Reducing Counterproductive Work Behavior - The Roles of Self-Efficacy and Emotional Regulation
Table of contents
Background and research relevance
Theoretical Constructs
   Counterproductive work behavior
   Self-efficacy
   Emotions and emotional regulation
   Mindfulness
   Feedback
Empirical Findings of Effects on CWB
Research Purpose, Questions and Hypotheses
Method
Participants and Sampling
Instruments
   Counterproductive work behavior checklist (CWB-C)
   Self-efficacy questionnaires
   Emotional regulation questionnaire
   Feedback intervention material
   Mindfulness intervention material
Experimental Design
Procedure
Results
Discussion
Limitations
Summary
References
Appendix I
Appendix II
Appendix III
Abstract
The aim of the study was to investigate the reduction of counterproductive work behavior (CWB) through two interventions. The sample consisted of 22 nursing assistants working in an elderly nursing home, who were divided into two treatment groups, where one received a mindfulness intervention and one received a feedback intervention. The main hypothesis was that both interventions would be effective in reducing CWB by increasing self-efficacy through positive feedback and increasing emotional regulation through mindfulness practice, respectively. A pre-post quasi-experimental design was used, where the participants engaged in the interventions two times per week for four consecutive weeks. The results did not support the main hypothesis, as the interventions did not significantly reduce CWB. The lack of support for the main hypothesis is most likely due to low self-reported engagement in CWB at baseline. However, the interventions did significantly affect both self-efficacy and emotional regulation, but not in line with the hypotheses’ expectations. The feedback intervention significantly increased both emotional regulation dimensions but not self-efficacy, while the mindfulness intervention increased emotional self-efficacy and showed strong tendencies towards increasing social self-efficacy, but did not increase any of the emotional regulation dimensions as hypothesized. A conclusion from the results is that more research is needed to further investigate the effectiveness of the two interventions.

Keywords: counterproductive work behavior, self-efficacy, emotional regulation, feedback, mindfulness, interventions.
Counterproductive work behavior (CWB) is a workplace-related behavior that is defined as either harmful and/or having the intention and potential to harm an organization or the individuals connected to the organization (Bennett & Robinson, 2000; Bollmann & Krings, 2011; Kessler & Penney, 2013; Spector et al., 2006; Spector & Fox, 2005). Counterproductive work behaviors have been associated with detrimental and costly consequences, as the behaviors have hazardous effects for both the psychological well-being of employees and the organizational climate and productivity (Moretti, 1986). CWB decreases motivation, well-being and job satisfaction of employees (Barber, Becker & Bolton, 2010; Peschek & Qiu, 2012). In the US, employee engagement in CWB costs organizations millions of dollars annually (Bennett & Robinson, 2000; Dineen, Lewicki & Tomlinson, 2006; Greenberg, 2002.). Consequently, the aim of this study is to investigate methods of reducing CWB in order to increase the well-being of employees and to enhance the organizational climate.

Previous research in the field of CWB have in the last two decades primarily focused on factors based on individuality (the employees), the organization (e.g. job structure) and antecedents for deviant work behaviors (Piotrowski, 2013). The most prominent research topics within the field of CWB include personality factors, organizational justice, measures/instruments, workplace constraints, organizational citizenship behaviors and leadership factors (Piotrowski, 2013). However, the research emphasis has been mainly theoretical and with a lack of practical application, such as interventions. Furthermore, there has been a relatively small research focus on intrapersonal variables (compared to external variables) in connection to CWB (Piotrowski, 2013). As Piotrowski (2013) emphasizes, to further advance the field of counterproductive work behavior, research should examine “how organizations can deter escalation of CWB from becoming a chronic worksite problem” (p. 79).

In the current study, the effects of two interventions are evaluated in terms of their effectiveness in reducing employee CWB. A possible way to approach reduction of CWB is to focus on employees’ perception of workplace related stressors and the negative emotions associated with this perception (Spector & Fox, 2005). Altering these factors partially lies in the connection between CWB and control, where a higher actual or perceived control has been associated with a lower degree of CWB. Further, both emotional regulation and self-efficacy have been associated with possessing control (Bandura, 1997; Biçaksız, Erol-Korkmaz, Johnson & Matta, 2014). Emotional regulation increases the individual’s control over the emotions connected to a stressor (i.e. being able to alter the negative emotions when experienced), while self-efficacy increases the cognitive perception of control through belief in the individual’s own competency (Bandura, 1997; Biçaksız, Erol-Korkmaz, Johnson & Matta, 2014). Increasing self-
efficacy at work can also make individuals more prone to act according to role expectations, to be more positive towards new tasks and to perform at a higher level at the workplace, and finally act as a buffer against negative emotions (Fox & Spector, 2006; Raelin, 2010). Increasing emotional regulation can potentially help individuals learn how to successfully manage negative emotions but also how to reappraise events to not elicit negative emotions and CWB in the first place (Biçaksiz, Erol-Korkmaz, Johnson & Matta, 2014).

For the sake of increasing self-efficacy and emotional regulation, two separate interventions were utilized the current study. One was a mindfulness intervention with an aim of altering the emotional processes of CWB development through emotional regulation. The other was a feedback intervention with an aim of altering the cognitive processes of CWB development through self-efficacy. Both interventions had a similar focus in incorporating a cognition-emotion relationship in reducing CWB, but while the self-efficacy intervention emphasized cognition foremost, the emotional regulation intervention emphasized primarily emotion.

Theoretical Constructs

The main theoretical constructs used in the present study are *counterproductive work behavior, self-efficacy, emotional regulation, mindfulness* and *feedback*, which are all presented in the same order below.

**Counterproductive work behavior**

A classification of CWB has been developed by Bennett and Robinson, where the behaviors are divided into two categories; organizational counterproductive work behaviors (CWB-O) and interpersonal counterproductive work behaviors (CWB-I) (Aldea-Capotescu, 2013; Avey et al., 2008; Bennett & Robinson, 1995; Kessler & Penney, 2013). The classification distinguishes between behaviors that targets the organization, e.g. theft, deviance in production or deliberately working inefficiently, and behaviors that targets the individuals connected to it, e.g. harassment or violence against co-workers or customers (Avey et al., 2008; Kessler & Penney, 2013). A further distinction is made between intended and unintended harmful behaviors. Events such as accidents and mistakes are generally not included in the spectrum of CWB (Nanjundeswaraswamy, Roopa & Swamy, 2016).

Spector et al. (2006) define the construct of CWB as consisting of five behavioral dimensions: abuse toward others, production deviance, sabotage, theft, and withdrawal. Abuse
against others is defined as “harmful behaviors directed toward co-workers and others that harm either physically or psychologically through making threats, nasty comments, ignoring the person, or undermining the person’s ability to work effectively” (Spector et al., 2006, p. 448). Production deviance is defined as the “purposeful failure to perform job tasks effectively the way they are supposed to be performed” (Spector et al., 2006, p. 449). Sabotage concerns “defacing or destroying physical property belonging to the employer (Spector et al., 2006, p. 449). Theft concerns stealing property from either the organization or the individuals connected to the organization (e.g. stealing office supplies or stealing other employees’ valuables). Finally, withdrawal is defined as consisting of behaviors that “restrict the amount of time working to less than is required by the organization” and includes “absence, arriving late or leaving early, and taking longer breaks than authorized” (Spector et al., 2006, p. 450).

As noted earlier, research has shown the prevalence of the different dimensions of CWB to be very costly for both the concerned organizations and for the individuals connected to them. CWB is believed to be the main reason for 30% of all businesses that fail (Moretti, 1986), and an estimated 89% of employees have conducted CWB in some form (Boye & Wasserman, 1996). Organizational fraud and theft alone has been estimated to cost from $50 billion (Dineen, Lewicki & Tomlinson, 2006) to $400 billion (Greenberg, 2002) annually in America. Violence within organizations (belonging to the CWB dimension of abuse) has been estimated at an annual cost of $4.2 billion (Bennett & Robinson, 2000). Bennett and Robinson (2000) further concluded that various forms of deviant workplace behaviors cost organizations between $6 billion and $200 billion annually. Regarding the individual costs, CWB has been correlated with many negative effects for the employees and leading to reduced levels of work performance, health and wellbeing (Barber, Becker & Bolton, 2010). As an example, a study conducted by Peschek and Qiu (2012) indicated that interpersonal CWB (CWB-I) leads to reduced levels of emotional integration within the work teams as well as reduced knowledge sharing between team members and less acquisition of new knowledge. Conclusively, CWB can have hazardous and detrimental effects on both organizational and individual levels.

As presented in the stressor-emotion model developed by Spector and Fox (2005, Figure 1), the main cause of CWB can be attributed to negatively perceived stressful conditions in the work environment (defined as environmental stressors). In more detail, negative subjective perceptions of environmental stressors cause negative emotions, in turn leading to CWB (Spector & Fox, 2005; Kessler & Penney, 2013).
The stressor-emotion model heavily emphasizes the importance of subjective and intrapersonal processes of cognition and emotion in the development of CWB, rather than the stressful events themselves (Kessler & Penney, 2013). Environmental stressors are always prevalent to some extent within an organization (e.g. organizational change, turnover, faulty leadership, malfunctioning work routines or interpersonal conflicts), and it is seemingly impossible to extinguish all possible stressors from a workplace indefinitely. Instead, what the stressor-emotion model accentuates is that it is not the eradication of stressors that is the main key in decreasing CWB, but rather a change in the individual, subjective cognitive and emotional processes leading up to the deviant behaviors. In contrast, Kessler and Penney describe a limitation of the stressor-emotion model by emphasizing that “to the extent that individual behavior, including CWB, is goal-directed, there may be other reasons why employees engage in CWB that preclude the experience of negative emotions” (2013, p. 207). As an example, prevalence of CWB could exist or be reinforced simply because the behavior does not receive any negative consequences (Fox & Spector, 2010). Thus, although the relationships between environmental stressors, negative emotions and CWB are supported by the stressor-emotion model and utilized both theoretically and practically in the current study, it is important to recognize that there are other valid approaches to how CWB develops and what causes it.

Regarding means of counteracting CWB, the stressor-emotion model emphasizes control as a mediating variable that can affect the cognitive and emotional processes and thus affect the behavioral outcomes in terms of CWB (Spector & Fox, 2005). As Kessler and Penney describes the role of control as a mediator; “high levels of control (e.g., employee perceptions of the controllability of a stressor, perceived or actual control over the work environment) generally reduce the experience of negative emotions and the tendency to take counterproductive action” (Kessler & Penney, 2013, p. 204). However, individual control can in turn be divided into
objective (or actual) control and perceived control. Objective control regards exercising control over the environment (Kessler & Penney, 2013). This could manifest itself as being able to control facets of a job, such as control over job-location (e.g. working at the office or at home), what to work on (e.g. autonomy in work assignments) and when to work (e.g. flexible work-days) (Kessler & Penney, 2013; Spector, 2002). However, even though objective control can increase employee satisfaction and performance, individual controllability over the environment is difficult to implement in many professions with low variability and rigid work tasks (Spector, 1986). Perceived control, however, is a subjective assessment of one's own ability to control behaviors, thoughts and feelings, which has been shown as beneficial for a multitude of domains such as stress-coping, anxiety-training and maintaining healthy relationships (Maddux & Lewis, 1995). Perceived control is not necessarily about possessing actual control, but rather “employees' evaluation of their physical, social, psychological, and material resources to deal with the threatened work situation” (Vander Elst, Van den Broeck, De Cuyper & De Witte, 2014, p. 674).

Perceived control is highly connected to self-efficacy, which regards individuals’ belief in the own capabilities and the ability to execute the proper action to reach a specific goal (Bandura, 1997). Maddux and Lewis (1995) claim that “a sense of personal control […] is in the heart of self-efficacy theory” (p. 38). In essence, the relationship can be described as that “having control means being able to effectively exercise it” (Williams, 1995, p. 85), which means that self-efficacy could be a powerful way to increase the level of perceived control. Perceived control is furthermore highly connected to emotions; high levels of perceived control can dampen negative emotions, which in turn make individuals perceive stressors more positively. Conversely, low levels of perceived control can reinforce negative emotions, which can influence individuals to perceive stressors more negatively (Penney & Spector, 2005; Spector, 2002). Perceived control is also connected to being able to control feelings, defined as emotional regulation (Maddux & Lewis, 1995). However, the opposite has also been demonstrated by Bercovits, Langer and Pagnini (2016), who showed that an increased emotional regulation led to a higher degree of perceived control. To conclude, research suggests that perceived control is an important factor to consider when investigating means of reducing CWB. Perceived control could be defined in terms of self-efficacy and emotional regulation, which if increased could benefit individuals in rigid work environments with low objective control (Bandura, 1997), and consequently reduce employee engagement in CWB.
Self-efficacy

Self-efficacy regards an individual’s belief in his/her own capabilities, and belief in the ability to execute the proper action to reach a specific goal (Bandura, 1997; Maddux, 1995). According to Albert Bandura, people have an innate drive of wanting to control the events that influence their lives and to have the competencies and capabilities to perform successfully (Bandura, 1989; Bandura 1997). The perception of self-efficacy guides cognition, and is a powerful predictor of motivation and affective states (Bandura, 1997). The influence of self-efficacy is not only manifested in the choices that are made, but also in how much effort that is invested in that particular choice and how the individual will re-evaluate the choice taken in the face of obstacles, potentially leading to quitting or perseverance (Bandura, 1997). Thus, self-efficacy does not regard possessing specific skills or abilities, but rather the individual’s subjective perception of what one can do with the skills and abilities possessed (Maddux, 1995).

Self-efficacy beliefs should be captured in the context or situation that the behavior under investigation takes place in, such as the workplace (Maddux, 1995). General self-efficacy scales have been developed but have been shown to be less capable to capture behavioral change than more contextually specific self-efficacy scales. However, self-efficacy at the workplace is a multi-dimensional construct, and is presently conceptualized on three dimensions; cognitive-, emotional- and social self-efficacy at the workplace (Loeb, 2016). Cognitive self-efficacy at the workplace regards the belief that one has the capabilities to perform the necessary and expected behaviors and practices (Rigotti, Schyns & Mohr, 2008). Individuals with higher cognitive self-efficacy at the workplace are thought to be more successful, partly mediated by their willingness to undertake and perform well at tasks (Raelin, 2010). In more detail, cognitive self-efficacy has a direct influence on goal-setting and problem-solving through regulating the persistence, confidence or endurance when facing obstacles (Maddux, 1995).

Emotional self-efficacy at the workplace influences the type and intensity of an affective reaction experienced at work (Loeb, 2016). For example, low emotional self-efficacy at the workplace can reinforce negative emotions such as anxiety or agitation (Maddux, 1995). Conversely, individuals with high emotional self-efficacy are more efficient in terminating emotions and to stop rumination when experiencing negative emotions, as long as the event is perceived as controllable (Maddux, 1995). Emotional self-efficacy is thus regarded as the belief in one’s capabilities to understand, regulate and use emotions (Bandura, 1997). A strong emotional self-efficacy has been shown to help individuals resist engaging in detrimental and negative interpersonal actions at work, especially in workplaces with a high emotional demand (Loeb, 2016).
The third dimension of self-efficacy at the workplace is social self-efficacy. Social self-efficacy regards the belief in one’s capabilities in social interactions, such as making friends, engaging in group work and managing conflicts. In more detail it regards “employees’ confidence in their capability to engage in the social interactional tasks necessary to initiate, maintain and develop interpersonal relationships at work” (Loeb, 2016, p. 47).

According to Maddux and Lewis (1995), there are several ways of increasing a self-efficacy belief, including the control of emotional/physiological arousal (e.g. being taught techniques in how to relax) and verbal persuasion (e.g. receiving feedback or encouragement). Controlling emotional/physiological arousal regards increasing self-efficacy through relaxation-techniques. According to Maddux and Lewis (1995), individuals feel a higher degree of self-efficacy when calm, compared to when distressed. Relaxation techniques that aim to control and reduce emotional arousal (e.g. meditation practice) can therefore also increase self-efficacy (Maddux & Lewis, 1995). Verbal persuasion regards communication and encouragement. Verbal persuasion, such as receiving positive feedback, can increase self-efficacy through challenging dysfunctional beliefs, attitudes and outcome expectancies, and thus shed new light on wrongly held beliefs about oneself. To be effective, verbal persuasion needs to reinforce constructive beliefs or encourage new beliefs that in turn foster new behavior (Maddux & Lewis, 1995).

**Emotions and emotional regulation**

A common feature among many definitions of emotion is that emotions are affective responses to internal or external stimuli (Grandey, 2000; Gross, 1998; Gross & Ochsner, 2005; Kleinginna & Kleinginna, 1981). As the theoretical background developed by Spector and Fox (2005) has established, emotions and their influence on behavior are key factors in understanding why individuals engage in deviant work behaviors such as the five dimensions of CWB. When emotions disturb the ability to engage in adaptive behaviors, thus making the emotions dysfunctional, emotional regulation is important to alter the emotions in a positive way in order for psychological health to be established or maintained (Anholt, Henik & Moyal, 2014). Conversely, research has shown that difficulties in emotional regulation are connected to depression and anxiety disorders (Anholt, Henik & Moyal, 2014). Emotional regulation can be defined as “the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (Gross, 1998, p. 275). These processes can be either conscious or nonconscious, and are utilized as strategies to either increase, decrease or maintain the experienced emotions (Guendelman, Medeiros & Rampes,
Further than altering existing emotional responses through processes of regulation, emotional regulation includes the initiation of new emotional responses (Gross & Ochsner, 2005), as well as predicting the appropriate emotional responses in different contexts (Thompson, 1994). Thus, emotional regulation is based on both the intrapersonal control of emotions and their respective responses, as well as the cognitive analysis of the context and which emotions are appropriate in each situation (i.e. cognitive appraisal). Emotional regulation, through these processes, affects the quality of the emotional response as well as its intensity and timing, to influence the whole experience of emotion (Thompson, 1994).

Gross (1998) developed several processes of emotion regulation, including attention deployment, cognitive change and response modulation. Attentional deployment refers to the selection of what to focus on in a particular situation, cognitive change refers to what meaning is given to the particular situation and how it is appraised, and response modulation refers to the influence over the behavioral responses elicited by the emotions. Corresponding with the stressor-emotion model of CWB, the three latter regulatory processes of emotion refer to the subjective appraisal of stressors and emotions and the control over them. In more detail, the three processes of emotional regulation mentioned are defined as being able to regulate/control attention, cognition and responses in order to regulate emotions efficiently. This further interconnects emotional regulation with the concept of perceived control through the perception of being able to control emotions. To support this notion, research has demonstrated how methods that has been shown to increase emotional regulation (e.g. mindfulness practice) improves perceived control (Bercovits, Langer & Pagnini, 2016). In this process, emotional regulation works by neutralizing or altering the negative experiences of the stressors, which lowers the overall level of negative emotional outcomes (Gross, 2002; Jackson, Malmstadt, Larson & Davidson, 2000).

**Mindfulness**

Mindfulness refers to a specific type of meditation that was developed within the context of buddhist tradition, a tradition concerning itself with how consciousness, emotions and the mind in general work (Guendelman, Medeiros & Rampes, 2017). The definitions of mindfulness vary, however in a general overview of the construct, mindfulness can be described as a kind of “nonelaborative, non-judgmental, present-centered awareness in which each thought, feeling, or sensation that arises in the attentional field is acknowledged and accepted as it is” (Kabat-Zinn & Williams, 2011, p. 43). Research in mindfulness has demonstrated how the practice can be effectively applied in various fields of use with a number of benefits for psychological and
physical processes (Hyland, Andrew Lee & Mills, 2015). In a broad sense, research indicates that mindfulness practice “promotes metacognitive awareness, decreases rumination via disengagement from perseverative cognitive activities and enhances attentional capacities through gains in working memory” (Davis & Hayes, 2011, p. 200). Empirical research shows how mindfulness is an effective practice in a number of processes, for example treatment of anxiety, mood symptoms and depression (Hofmann, Sawyer, Witt & Oh, 2010), reducing stress, rumination and emotional reactivity, and increasing working memory, attentional focus, cognitive flexibility and emotional mental health (Davis & Hayes, 2011; Guendelman, Medeiros & Rampes, 2017).

Regarding its connection to emotional regulation, mindfulness has shown its effectiveness against several psychological conditions in relation to dysregulation of emotions (Guendelman, Medeiros & Rampes, 2017), and specifically in aiding the development of effective emotional regulation (Corcoran, Farb, Anderson & Segal, 2010; Farb et al., 2010; Siegel, 2007). A study conducted by Hill and Updegraaff (2012) indicated that mindfulness is associated with “greater emotion differentiation and less emotional difficulties (i.e., emotion lability and self-reported emotion dysregulation)” (p. 81).

Furthermore, research shows that individuals with a higher degree of mindfulness are less prone to hostile feelings and behaviors (Krishnakumar & Robinson, 2015). The results of these studies suggest that mindfulness practice can be used as an effective mean of reducing negative emotions and behaviors at work, depending on effective emotional regulation among other things (Hill & Updegraaff, 2012; Krishnakumar & Robinson, 2015). This is further supported by results showing that employees with a higher degree of mindfulness engage less actively in CWB (Krishnakumar & Robinson, 2015). Conclusively, mindfulness practice can alter and enhance the subjective cognitive and emotional processes in the chain of CWB development through emotional regulation and reappraisal of emotions, consequently leading to a reduced prevalence of employee CWB.

**Feedback**

As mentioned previously, verbal persuasion such as feedback can be an effective tool in influencing self-efficacy. Receiving positive feedback has been shown to raise self-efficacy, and receiving negative feedback has conversely been shown to lower self-efficacy (Kampkuiper, 2015). Positive feedback regards communication and encouragement, and can increase self-efficacy through challenging dysfunctional beliefs, attitudes and outcome expectancies (Maddux & Lewis, 1995).
According to Epstein and Morling (1995), all humans have an intrinsic need of self-enhancement and self-verification. Self-verifying feedback can give the individual a sense of being in control, whereas self-enhancing feedback can give the individual a sense of reaching goals. Positive feedback has the power to reframe negative schemas, but then needs to be based on a combination of self-verifying and self-enhancing information from significant individuals, such as oneself (self-verifying internal feedback) or a co-worker (self-enhancing external feedback) (Epstein & Morling, 1995). The purpose of positive internal feedback is to allow and encourage the individual to reflect about personal experience. By remembering, re-perceiving and re-evaluating past events individuals have been active in, individuals can gain new insights and strengthen their belief in themselves (Reed & Aspinwall, 1998). One reason why positive internal feedback is important is that individuals often recall experiences and feelings that are representations of their self-perception. Having a low self-perception will guide the memory to situations where one produced poorly (even though there might have been situations where the individual performed well), which means that negative past experiences can reinforce future evaluations of events (Maddux & Lewis, 1995). Having a self-verifying internal feedback intervention that aims to let the participant reflect over positive situations can re-guide past representations to be more nuanced.

Positive external feedback can also have significant effects on self-efficacy. Receiving self-enhancing external feedback from a supervisor or colleague might inform the individual that s/he is making progress towards a personal goal, and is also valuable to remind the individual that a successful experience is attributed to the performance of the individual and not to external factors (Maddux & Lewis, 1995; Schunk, 1995). This method of linking individual effort with success is called attributional feedback, which can increase self-efficacy and heighten the motivation to continue with the rewarded behavior (Schunk, 1995). This is also connected to verbal reward (being verbally praised), where research has connected the anticipation of a desirable outcome (receiving verbal reward) as a motivation for behavior (Schunk, 1995).

**Empirical Findings of Effects on CWB**

As mentioned previously, self-efficacy and emotional regulation are important variables affecting regulative processes, both cognitive and emotional. These are in turn connected to the stressor-emotion model, which indicates that self-efficacy and emotional regulation could be important factors to incorporate in order to reduce CWB.
Previous empirical research regarding self-efficacy and CWB has been generally overlooked, according to psychologists Fida, Paciello, Tramontano, Barbaranelli and Farnese (2015). Instead, most previous studies on CWB have conceptualized control in terms of autonomy or locus of control, not as self-efficacy. In contrast, the authors behind the stressor-emotion model encourage future research to instead incorporate self-efficacy as a dimension of control, because individuals with a high degree of self-efficacy are more likely to perceive a stressor as a challenge than a threat which in turn affects their emotional response and consequently their behavioral response (Fox & Spector, 2006). Following this advice, Fida et al. (2015) incorporated two dimensions of self-efficacy (cognitive self-efficacy and emotional self-efficacy) to investigate how these dimensions can buffer CWB. Their study involved 1147 working adults in Italy, with no specification regarding work tasks or work situation. The participants filled out questionnaires about the two self-efficacy dimensions and CWB, as well as interpersonal conflict, organizational constraints, workload, role stressors, social support and negative emotions. The results showed negative correlations between the two self-efficacy dimensions respectively and organizational constraints, role ambiguity, role conflict, negative emotions and CWB, and further correlated positively with perceived social support (Fida et al. 2015). The authors’ conclusion is that individuals with high self-efficacy perceive stressors less negatively, reported fewer negative emotions and experienced less stress at the workplace, and as a consequence engaged more rarely in CWB. Due to the promising result and recommendations from Fida et al. (2015), this paper will further investigate this relatively unexplored field of CWB by the incorporating dimensions of self-efficacy as mediating variables in an quasi-experimental design, as well as the incorporation of feedback as a conceptualization of support to increase self-efficacy.

Regarding emotional regulation, the development of CWB is heavily based on the subjective perception of stressors and its subsequent connection to negative emotions (Spector & Fox, 2005). In a study conducted by Biçaksiz, Erol-Korkmaz, Johnson & Matta (2014), 50 full-time employees from Turkish private sector companies were included as participants in a web-based diary survey. The data, which was collected over 10 working days, included measures such as CWB, emotional regulation, negative emotional reactions and significant events at work. The results of the study show that emotional regulation can help the individual reappraise significant events at work (e.g. environmental stressors) and reappraise and control the negative emotions stemming from the stressors (Biçaksiz, Erol-Korkmaz, Johnson & Matta, 2014). Negative emotions mediate the relationship between environmental stressors and CWB, which
emphasizes the importance of emotional regulation as a measure for reducing CWB (Biçaksiz, Erol-Korkmaz, Johnson & Matta, 2014).

However, emotional regulation is not only interconnected with CWB through altering the development of negative emotions. From a contrasting perspective, research has shown that CWB can be performed by individuals with the specific motive of increasing their emotional regulation. The CWB then works as a strategy to cope with the environmental stressors and to regulate the negative emotions they induce (Kessler & Penney, 2013). Thus, if an employee manages to regulate emotions and to cope with the environmental stressor in a different way than by engaging in CWB (e.g. by increasing emotional regulation through mindfulness meditation practice), this can neutralize one of the motivational drives for CWB.

Thus, in relation to emotional regulation, CWB can be reduced in two ways. Firstly, by reducing the occurrence of negative emotions stemming from environmental stressors, and secondly by reducing or eliminating the motive for CWB that stems in a lack of emotional regulation.

Research Purpose and Hypotheses

The research purpose is to experimentally investigate the effectiveness of two interventions (a mindfulness intervention and a feedback intervention) in reducing CWB. The mindfulness intervention and the feedback intervention aim to reduce CWB by increasing emotional regulation and self-efficacy respectively (see Figure 2). Thus, three hypotheses have been formed.

H1: The two interventions respectively reduce the degree of CWB.
H2: The feedback intervention increases the level of self-efficacy.
H3: The mindfulness intervention increases the level of emotional regulation.

![Figure 2](attachment:control-cwb-intervention-model.png)

**Figure 2  Control-CWB Intervention Model**

The figure visualizes the theoretical relationships between the mediating variables and CWB.
Method

Participants and Sampling

The sample consisted of 22 employed nursing assistants working in elderly care within a nursing home in a small municipality in the south of Sweden. The total staff of the nursing home consisted of 28 individuals. All were invited to participate in the study, of which six declined. The participants’ job tasks included looking after the elderly residents of the nursing home by providing everyday care. 96.5% (n=21) of the participants were female. The age range varied from 19 to 64 years with a mean age of 41 years (SD=16). The participants’ tenancy within their current workplace ranged from 0.5 to 25 years, with a mean of 7 years (SD=7.5). The participants were conveniently sampled via the Human Resources department of the organization and consisted of four pre-existing work groups.

Instruments

Counterproductive work behavior checklist (CWB-C)

Counterproductive work behavior was measured through the 32-item self-report questionnaire Counterproductive Work Behavior Checklist (CWB-C), used to assess the participants' levels of CWB on five dimensions (abuse, production deviance, sabotage, theft, and withdrawal; Spector et al., 2006). The CWB-C asks participants to assess how often they engage in specific behaviors in their specific job, and each item is measured on a five-point Likert scale that ranges from “Never” (1) to “Every day” (5). A higher score on the CWB-C indicates a higher prevalence of individual counterproductive work behavior. The item scores are measured both through the five separate CWB dimensions and as an aggregated total score. Sample statements from the checklist include “Came to work late without permission” and “Insulted or made fun of someone at work”. The CWB-C was developed by Spector and Fox (Copyright 2002). A Cronbach’s $\alpha = .90$ has been previously estimated for the CWB-C, indicating a high internal consistency (Spector et al., 2006). A Swedish version of the CWB-C was used in the current study. Translation of the CWB-C from English to Swedish was conducted by the authors. Back-translation of the CWB-C from Swedish to English was conducted by an external, bilingual consultant with both languages spoken fluently. Consequently, the original English version of the questionnaire was compared to the back-translated English version for consistency between the versions.
**Self-efficacy questionnaires**

Self-efficacy was measured with three scales of self-efficacy at work: cognitive-, emotional- and social efficacy. The cognitive dimension was captured with the occupational self-efficacy scale (Rigotti, Schyns & Mohr, 2008), which consists of six items, and is available in Swedish (Cronbach’s $\alpha = .86$). A sample questions is “I can remain calm when facing difficulties in my job because I can rely on my abilities” (Rigotti, Schyns & Mohr, 2008). Responses are given on a seven-point Likert-scale (1-7), where “1” represents “strongly disagree” and “7” represents “strongly agree”.

Emotional self-efficacy was measured with the occupational emotional self-efficacy scale, available in Swedish (Loeb, 2016). It has a total of eight items, where four are directed towards the individual (self-oriented) and four are direct at co-workers (other-oriented). One sample item from the self-oriented part is “I have confidence in my ability to know what causes me to feel a negative emotion at work”. A sample item from the other-oriented part is; “I have confidence in my ability to correctly identify when other people are feeling negative emotions at work” (Loeb, 2016). Responses are given on a five-point Likert-scale (0-4), where “0” represents “no confidence at all” and “4” represents “complete confidence”. Cronbach’s $\alpha = .85$ (Loeb, 2016).

Social self-efficacy was measured with the occupational social self-efficacy scale, available in Swedish. The scale consists of five items and aims to measure “employees’ confidence in their capability to engage in the social interactional tasks necessary to initiate, maintain and develop interpersonal relationships at work” (Loeb, 2016, p. 47). A sample item is “I have confidence to manage a conflict situation with people at work”. It uses the exact same Likert scale as emotional self-efficacy. Cronbach’s $\alpha = .87$ (Loeb, 2016).

**Emotion regulation questionnaire (ERQ)**

Emotional regulation was measured with the 10-item self-report questionnaire *Emotion Regulation Questionnaire* (ERQ; Gross & John, 2003), which aims at assessing the different emotion-regulatory strategies and processes of the participants. The ten items of the questionnaire specifically captures two separate strategies of emotional regulation; cognitive reappraisal (six items) and expressive suppression (four items). Each item is assessed on a seven-point Likert scale ranging from “Strongly disagree” (1) to “Neutral” (4) to “Strongly agree” (7). A higher score on the ERQ indicates a higher prevalence of the respective strategy. Sample statements from the questionnaire includes “When I want to feel less negative emotion (such as sadness or anger), I change what I’m thinking about” and “When I am feeling negative
emotions, I make sure not to express them”. A Cronbach’s 𝛼 of .79 has been previously measured for the cognitive reappraisal strategy of the questionnaire, and a Cronbach’s 𝛼 = .73 for the expressive suppression strategy (Gross & John, 2003), indicating a high internal consistency.

A Swedish version of the ERQ was used in the current study, translated by Enebrink, Björnsdotter and Ghaderi (2013). As they describe the translation process, the “translation and back-translation of the ERQ from English [...] was carried out according to the procedure suggested by the World Health Organization” (Enebrink et al., 2013, p. 292).

**Feedback intervention material**

The feedback intervention consisted of written internal positive feedback, which the participants were instructed to give themselves, and external feedback which the participants were instructed to give each other. The participants received instructions with examples on how to write internal and external feedback. Both instructions were created and formulated by the authors, but partly based on intervention designs previously used in research (Reed & Aspinwall, 1998; Loeb, 2016; Schunk, 1995).

Internal feedback intervention was based on the affirmation manipulation design (Reed & Aspinwall, 1998). The affirmation manipulation is a questionnaire intervention where the purpose is to let the respondent answer “yes/no” to simple statements. For example, “Have you ever forgiven another person when they have hurt you?” If the answer was “yes”, the respondent was asked to give a brief written example of a situation where that was the case (Reed & Aspinwall, 1998). The affirmation manipulation is then supposed to induce feelings of kindness by letting the respondent elaborate a response on fairly common behavior regarding acts of kindness (such as forgiving someone or caring for someone else). For the case of raising self-efficacy, the same design was used on letting the respondents reflect and elaborate once a week on six statements from the self-efficacy at work scales used in the pre-post measurement (Loeb, 2016). Two statements from each of the three self-efficacy dimensions at work were used (social-, emotional- and occupational self-efficacy). For the emotional-efficacy, one statement each from both the other and self-oriented efficacy was used, which gave a total of six “yes/no” statements where the respondent was asked to elaborate if the answer was yes. The selection of the six was based on choosing statements that the respondent was mostly likely to have encountered (thus prompting a yes-response). As a buffer-procedure, a no-response to the statements was followed by a request to elaborate hypothetically, in order to make sure that the respondent was able to reflect. A sample item is “Have you asked someone at work for help if
you have needed it?” (If yes, please describe a situation when this was the case. If no, how would you have gone about to achieve this if you had to?). For the instructions, see appendix I.

The external feedback instruction was based on Schunk’s work on attributional feedback (1995). Attributional feedback links individual effort with external praise, and increases self-efficacy by illustrating both that the individual works hard, is capable and is making progress (Schunk, 1995). Thus, the attributional feedback-instruction in the present paper was focused on three different parts of feedback, all potential sources of self-efficacy. The three parts were: acknowledges of effort, acknowledges of skills and capabilities and acknowledges of progress (Schunk, 1995). In detail, the participant was instructed to give a colleague feedback on an area at work where the colleague had made an effort, an area at work where the colleague possesses skills and an area at work where the colleague has made a progress. The participants were asked to give one to two examples for each area, and were provided with the start of the sentence for each of the three points (i.e. “you worked very hard when…” or “you are very good at…”). The external feedback-intervention could be seen as two parts, both receiving and giving praise. See appendix I and II for both the internal and external instructions.

**Mindfulness intervention material**

The mindfulness intervention material consisted of a 19.5 minute long audio file containing a guided (spoken) mindfulness meditation session (Thorsen, 2010). The focus of the guided session is acceptance of thoughts and emotions through the mindfulness practice of non-judgmental and present-centered awareness and attention, in line with the defining features of mindfulness (Kabat-Zinn & Williams, 2011; Krishnakumar & Robinson, 2015). The session is guided in Swedish by a female voice. When applying mindfulness practice in therapy, there are three main techniques that are used; body scan, sitting meditation, and Hatha Yoga (Chiesa & Malinowski, 2011). The technique of body scanning mainly concerns paying attention to physical sensations, breathing and relaxation. Hatha Yoga focuses mainly on breathing and physical postures and stretches aimed at strengthening the musculoskeletal system of the body. In contrast, the technique of sitting meditation (applied in the current intervention) focuses on breathing and attention to physical sensations but also on non-judgemental awareness and acceptance of cognitions such as thoughts and emotions (Chiesa & Malinowski, 2011). The effectivity of mindfulness practice oriented towards acceptance of thoughts and emotions has been indicated in contemporary research where acceptance is a key feature of behavioral change (e.g. as is discussed in the practice of psychotherapy) (Baer, 2003). Thus, the technique of sitting meditation with an orientation towards acceptance of thoughts and emotions was deemed the
most appropriate for this study, as it corresponds well with the intervention aim of increasing emotional regulation. More specifically, the mindfulness meditation session applied in this intervention focuses on acceptance of thoughts and emotions with the aim of being able to identify them correctly and not letting them automatically control behavior, which is strongly connected to emotional regulation.

Sample phrases from the mindfulness meditation intervention include (translated from Swedish) “Try to approach the feeling with kind curiosity; how does it really feel? Can you perhaps create room for this feeling? Is it really as unpleasant and dangerous as you’ve thought?” (Thorsen, 2010), and “If you want, you can label the thoughts and feeling that arise in your consciousness, if you for example recognize anxiousness you can quietly say ‘anxiousness, this is anxiousness’, to yourself. Just observe and label, without trying to change anything. Allow everything to be as it is” (Thorsen, 2010).

**Experimental Design**

A quasi-experimental, pre-post-test design was used with two treatment groups undergoing a four week-long intervention each. Two work groups conducted the mindfulness intervention (n=10) and two work groups conducted the feedback intervention (n=12). Even though the interventions were different, the pre-post test design, duration of the interventions and questionnaires were identical for both groups. No control group was used in the study, due to the fact that the two groups undergoing the feedback intervention had to remain intact for the integrity of the intervention (the external feedback was supposed to come from a near colleague whom one has everyday interaction with), which consequently did not allow random sampling. However, since two work groups underwent the mindfulness intervention and two work groups underwent the feedback intervention, the interventions could partly be controlled between the work groups.

**Procedure**

An HR representative and a branch head of the municipality was contacted prior to the study for an initial meeting regarding the psychosocial climate of the organization and its employees. During this interview the study purpose, design and procedure were discussed, as well as the possible sample of participants. The study was approved by the representatives, thus allowing contact with the health care workers for participation. Starting the interventions, the participants met in their four respective work groups to receive information regarding the
purpose and procedure of the study. A brief presentation was given to explain the relevance of emotional regulation and self-efficacy in connection to perceived control and work-related behaviors. Information regarding confidentiality of data, participant coding and freedom of participation (and cancellation of current participation at any given point) was given to the participants prior to participation. Each participant then proceeded to fill out the pre-measurement questionnaires regarding CWB, self-efficacy and emotional regulation. Half the sample (two of four work groups) was assigned to the mindfulness intervention, while the other half was assigned to the feedback intervention.

The feedback intervention was conducted in two simultaneous steps; one internal (self-verifying) and one external (self-enhancing). Both feedback types were written, and were structured into the following two steps: first, write feedback once per week for four consecutive weeks to oneself (internal feedback). Second, write feedback once per week during the same four consecutive weeks to a specific colleague, and then consequently read the external feedback another participant has written about them (external feedback). Each participant was given the same instructions on how to give written feedback (to others and themselves), and was also shown examples of what to include and how long the each feedback was supposed to be. See appendix I and II for the respective feedback instructions in Swedish. The participants were instructed to send a copy of both the internal and external feedback to the researchers via email, in order to verify completion after each intervention session.

The mindfulness intervention was conducted two times per week for four consecutive weeks (for a total of eight sessions). During each intervention session, the participants listened to the 19.5 minute long mindfulness meditation session in a secluded room solely used for the intervention. The audio file was played either via headphones connected to a CD-player or via headphones connected to a phone (depending on the choice of the participant).

All participants confirmed completion of each session through a verification message sent to the authors after each respective session. Both interventions were conducted at the workplace during paid working hours. The participants received two 30-minute breaks during their paid work time each week for the four consecutive weeks to perform the interventions. No incentives other than the 30-minute breaks were offered to the participants. After the four consecutive intervention weeks had been conducted, the participants completed the study during a group meeting by filling out the post-measurement questionnaires regarding CWB, self-efficacy and emotional regulation.
Results

H1: The two interventions respectively reduce the degree of CWB.

To investigate if there was a difference in CWB development within and between the intervention groups, a Mixed Design ANOVA was conducted. However, as the post-measurement of CWB contained outliers and was not normally distributed, the data was ranked. Levene’s Test of Equality of Error Variance indicated that homogeneity of variance could be assumed (pre \( p = .069 \), post \( p = .141 \)). Box’s test of Equality of Covariance indicated that the covariance matrices between the groups are equal (Box’s \( M = 2.013 \), \( p = .619 \)). The results showed no statistical difference, \( F (1,19) = 0.72 \), \( p = .683 \); Wilk’s \( \Lambda = 0.99 \), partial \( \eta^2 = 0.009 \). Thus, H1 was not confirmed as the results failed to support the null hypothesis; there was no significant difference within the respective intervention groups in terms of CWB reduction, nor between the interventions.

H2: The feedback intervention increases the level of self-efficacy.

Paired sample t-tests were conducted on the feedback intervention group to investigate differences in the three dimensions of self-efficacy (occupational, social and emotional self-efficacy) before and after the intervention period. The assumption of normally distributed data was met for all three dimensions. Results showed no significant difference in any of the self-efficacy dimensions before and after the feedback intervention; occupational self-efficacy \( t(10) = -0.696, p = .502 \), social self-efficacy \( t(10) = -1.707, p = .119 \) and emotional self-efficacy \( t(10) = -0.105 p = .919 \). Thus, hypothesis two was not confirmed as the results failed to support the null hypothesis (\( p > .05 \)). However, the intervention did produce a slight increase in all three self-efficacy dimensions.

Table 1: Pre and post intervention mean of self-efficacy, significance level and effect size

<table>
<thead>
<tr>
<th></th>
<th>Feedback-group</th>
<th>Mindfulness-group (control-group)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre (SD)</td>
<td>Post (SD)</td>
</tr>
<tr>
<td>OSE</td>
<td>5.71 (.67)</td>
<td>5.83 (.41)</td>
</tr>
<tr>
<td>SSE</td>
<td>2.67 (.47)</td>
<td>2.89 (.43)</td>
</tr>
<tr>
<td>ESE</td>
<td>2.72 (.43)</td>
<td>2.73 (.41)</td>
</tr>
</tbody>
</table>

occupational self-efficacy (OSE), social self-efficacy (SSE) and emotional self-efficacy (ESE)
Furthermore, dependent t-test results from the mindfulness group showed that there was a significant difference on the emotional self-efficacy dimension, \( t(9) = -2.316, p = .046 \), and that the social self-efficacy showed tendencies towards significance and with a high effect size \( r >0.5 \) (Field, 2009).

Both interventions did produce a slight increase in the mean level of all self-efficacy dimensions. However, when comparing the difference of the three dimensions of self-efficacy between the intervention groups, no significant differences \( (p >.05) \) were found (Table 1), indicating that undergoing a feedback intervention does not increase self-efficacy more than a mindfulness intervention.

**H3: The mindfulness intervention increases the level of emotional regulation.**

Paired sample t-tests were conducted on the mindfulness intervention group to determine whether there was a statistically significant mean difference in the two dimensions of emotional regulation (cognitive reappraisal and expressive suppression) before and after the intervention period. The assumption of normally distributed data was met. Results did not show a significant difference in cognitive reappraisal, \( t(9) = .605, p = .560 \). However, in expressive suppression, there was a tendency towards significance and the effect size was high, \( t(9) = -2.193, p = .056, r = 0.59 \) Thus, hypothesis three was not confirmed as the results failed to support the null hypothesis \( (p >.05) \).

**Table 2:** Pre and post intervention mean of emotional regulation, significance level and effect size

<table>
<thead>
<tr>
<th></th>
<th>Mindfulness-group</th>
<th>Feedback-group (control-group)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cogre Pre (SD)</td>
<td>5.16 (.95)</td>
<td>4.33 (.84)</td>
</tr>
<tr>
<td>Cogre Post (SD)</td>
<td>5.03 (.66)</td>
<td>4.86 (.84)</td>
</tr>
<tr>
<td>Sig.</td>
<td>.560</td>
<td>.048</td>
</tr>
<tr>
<td>r</td>
<td>.20</td>
<td>.70</td>
</tr>
<tr>
<td>ExpSup Pre (SD)</td>
<td>3.15 (.67)</td>
<td>3.22 (.57)</td>
</tr>
<tr>
<td>ExpSup Post (SD)</td>
<td>3.57 (.79)</td>
<td>3.73 (.69)</td>
</tr>
<tr>
<td>Sig.</td>
<td>.056</td>
<td>.029</td>
</tr>
<tr>
<td>r</td>
<td>.59</td>
<td>.62</td>
</tr>
</tbody>
</table>

Furthermore, results from the feedback group showed statistically significant mean increases in the two dimensions emotional regulation; cognitive reappraisal \( t(10) = -2.252, p = .048 \), and expressive suppression \( Z = -2.965, p = .029 \) (data did not meet the assumption of normality; Wilcoxon Signed Rank test was used). When comparing the levels of cognitive reappraisal and expressive suppression between the two interventions groups, there was no statistical significant
difference in either case: CogRe, \( t(19) = 0.508, p = .617, \) and ExpSup U = 50.5, \( p = .749, \) indicating that undergoing a mindfulness intervention does not affect emotional regulation more than a feedback intervention.

**Discussion**

The main implication of the result was that none of the hypotheses were confirmed. In hypothesis one, there was a slight but not significant decrease in CWB among both groups. Hypothesis two was similar, where the feedback intervention increased all three self-efficacy dimensions slightly but not significantly. However, all three self-efficacy dimensions were slightly increased in the mindfulness group as well (even significantly with regards to emotional self-efficacy), which indicated that the slight progression of self-efficacy in the feedback group could be due to external variables like natural maturation, or that a mindfulness intervention has potential to increase all the variables of self-efficacy (especially emotional self-efficacy). Similar results, contrary to expectation, were evident in hypothesis three. The feedback group significantly increased both dimensions of emotional regulation, and the mindfulness group in contrast saw a small increase in one dimension and a small decrease in the other. This indicates, similar to hypothesis two, that the actual effect of the mindfulness intervention on these variables are quite low and the changes observed could be due to external variables. The main theoretical implication of the results is that more research is needed to investigate if these interventions have a practical effect, since this research could not demonstrate adequate effects. The small tendencies towards the hypotheses’ predictions gave some indication towards that there might be a miniscule effect, however, in the light of the null hypothesis these small changes (in all hypotheses) could be regarded as externally motivated or as natural fluctuations.

There are a number of important topics to discuss regarding the results. The first topic regards issues with pre-measurement data, as the CWB values were quite low (a total mean of 1.16 on a scale ranging from 1-5). These initial self-report scores indicated that CWB was not a significant problem in the assessed work groups. This would evidently have ramifications for interventions designed to reduce CWB through the increase self-efficacy and emotional regulation respectively. Regarding this low pre-measurement levels of CWB, there are several topics of importance. The first is an apparent floor-effect, which regards the inability to differentiate between important behavioral differences within the CWB-spectrum (possibly causing a type II error). This is tied to the sensitivity of the CWB measurement instrument (i.e. that the scale used is designed in such a way that the results can reflect the actual behavioral or
psychological levels within each participant) or if the Swedish translation of the test has an adequate construct validity.

However, the low CWB score could also be explained by socially desirable answers from the participants. As CWB are generally unacceptable at the workplace, they could be shameful or hard to admit explicitly in a questionnaire. Social desirability would in this case lower the general levels of measured CWB to correspond with what is socially desirable in the workplace context. However, as a control measure for social desirability, we asked the chief of staff to evaluate the levels of CWB in the respective work groups, through the same instrument. Results showed a total mean value of 1.63 for all four work groups, which in comparison to the participants’ mean CWB value of 1.13 indicates that social desirability, while possibly still existing, could be a smaller issue than anticipated. Another method of controlling for social desirability can be to include a lie detection question item in the CWB-C. Furthermore, each participant can also be instructed to evaluate the perceived level of CWB in their whole work group instead of (or as an addition to) self-assessments. However, research has indicated that self-assessments and peer-assessments of CWB correlates significantly with each other, indicating that there is no large difference in the level of estimated CWB between the assessment methods (Fox, Spector, Goh & Bruursema, 2007). Regardless, this problematization should be acknowledged in future research within the field.

With regards to the interventions, both failed to significantly increase their respective outcome variables. Even if the interventions did produce a small effect on the designated variables, more noteworthy is that both interventions significantly increased one or more of their control variables contrary to expectation. The feedback intervention yielded no significant differences on any of the three self-efficacy variables. However, undergoing a feedback intervention seems to have increased the participants’ level of emotional regulation, as both cognitive reappraisal and expressive suppression was significantly higher after the intervention. This result is a little surprising since it indicates that the participants increased their emotion regulatory strategies but not their perceived competence to exercise them. An almost reversed scenario appeared for the mindfulness intervention. The participants in the intervention did not increase any of the two emotional regulation variables (in fact, cognitive reappraisal was slightly lower after the intervention). The mindfulness intervention did however produce a significant difference in the emotional self-efficacy variable. This result indicates that the participants did not increase any emotion regulatory strategies, but instead increased their perceived competence to exercise them.
Further, there are several factors that could contribute to the absence of strong effects in line with the hypotheses, such as that adding new routines or practices (practicing mindfulness or feedback) could have been seen as intimidating or uncomfortable, consequently subduing the positive effects of the interventions. This could especially have been the case in the feedback intervention where giving and receiving external feedback to a colleague that one dislikes may stir up negative emotions. Regarding the methodology of the intervention designs, there are a few points that ought to be acknowledged. As the intervention sessions were primarily conducted by the participants during paid work hours, there were factors which could not be controlled for by the researchers. For example, although the participants notified the researchers after each successfully conducted session, there was no certain confirmation that the participants actually conducted each intervention session. Furthermore, two main discrepancies exist between the initial intervention plan and the practical implementation. Firstly, the participants were initially supposed to send a copy of all the feedback material to the researchers, in order to control for feedback consistency, length and quality. However, due to both ethical considerations and practical implications, this was not actualized. Secondly, all intervention sessions were initially planned to be conducted during paid work hours, but since there was no control over this factor the participants could have conducted the sessions outside of work hours, possibly affecting the final results. For example, the quality of each intervention session could depend on the context and its consistency. To conclude, the methodological discrepancies between the initial plan and the practical application stemmed in reasons of practicality, participatory willingness and simplicity for the participants rather than theoretical reasons.

However, although the interventions did not produce clear results in line with the expectations, it did manage to alleviate some of the pre-existing problems at the workplace, as demonstrated at the intervention evaluations. The evaluation was conducted after the participants had filled out the post-measurements, where both positive and negative aspects of the interventions were discussed verbally with the whole group, as well as letting the participants fill out a written evaluation with three items (see Appendix III).

Regarding positive consequences of the feedback intervention, a vast majority of the individuals believed that the intervention made them feel proud, that it was fun receiving feedback and that they each week felt excited and anticipated to receive and give positive external feedback. Some individuals wrote that they had become better at dealing with negative feelings, better at avoiding thinking negative thoughts and that the group had a better and more positive climate, partly due to better and increased communication. One individual remarked that the written positive feedback had encouraged verbal positive feedback and made it easier to
praise each other. Regarding the length and instruction of the feedback intervention, a majority was positive towards the design and length of the intervention and clarity of the instructions. However, a few participants remarked that the intervention did not affect much individually or for the group. The internal feedback was also deemed harder to perform than the external as the questions were similar to each other, identical over the four weeks and less exciting than the external feedback. Overall, the feedback intervention was deemed enjoyable and positive among practically all the participants, as it seemed to affect the psychological climate in a beneficial way. However, the praise regarded mainly the external feedback.

Regarding the mindfulness evaluation, there was both positive and negative critique regarding the intervention itself as well as the practical aspects of it. The positive remarks emphasized the mindfulness intervention as a positive idea that made the participants more relaxed and calm after each session. The meditation sessions were generally valuable as a break from work, as well as positively affecting the thought patterns of some participants. For example, one participant implied that the colleagues participating in the intervention became increasingly more positive in their work and towards the intervention itself during the four week period. In contrast, the negative critique from some participants emphasized how the intervention itself was a good idea with potential that should be implemented at the workplace in some form, but that the evident effects from the intervention on the individual and on the group were small or non-existing. A few participants indicated that the group effects were small due to the fact that not all team members participated in the intervention and that the sample was too small. Furthermore, some participants had trouble finding time or remembering to do the intervention each week (subsequently leading to a text-based reminder from the researchers), resulting in a recurring mental pressure to schedule each session. Thus, a longer intervention period but with half the amount of sessions each week was deemed a more suitable approach by these participants, as well as having the sessions scheduled by the manager instead of by the participants themselves. Regarding the more practical aspects of the intervention, some participants emphasized how the sessions were suitably long for a workplace context and a good length for a relaxation session. The same participants deemed the amount of sessions as adequate as well. Other participants indicated that the sessions were too long, too many, or that the voice of the audio file was not relaxing. Having additional mindfulness audio files to choose from would therefore have been positive. Generally, the mindfulness intervention was valued as a potentially good intervention which granted several positive emotional and cognitive effects for some participants but not for others. The group effects were also visible to some participants but not for others, which emphasizes the importance of individual differences and the general
attitude towards mindfulness and its effectiveness for it to be successful.

**Limitations**

The main limitation of the study is its explorative nature. As far as we know, this is the first study of its kind that utilizes both a mindfulness intervention and a feedback intervention with the aim of reducing CWB. The novelty of this study creates a number of limitations, since particularly the feedback intervention (consisting of internal- and external feedback) has been supported theoretically rather than empirically, warranting the creation of a totally new, pilot-intervention designed for a Swedish application context. Therefore, some concerns about threats against validity and reliability should be raised. Threats against external validity stems from its nature of being a pilot experiment conducted on a small sample. Future research needs to apply the feedback intervention on a larger sample with participants working within different professions in different areas, situations and administrators but with identical intervention instructions in order to reinforce the ability to generalize the results. However, the ecological validity should be satisfactory since the only “real world” criteria in the study was that the participants were colleagues (in the feedback-intervention), which means that any sample could receive the same instructions and do this as long as this criterion is fulfilled. Regarding internal validity, there are several threats. Neither the feedback nor the mindfulness intervention have been previously tested as reliable interventions, which greatly limits the possibility to talk about causality. Further, there was no control group, which did not give the chance to investigate natural maturation or changes in group dynamics or any other events in the environment that might have affected the results. The interventions were only tested against differences in emotional regulation and self-efficacy scores, which means that the interventions could have yielded an increase in a number of uncontrolled confounding variables attributing to the results.

The novelty of the feedback intervention also creates an ethical discussion as it was a four-week pilot-intervention on a real sample in a master thesis study. The consequences of partaking in a pilot-intervention of this nature were unknown to us and we were only able to motivate it with theoretical claims, not empirically verified practical benefits. Further, the sample had previous communication difficulties, workload complaints and group tensions, which could have been worsened by our intervention programs, for example by putting additional pressure and strain on the groups. However, the interventions were implemented with the ethical motivation that the participants would have a clear and detailed understanding of the interventions before initiation of the experiment, through receiving a personal presentation by us.
(which they chose to partake in on a voluntary basis only). Further, the interventions themselves only contained positive reinforcement that were to be conducted during paid work hours. We also had weekly contact with each participant, in which questions or concerns regarding the study or the interventions could be communicated. A final limitation note regarding the explorative nature of this study is that it is hard to find previous research to compare with, thus limiting the ability to draw tentative conclusions regarding the results. Another consequence is that this discussion is limited to a theoretical exploration with few empirical claims or comparisons. More empirical research is consequently needed to further explore the field.

**Summary**

The present study investigated the effectiveness of two different interventions to reduce CWB. The study failed to demonstrate any empirical proof of the effectiveness of the interventions in their ability to reduce CWB, or to significantly increase self-efficacy and emotional regulation, respectively. There are a number of variables that could have contributed to this result discussed in this paper, such as low levels of self-reported CWB. However, both interventions were well received and appreciated among the participants, produced a slight increase in most designated variables as well as lowering CWB slightly in both groups. Therefore, the effectiveness of the interventions in reducing CWB could still be valid in the right context, but more research is needed to support this notion. The intervention with the clearest connection to both individual and group-level processes was the feedback intervention, and future research could further investigate the effect of specifically external feedback on CWB, and should also include molar climate as an outcome variable (Schneider, Ehrhart & Macey, 2011). To conclude, the value of future research in this area is not only to benefit the organizations through lower employee engagement in CWB, but also to increase the general wellbeing of employees (particularly in jobs with low level of control) through the increase of self-efficacy and emotional regulation. There is a clear win-win scenario to be gained, and perhaps this study has provided some useful lessons for the journey ahead.
References


Kabat-Zinn, J., & Williams, J.M.G. (2011). Mindfulness: Diverse Perspectives on its meaning, origins, and multiple applications at the intersection of science and dharma. *Contemporary Buddhism, 12(1).*


Appendix I

Instruktioner för extern feedback

Din uppgift är att skriva positiv feedback till en kollega en gång per vecka. Texten du ska skriva kommer vara uppdelad i tre olika stycken, och handlar om att du ska ge exempel på saker som du tycker att din kollega har gjort bra under de senaste arbetsveckorna som gått (kan vara händelser som skett längre tillbaka i tiden, men försök att fokusera på närtid) samt är vad din kollega är bra på i allmänhet i sitt arbete. Nedan kommer exempel på det du ska inkludera i din feedback.

1. **Insats/ansträngning på jobbet** – Ge ett eller två personliga exempel från er vardag där din kollega gjorde en stor insats eller ansträngning på jobbet. Du kan använda: ”Du jobbade väldigt hårt när... ” eller ”Du jobbade väldigt bra...”, där du sedan fyller i en situation där din kollega gjorde en insats.

2. **Uppmuntran om förmågor på jobbet** – Ge ett eller två personliga exempel från er vardag om vad din kollega är särskilt bra på i sitt arbete. Du kan använda ”Du är väldigt bra på att...”, där du sedan fyller i minst en förmåga just denna kollega är väldigt på.


Fyll i feedbacken i lugn och ro en gång i veckan och skicka sedan dokumentet i ett mejl till din arbetskollega, samt en kopia till våra mejladresser: et222jq@student.lnu.se eller os222cr@student.lnu.se.

Lycka till!
Appendix II

Instruktioner för intern feedback

Nedan kommer du få svara på sex stycken påståenden. Din uppgift är att svara ”ja” om påståendet stämmer, och ”nej” om påståendet inte stämmer. Om svaret är ”ja”, så ber vi dig skriva en liten beskrivning om en situation som stämmer in på påståendet. Om svaret är ”nej”, så ber vi dig att tänka på en alternativt tillvägagångssätt som du hypotetiskt skulle kunna ha tillämpat. Vi ber dig att för varje påstående försöka tänka på en situation ur den gångna veckan. Skriv åtminstone ett par meningar per fråga.

Har du under den gångna veckan…

1. … hanterat en konfliktsituation på jobbet?
   - Om ja, beskriv hur du hanterade situationen när detta skedde.
   - Om nej, hur hade du hanterat en sådan situation på bästa sätt?
   Ditt svar:

2. … fått dina arbetskamrater att lyssna på dina åsikter/ditt synsätt?
   - Om ja, beskriv hur du fick dina arbetskamrater att lyssna på dig.
   - Om nej, hur hade du på bästa möjliga sätt fått dina arbetskamrater att lyssna på dig?
   Ditt svar:

3. … kunnat hantera dina negativa känslor på jobbet på ett bra sätt?
   - Om ja, beskriv en situation då du hanterade dina negativa känslor på ett bra sätt.
   - Om nej, hur hade du på bästa möjliga sätt kunnat hantera de negativa känslorna?
   Ditt svar:

4. … hjälpt andra personer på jobbet att hantera sina negativa känslor?
   - Om ja, beskriv en situation då du hjälpte någon att hantera sina negativa känslor.
   - Om nej, hur hade du på bästa möjliga sätt kunnat hjälpa någon att hantera sina negativa känslor?
   Ditt svar:

5. … känt att du kan hitta lösningar på problem du stött på i jobbet?
   - Om ja, beskriv hur du löste problemet.
   - Om nej, hur kan du gå tillväga för att hitta lösningar på problem på jobbet?
   Ditt svar:

6. … känt dig självsäker att möta de krav som jobbet ställer på dig?
   - Om ja, beskriv på vilket sätt du känner dig självsäker att möta jobbets krav.
   - Om nej, hur kan du bli mer självsäker på att möta jobbets krav?
   Ditt svar:

Fyll i feedbacken i lugn och ro en gång i veckan och skicka sedan dokumentet i ett mejl till våra mejladresser: et222jq@student.lnu.se eller os222cr@student.lnu.se.
Lycka till!
Appendix III

Hej! Som avslutning av denna studie ber vi dig reflektera kring några frågor som rör effekten av interventionen. Mer konkret, vilka förändringar har du sett hos dig själv och i gruppen (positiva som negativa)? Det finns inga rätt eller fel svar, utan vi är bara ute efter dina tankar så känn dig fri att skriva vad du vill! Notera även att en fråga finns på andra sidan bladet.

1. Har interventionen haft någon påverkan på dig, och i sådana fall hur?

2. Har du sett några förändringar i arbetsgruppen under interventions-perioden, och i sådana fall vilka? Fortsättning på andra sidan…

3. Vad tyckte du om interventionen? (T.ex. dess längd, utformning, instruktioner etc.)

Tack för din medverkan i studien, det har varit kul att träffa dig!
Hoppas att interventionen har varit positiv och rolig att genomföra.

Med vänlig hälsning,
Emil & Oskar