m=4.97(0.50)	19-39 m=4.40(0.73)	m=4.17(0.66)
G1T2	22-42 m=4.22(0.73)	24-42 m=4.83 (0.64)	27-42 m=4.95(0.59)	28-42 m=5.13(0.49)	24-39 m=4.66(0.58)	20-38 m=4.38(0.68)
G1T3	20-41 m=4.13(0.73)	25-38 m=4.55 (0.49)	17-42 m=4.74(0.96)	24-42 m=4.9 (0.72)	18-38 m=4.50(0.82)	21-38 m=4.39(0.72)
G1T1-G1T2	t=-2.3 p=0.02*	t=-2.78 p=0.007**	p=-2.36 p=0.02*	t=-1.3 p=0.12	t= -1.57 p=0.12	t=1.29 p=0.20
G1T2-G1T3	t=0.47 p=0.63	t=1.68 p=0.09	t=1 p=0.36	t=0.99 p=0.36	t=0.58 p=0.42	t=-0.015 p=0.93
G1T1-G1T3	t=-1.6 p=0.11	t=1.13 p=0.26	t=-0.79 p=0.45	t=0.23 p=0.98	t=0.49 p=64	t=-1.16 p=0.24
G2T1	19-37 m=3.84(0.60)	20-41 m=4.49 (0.74)	22-40 m=4.59(0.62)	24-41 m=4.75(0.62)	21-40 m=4.47(0.64)	17-38 m=3.90(0.74)
G2T2	20-36 m=3.96(0.52)	23-40 m=4.50(0.75)	21-39 m=4.53(0.66)	24-39 m=4.69(0.57)	22-40 m=4.38(0.64)	19-39 m=4.08(0.67)
G2T1-G2T2	t=-,70 p=0.48	t=-0.02 p=0.98	t=0.34 p=0.72	t=0.37 p=0.70	t=0.49 p=0.62	t=-0.85 p=0.39
G1T1-G2T1	t=0.01 p=0.99	t=-0.71, p=0.4	t=-0.94 p=0.9	t=1.51 p=0.13	t=-0.36 p=0.7	t=1.53 p=0.13
G1T2-G2T2	t=1.38 p=0.17	t=1.67 p=0.10	t=2.4 p=0.01*	t=2.98 p=0.004**	t=1.68 p=0.09	t=1.59 p=0.16

(G1=test-group, G2=control group, T1=pre-test, T2=post-test, T3=2nd post-test, * p<0.05; ** P<0.01)

Appendix 6. Quality of Life, Psychological domain (Mean,sd)

	To what extend do you enjoy life?	**To what extent do you feel your life to be meaningful?**	**How well are you able to concentrate?**	**Are you able to accept your bodily image?**	**How satisfied are you with yourself?**	**How often do you have negative feelings such as blue mood, despair, anxiety or depression?**
G1T1	m=3.5 (0.75)	m=3.7 (0.89)	m=3.1 (0.69)	m=3.4 (0.80)	m=3.5 (0.80)	m=3.2 (1.0)
G1T2	m=3.8 (0.72)	m=4.5 (0.80)	m=3.7 (0.73)	m=3.7 (0.84)	m=4.0 (0.84)	m=3.5 (0.91)
G1T3	m=4.08 (0.79)	m=4.3 (0.90)	m=3.8 (0.9)	m=3.3 (0.78)	m= 4.2(0.75)	m=3.8(0.90)
G1T1-G1T2	t=1.73 p=0.08	t=-2.32 p=0.02*	t=-3.45 p=0.001**	t=-1.65 p=0.10	t=-2.86 p=0.009**	t=-1.13 p=0.26
G1T2-G1T3	t=-1.18 p=0.24	t=-0.59 p=0.52	t=-0.67 p=0.50	t=1.6 p=0.11	t=-0.90 p=0.3	t=-1.01 p=0.31
G1T1-G1T3	t=-2.69 p=0.009**	t=-2.54 p=0.01*	t=-3.53 p=0.001**	t=0.03 p=0.97	t=-3.43 p=0.001**	t=-1.98 p=0.05*
G2T1	m=3.6 (0.84)	m=3.7 (0.87)	m=3.56 (0.81)	m=2.8 (0.66)	m=3.7 (0.79)	m=3.3 (0.91)
G2T2	m=3.5 (0.90)	m=3.6 (0.90)	m=3.40 (0.85)	m=2.5(0.85)	m=3.40 (1.0)	m=3.6 (0.84)
G2T1-G2T2	t=0.49 p=0.6	t=0.25 p=0.79	t=0.60 p=0.5	t=1.20 p=0.2	t=1.1 p=0.2	t=-1.35 p=0.1
G1T1-G2T1	t=-0.69 p=0.49	t=0.29 P=0.77	t=-2.38 p=0.02*	t=3.05 p=0.003**	t=-0.96 p=0.34	t=-0.24 p=0.98
G1T2-G2T2	t=1.33 p=0.18	t=2.62 p=0.01*	t=1.43 p=0.15	t=5.12 p=0.000**	t=2.47 p=0.017*	t=-0.30 p=0.76

(G1=test-group, G2=control group, T1=pre-test, T2=post-test, T3=2nd post-test, * p<0.05; ** P<0.01)

Appendix 7. Quality of life, items from social domain (mean, sd)

	How satisfied are you with your personal relationships?	How satisfied are you with your sex-life?
G1T1	m=3.4 (1.05)	m=2.9
G1T2	m=4.0 (1.18)*	m=3.2 (1.07) **
G1T3	m=4.30 (0.76)**	m=3.73 (0.68)**
G1T1-G1T2	t=-2.32 p=0.02	t=-2.97 p=0.004
G1T2-G1T3	t=-1.18 p=0.24	t=-0.24 p=0.8
G1T1-G1T3	t=-3.26 p=0.002	t=-2.93 p=0.005
G2T1	m=3.87 (0.57)	m=3.69 (0.82)
G2T2	m=3.68 (0.57)	m=3.00 (1.02)
G2T1-G2T2	t=0.79 , p=0.43	t=0.9 p=35
G1T1-G2T1	t=1.29 p=0.20	t=2.73 p=0.009**
G1T2-G2T2	t=-1.83 p=0.07	t=-1.17 p=0.24

(G1=testgroup, G2=control group, t1=pre-test, t2=post-test, t3=2nd post-test, * p<0.05; ** P<0.01)

Appendix 8. Quality of life, items from Physical Domain (mean, sd)

	How satisfied are you with your capacity to work?	How satisfied are you with your sleep?
G1T1	m=3.4 (0.89)	m=2. 8 (1.17)
G1T2	m=4.0 (0.74)**	m=3.7 (1.10)**
G1T3	m=4.2 (0.90)	m=3.7 (1.00)
G1T1-G1T2	t=-2.46 p=0.01	t=-2.86 p=0.002
G1T2-G1T3	t= -0.85 p=0.39	t= -0.11 p=0.91
G1T1-G1T3	t=-3.2 p=0.002**	t=-2.96 p=0.004**
G2T1	m=4.00 (0.95)	m=3.75 (1.00)
G2T2	m=3.59 (1.0)	m=3.18 (1.3)
G2T1-G2T2	t=1.68 p=0.09	t=0.78 p=0.44
G1T1-G2T1	t=1.51 p=0.13	t=1.75 p=0.08
G1T2-G2T2	t=-2.69 p=0.009**	t=-1.92 p=0.05*

(G1=test-group, G2=control group, T1=pre-test, T2=post-test, T3=2nd post-test, * p<0.05; ** P<0.01)

Appendix 9.Quality of Life Domain Scores (Min.-Max scores, mean, SD)

	Psychological	**Physical**	**Social**	**How would you rate your quality of life?**
G1T1	19-94 m=60.9 (15.55)	38-94 m=68.32 (12.56)	25-94 m=61.24 (20.33)	m=3.65 (0.77)
G1T2	25-94 m=71.5 (15.33)	44-100 m=77.13 (13.79)	25-100 m=73.6 (16.8)	m=4.06 (0.51)
G1T3	31-100 m=73.86 (16.77)	44-94 m=74.86 (13.55)	44-100 m=78.86 (14.62)	m=4.21 (0.79)
G1T1-G1T2	t=-2.77 p=0.007	t=-2.71 p=0.009	t=-2.69 p=0.009	t=-2.5 p=0.01
G1T2-G1T3	t=-0.52 p=0.599	t=0.60 p=0.54	t=-1.23 p=0.22	t=-0.85 p=0.39
G1T1-G1T3	t=-2.9 p=0.005	t=-1.8 p=0.067	t=-3.57 p=0.001	t=-2.7 p=0.009
G2T1	31-94 m=61.4 (14.4)	38-88 m=68.8 (11.60)	19-94 m=70 (15)	m=3.66 (0.80)
G2T2	31-88 m=58.8 (18.2)	38-88 m=64.9 (16)	19-94 m=63.3 (21)	m=3.77 (0.16)
G2T1-G2T2	t=0.55 p=0.57	t=1.02 p=0.31	t=1.32 p=0.19	t=0.48 p=0.63

(G1=test-group, G2=control group, t1=pre-test, t2=post-test, t3=2nd post-test, * p<0.05; ** P<0.01)

Appendix 10. Work engagement and psychological capital of the control group (Mean, SD)

	G2T1	G2T2	t1-t2 (Mean difference)	t	p
Vigor	4.40 (0.89)	4.37 (1.12)	0.028	0.103	0.919
Dedication	4.37 (1.29)	4.46 (1.13)	-0.090	-0.261	0.795
Absorption	4.24 (1.16)	4.03 (,98)	0.204	0.659	0.204
Work engagement	4.33 (1.02)	4.29 (1.0)	0.040	0.139	0.890
Self-efficacy	4.68 (0.75)	4.56 (0.71)	0.120	0.569	0.572
Hope	4.65 (0.56)	4.33 (0.91)	0.338	1.652	0.105
Resiliency	4.73 (0.56)	4.59 (0.52)	0.134	0.877	0.385
Optimism	4.29 (0.64)	3.92 (0.65)	0.370	2.031	0.048
PsyCap	4.62 (0.48)	4.35 (0.59)	0.276	1.81	0.07

(G2=Control group, T1=pre-test, T2=post-test)

Appendix 11. Work engagement and psychological capital comparison between groups

Dimension	G1T1-G2T1 (t, p)	G1T2-G2T2 (t, p)
Vigor	-0.636 , 0.52	1.23 , 0.22
Dedication	0.735 , 0.46	1.18 , 0.24
Absorption	-0.86 , 0.39	0.90 , 0.36
Work engagement	-0.34 , 0.73	1.10 , 0.27
Self-efficacy	0.12 , 0.91	1.76 , 0.08
Hope	-1.73 , 0.08	1.69, 0.90
Resiliency	-1.87 , 0.06	0.89 , 0.37
Optimism	0.87 , 0.38	5.03 , 0.000**
Psychological capital	-1.02 , 0.31	2.61 , 0.01**

(G1=test-group. G2=control group, t=t-statistics, p=p-value, **p=significant at 0.01 level))

Appendix 12. Correlations between work engagement and psychological well-being

		Vigor	Dedication	Absorption	Work Engagement	Autonomy	EnvironmentalMastery	PersonalGrowth	PositiveRelations	PurposeinLife	SelfAcceptance	
Vigor	r	1	,793(**)	,820(**)	,933(**)	,367(**)	,498(**)	0,109	0,128	0,19	,459(**)	
	p		0	0	0	0	0	0,307	0,233	0,074	0	
Dedication	r	,793(**)	1	,798(**)	,912(**)	,373(**)	,434(**)	,245(*)	0,13	,385(**)	,580(**)	
	p	0		0	0	0	0	0,02	0,225	0	0	
Absorption	r	,820(**)	,798(**)	1	,950(**)	,323(**)	,404(**)	0,051	0,085	0,194	,456(**)	
	p	0	0		0	0,002	0	0,632	0,427	0,069	0	
Work Engagement	r	,933(**)	,912(**)	,950(**)	1	,376(**)	,474(**)	0,132	0,119	,262(*)	,526(**)	
	p	0	0	0		0	0	0,216	0,266	0,013	0	
Autonomy	r	,367(**)	,373(**)	,323(**)	,376(**)	1	,486(**)	,289(**)	,317(**)	,429(**)	,571(**)	
	p	0	0	0,002	0		0	0,006	0,003	0	0	
EnvironmentalMastery	r	,498(**)	,434(**)	,404(**)	,474(**)	,486(**)	1	,421(**)	,467(**)	,551(**)	,641(**)	
	p	0	0	0	0	0		0	0	0	0	
Personal Growth	r	0,109	,245(*)	0,051	0,132	,289(**)	,421(**)	1	,618(**)	,739(**)	,506(**)	
	p	0,307	0,02	0,632	0,216	0,006	0		0	0	0	
PositiveRelations	r	0,128	0,13	0,085	0,119	,317(**)	,467(**)	,618(**)	1	,579(**)	,395(**)	
	p	0,233	0,225	0,427	0,266	0,003	0	0		0	0	
PurposeinLife	r	0,19	,385(**)	0,194	,262(*)	,429(**)	,551(**)	,739(**)	,579(**)	1	,721(**)	
	p	0,074	0	0,069	0,013	0	0	0	0		0	
SelfAcceptance	r	,459(**)	,580(**)	,456(**)	,526(**)	,571(**)	,641(**)	,506(**)	,395(**)	,721(**)	1	
	p	0	0	0	0	0	0	0	0	0		

Appendix 13. Correlations between psychological quality of life and work engagement

		Vigor	Dedication	Absorption	Work Engagement	How would you rate your quality of life?	To what extend do you enjoy life?	To what extend do you feel your life to be meaningful?	How well are you able to concentrate?	Are you able to accept your bodily appearance?	How satisfied are you with your self?	How often do you have negative feelings such as blue mood, despair, anxiety, depression?
Vigor	r	1	,793(**)	,820(**)	,933(**)	,454(**)	,470(**)	,463(**)	,544(**)	,349(**)	,468(**)	,377(**)
	p		0	0	0	0	0	0	0	0,001	0	0
Dedication	r	,793(**)	1	,798(**)	,912(**)	,452(**)	,476(**)	,612(**)	,410(**)	,315(**)	,469(**)	,378(**)
	p	0		0	0	0	0	0	0	0,002	0	0
Absorption	r	,820(**)	,798(**)	1	,950(**)	,453(**)	,396(**)	,422(**)	,388(**)	,298(**)	,345(**)	,302(**)
	p	0	0		0	0	0	0	0	0,004	0,001	0,004
Work Engagement	r	,933(**)	,912(**)	,950(**)	1	,484(**)	,473(**)	,522(**)	,476(**)	,342(**)	,448(**)	,372(**)
	p	0	0	0		0	0	0	0	0,001	0	0
How would you rate your quality of life?	r	,454(**)	,452(**)	,453(**)	,484(**)	1	,647(**)	,681(**)	,503(**)	,505(**)	,718(**)	,344(**)
	p	0	0	0	0		0	0	0	0	0	0,001
To what extend do you enjoy life?	r	,470(**)	,476(**)	,396(**)	,473(**)	,647(**)	1	,679(**)	,461(**)	,477(**)	,701(**)	,506(**)
	p	0	0	0	0	0		0	0	0	0	0

To what extend do you feel your life to be meaningful?	r	,463(**)	,612(**)	,422(**)	,522(**)	,681(**)	,679(**)	1	,490(**)	,461(**)	,741(**)	,373(**)
	p	0	0	0	0	0	0		0	0	0	0
How well are you able to concentrate?	r	,544(**)	,410(**)	,388(**)	,476(**)	,503(**)	,461(**)	,490(**)	1	,333(**)	,496(**)	,505(**)
	p	0	0	0	0	0	0	0		0,001	0	0
Are you able to accept your bodily appearance?	r	,349(**)	,315(**)	,298(**)	,342(**)	,505(**)	,477(**)	,461(**)	,333(**)	1	,630(**)	,349(**)
	p	0,001	0,002	0,004	0,001	0	0	0	0,001		0	0,001
How satisfied are you with yourself?	r	,468(**)	,469(**)	,345(**)	,448(**)	,718(**)	,701(**)	,741(**)	,496(**)	,630(**)	1	,430(**)
	p	0	0	0,001	0	0	0	0	0	0		0
How often do you have negative feelings…	r	,377(**)	,378(**)	,302(**)	,372(**)	,344(**)	,506(**)	,373(**)	,505(**)	,349(**)	,430(**)	1
	p	0	0	0,004	0	0,001	0	0	0	0,001	0	