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*A Longitudinal Investigation of Moderators of Organizational Change: Implications
for Employee Well-being*

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Tora Palmer Skagestad

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Supervisor

Guy Notelaers

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Abstract

Den negative innvirkningen organisasjons endringer har på ansattes velvære er vel etablert, mulige moderatorer av dette forholdet er derimot lite studert. Målet med denne survey undersøkelsen var derfor å teste en mulig beskyttende effekt av medbestemmelse og endringsorientert lederstil, på forholdet mellom organisasjonsendring og ansattes jobbtrivsel og depresjon. Den modererte hierarkiske regresjonsanalysen (N=2539) viste en hovedeffekt av organisasjonsendring på jobbtrivsel og depresjon over tid.

Organisasjonsendring T1 var positivt relatert til depresjon T2 ($.06 \beta; p = .00$), og negativt relatert til jobbtrivsel T2 ($-.05 \beta; p = 0.3$). Resultatene støttet ikke en beskyttende effekt av medbestemmelse og endringsorientert lederstil. Det var derimot en interaksjon mellom organisasjonsendring og endringsorientert lederstil i en negativ retning ($\beta = -.073, p = .004$). Ansatte som var eksponert for en høy grad av endringer og hadde en leder som var endringsorientert, viste en nedgang i jobbtrivsel over tid. Disse resultatene indikerer at organisasjonsendring har en negativ effekt på ansattes velvære over tid, og at en endringsorientert ledelsestil er negativt for ansattes jobbtrivsel under en høy grad av organisasjonsendringer.

Nøkkelord: organisasjonsendringer; longitudinelt; moderatorer; mental helse; endringsorientert lederstil

A longitudinal Investigation of Moderators of Organizational Change:

Implications for Employee Well- being

Tora P. Skagestad

University of Bergen

Author note

Tora P. Skagestad, Faculty of Psychology, Univeristy of Bergen.

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Correspondance concerning this article should be adressed to Tora P. Skagestad, Fredrik Meltzers gate 36, 5007 Bergen, Norway.

Contact: 0047 99571239. tora.skagestad@gmail.com

Abstract

The negative impact of organizational change upon employee well-being is well established, however, studies on possible moderators of this relationship are scarce. Therefore, the aim of this longitudinal research was to test the possible buffering effects of participation in decision making and change-centered leadership style, on the relationship of organizational change and employee job satisfaction and depression. Moderated hierarchical regression analyses (N =2539) revealed lagged main effects of organizational change on employee job satisfaction and depression. Time 1 organizational change was positively related to Time 2 depression ($.06 \beta; p = .00$) and negatively related to Time 2 job satisfaction ($-.05 \beta; p = 0.3$). Results did not support the buffering effects of participation in decision-making and change-centered leadership style. However, there was an interaction between organizational change and a change-centered leadership style ($\beta = -.073, p = .004$). It was found that employees exposed to high levels of organization change and change-centered leadership had a decrease in job satisfaction over time. Overall, the results suggest that organizational change has a negative effect upon employee well-being over time, and that a change-centered leadership style is negative for employee job satisfaction during a high degree of organizational changes.

Keywords: organizational change; longitudinal; moderators; employee well-being; change-centered leadership

Word count: 6877

A longitudinal Investigation of Moderators of Organizational Change:
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In order to remain competitive in a global marketplace, more and more organizations are implementing organizational change initiatives, such as mergers, restructuring and downsizing (Mellert, Scherbaum, Oliveira & Wilke, 2015). In response to this changing dynamic in contemporary work, there has been a growing interest in the employees experiences and reactions to organizational change (Oreg, 2006; Schyns, 2004; Stanley, Meyer, & Topolnytsky, 2005; Van Dam, 2003). Though some authors argue that organizational change can lead to positive outcomes (Kiefer, 2002; Rousseau & Tijoriwala, 1999), the dominant discourse emphasizes negative effects upon employees (Fugate, Kinicki, & Scheck, 2002; Hellgren & Sverke, 2003; Martin, Jones & Callan, 2005; Kiefer, 2005). However, organizations have to rely substantially on their employees for successful change implementation (Myungweon, 2011). Overcoming negative individual reactions to change efforts is essential, as resistance to change it is one of the main reasons why organizational change fail (Armenakis, Harris, & Mossholder, 1993; George & Jones, 2001; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004; Isabella, 1990; Oreg, 2006). Aspects of the change process, such as degree of employee participation and leader behavior, are assumed to affect the employees reactions to change (e.g. Wanberg & Banas, 2000; Oreg, 2006). However, research on the possible moderating effects of such process characteristics on employee well-being are scarce (Oreg, Vakola & Armenakis, 2011). Thus, there is a need to investigate possible moderators of the relationship between organizational change and employee well-being, to identify how the aversive affects of

organizational change can be mitigated (Oreg et. al, 2011).

Moreover, studies of reactions to change are typically restricted to the study of direct relationships between antecedents and employee reactions. Employing a longitudinal design could lead to a deeper understanding of the impact of organizational change, by being able to produce more reliable information on the prospective linkages between organizational change and employee well-being (Zapf, Dormann & Frese, 1996).

Therefore, the aim of this study is to investigate whether participation in decision making and a change- centered leadership style will moderate the presumably negative relationship between organizational change and employee well-being, in a longitudinal design.

Organizational Change and Employee Job Satisfaction and Depression

Organizational change is a broad concept that can involve a wide range of different strategies, actions, and consequences. In general, organizational change is defined as alterations to an organization's structure, its processes, and/or its social system (e.g., Porras & Robertson, 1992; Porras & Silvers, 1991). This definition encompasses large-scale and fundamental transformations, such as mergers, layoffs, or restructuring (Reilly, Brett & Stroh, 1993), as well as a variety of more minor changes. Typically, the term organizational change refers to organization-wide change, as opposed to minor change initiatives (Saksvik et. al, 2007). In this study, the organizational change measure consist of a wide range of events that are considered to entail negative outcomes for the employees (Oreg et. al, 2011). More specifically, downsizing, budget cuts, fissions or fusions, changes in management, changes in overarching goals and work tasks are included in the measure.

Organizational change is generally perceived as a stressful experience

(Jimmieson, Terry & Callan, 2004), affiliated with a diverse set of negative reactions in employees, such as decreased commitment and motivation, a sense of injustice, decreased health and feelings of insecurity and intentions to quit (Fugate et. al, 2002; Hellgren & Sverke, 2003; Martin et.al, 2005; Mohr, 2000; Naumann, Bennett, Bies, & Martin, 1996). Moreover, the best performers are more likely to engage in voluntary turnover after organizational change (Jackofsky, Ferris & Breckenridge, 1986). As job satisfaction is negatively related to turnover (Barrick & Zimmerman, 2005) investigating this outcome was considered particularly relevant. Job satisfaction show a consistently negative relationship with organizational change, which is evident over time (Jimmieson et. al, 2004; Nelson, Cooper & Jackson, 1995). Several mechanisms has been theorized about the negative effects of organizational change on job satisfaction. An empirically tested model by Oreg (2006) identifies job insecurity (i.e fear of losing ones job) and decrement of intrinsic reward as important factors. The lack of control and unpredictability is considered the core of job insecurity (Dekker & Schaufeli, 1995), and the association between job insecurity and job dissatisfaction is robust (De Witte, 1999). Job insecurity is prevalent during organizational change (Ashford, Lee & Bobko, 1989; Greenglass and Burke, 2001), which may in part explain the negative relationship between organizational change and job satisfaction. Moreover, since organizational change often involves changing positions and redefining tasks, it can threaten the intrinsic satisfaction that employees gain from their work (Hackman & Oldham, 1980). According to Ryan and Deci (2000), individuals intrinsic satisfaction is to a great degree dependent on their ability to satisfy basic needs such as the need for autonomy and self-determination.

Organizational change may also lead to reduced job satisfaction because it involves a high degree of role ambiguity (Jick, 1985; Yousef, 2000). The assignment of new work tasks, rearrangement of previous teams due to layoffs, and the introduction of new work tools, may create uncertainty about what is expected of the employees. Role ambiguity shows a consistent negative relationship with job satisfaction (Behrman & Perreault, 1984; Jackson & Schuler, 1985; Kohli, 1985; Teas, Wacker & Hughes, 1979). Thus, organizational change is expected to have a negative relationship with job satisfaction over time, as stated in hypothesis 1.

H1 Organizational change T1 will have a negative relationship with job satisfaction T2.

In addition to reducing job satisfaction, organizational change is associated with employee depression (Axtell et. al, 2002; Mak & Mueller, 2001; Niedhammer, Chastang, Barouhiel, Barrandon, 2006). To my knowledge, only two studies on the longitudinal relations between organizational change and employee depression have been conducted (Axtell et. al, 2002; Mak & Mueller, 2001); with both studies having methodological limitations. Mak & Mueller (2001) found that role stressors due to organizational change had a negative relationship with depression. However, initial levels of depression was not controlled for, therefore one can not be certain that organizational change was an antecedent for employee depression. A study by Axtell et. al (2002) did control for initial levels of depression, and found that employees that were more exposed to the new change (new technology procedure), demonstrated less depressive symptoms over time. However, as this study only measured technology as an indicator of change, there is a need to investigate how several organizational changes relate to depression over time.

The mechanisms through which organizational change elicit depressive symptoms is not well known, as the development of depression is complex, involving genetic, biological and psychosocial factors (Harris, 2007). Cross-sectional studies points to high job strain and low decision latitude as related to depressive symptoms during organizational change (Niedhammer et. al, 2006). The importance of high job strain and low decision latitude coincides with literature reviews on work stressors and well-being, as high job strain and low decision latitude is considered main factors for developing depression among employees (Netterstrøm et. al, 2008; Bonde, 2008). In addition, high job strain and low decision latitude is shown to be particularly prevalent during organizational change (Greenglass and Burke, 2001). Thus, the organizational change setting may entail a specific risk for the development of depressive symptoms.

Furthermore, organizational change is typically characterized by involving several kinds of loss (Bridges, 2003), that might act as a risk factor for depression. Losses that are outside of the control of the person, and that causes significant negative disruption in the person`s life, have been shown to have a direct causal effect on psychological distress (Shrout et. al, 1989). The impact of each loss is likely to vary, as example being laid off will cause a more negative disruption in ones life compared to a less severe loss (Dohrenwend et. al, 1978). However, being exposed to several losses at the same time, such as the loss of power or status, and/or loss of a familiar working role, may generate feelings of despair and augment depressive symptoms (Stuart, 1995). As organizational change is associated with high strain, low decision latitude and personal loss, it is hypothesized that organizational change will lead to depressive symptoms.

H2 Organizational change T1 will have a positive relationship with depression

T2

The Buffering Effects of Participation and Leadership on Employee Well-being

Even though the importance of identifying moderators of the negative effects of organizational change has been highlighted, studies on moderator effects are scarce (Oreg et. al, 2011). How the change process is handled seems to be an important factor, as employee reactions to change are greatly affected by the change process (Dent & Goldberg, 1999; Oreg, 2006; Saksvik et. al, 2007). In particular, minimizing uncertainty appears important for reducing the negative consequences of organizational change (Jimmieson, Terry & Callan, 2004). Therefore, there has been a great interest in the benefits of employee involvement strategies that enhance worker control, such as participation in decision making (PDM), in the context of organizational change (Black & Gregersen, 1997; Daniels & Bailey, 1999; Witt, Andrews & Kacmar, 2000). Only a few studies have investigated how participation in decision making can moderate employee well being during organizational change (Sagie & Koslowsky, 1994). Sagie & Koslowsky (1994) found moderating effects of participation in decision making on the relationship between organizational change and work satisfaction. However, there is no study investigating the longtime buffering effects of participation in decision-making on employee well-being.

Participation in decision making is defined as a process where decision making or influence is shared between superiors and their followers (Sagie, Elizur & Koslowsky, 1995). Employees who are able to influence salient decisions are more likely to evaluate the outcomes of organizational change positively (Black & Gregersen, 1997; Daniels & Bailey, 1999; Witt et al, 2000). In particular, employees who are able to be heard and influence matters that are important to them are more likely to believe they are fairly treated (Hunton, Hall, & Price, 1998; Roberson, Moye & Locke, 1999).

PDM is also associated with a reduction in role ambiguity, an enhancement of perceived influence and a general reduction of physical and psychological stress (Daniels & Bailey, 1999; Jackson, 1983). Some authors argue that PDM might enhance job satisfaction during organizational change by its effect on role ambiguity (Jackson, 1983; Yousef, 2000). Several studies show that participation in decision-making predicts role clarity, which in turn is related to a greater sense of job satisfaction (Daniels & Bailey, 1999; Jackson, 1983; Yousef, 2000). Role ambiguity is likely to be present during organizational change as the rules and norms of the organization may no longer apply, with new rules and norms not being yet in place (Shaw, Field, Thacker & Fisher, 1993). This form of transition stage may leave the employees unsure about what is expected of them and thereby experience greater tension and reduced job satisfaction (Shaw et. al, 1993). Being able to participate in decision-making during organizational change may clarify the employees future roles in the organization.

Moreover, PDM has shown to enhance control over ones own actions, influence over the environment and autonomy, and thereby satisfy basic human needs (Ganster & Fusilier, 1989). Therefore, PDM might increase intrinsic motivation, as satisfying the human need for autonomy is at the core of self determination theory (Ryan & Deci, 2000). PDM appears to reduce the impact of stress by enhancing a sense of control, which might be particularly important for its mitigating effect on depression (Daniels & Guppy, 1994; Ganster & Fuslier, 1989; Sagie & Koslowsky, 1996; Sparks, Faragher, & Cooper, 2001; Spector, 1986). At a psychological level, belief in personal control corresponds to reduced feelings of threat (Anderson, Hellreigel & Slocum, 1977; Burrows, Cox, & Simpson, 1977) and participation in decision making may enable workers to remove or

mitigate stressors, thereby reducing frustration and strain (Karasek, 1979). Conversely, low levels of control are associated with learned helplessness (Martinko & Gardner, 1982), stress (Miller, Ellis, Zook, & Lyles, 1990) and depression (Seligman, 1975). Because of PDM's ability to reduce role ambiguity and enhance autonomy and control, it is expected that the negative relationship between organizational change and outcomes can be circumvented.

H3 Participation in decision-making T1 will buffer the negative impact of organization change T1 on job satisfaction T2.

H4 Participation in decision-making T1 will buffer the negative impact of organizational change T1 on depression T2.

Leadership style is also considered to be an important factor in the change process, as how people respond to change is often influenced by the behaviors of leaders (Bommer, Rich, & Rubin, 2005; Fishman and Kavanaugh, 1989). Trust in management is associated with greater job satisfaction during organizational change (Oreg, 2006). Contrarily, leaders who are perceived negatively (unsupportive) are related to employee cynical reactions, negative emotions and resistance of change (Kiefer, 2005; Martin et. al, 2005; Stanley, Meyer, & Topolnytsky, 2005).

The employees awareness of present changes in the organization, and the consecutive demands during organizational change, may create a situation where a leadership style that is change centered is valued (Ekvall, 1991). A change- centered leadership style is characterized by adapting the organization to changing external conditions and demands and promote the necessity of change (Ekvall & Arvonen, 1991; 1994). Therefore, the followers may develop an understanding of the necessity of change, and feel committed and satisfied with the organization (Ekvall, 1991). Strong

positive relations with employee job satisfaction and change-centered leadership have been found in studies by Ekvall (1991) and Ekvall and Arvonen (1994). The effect of this leadership style on job satisfaction is considered to be related to an external pressure for renewal in the organization (Ekvall (1991) Therefore, it appears reasonable that a change-centered leadership style may particularly exert its positive effects in a context of a high degree of organizational changes, and thereby have a moderating effect.

As for depression, this type of leadership may enhance employee decision latitude by encouraging thinking along new lines. The leadership style is particularly characterized by promoting new ideas for change and growth, stimulating new projects and encouraging discussions about future possibilities (Ekvall, 1991). In addition, being oriented towards change is correlated with supporting, recognizing and consulting employees, and clarifying performance expectations (Yukl, Gordon & Taber, 2002; Yukl, O'Donnell & Taber, 2008). Clarifying what is expected of the employees and making sure that people know what to do, might provide the employees with a sense of control over the organizational change situation. Consulting employees is associated with a greater acceptance of decisions by people who will be affected by them. Thus, employees may experience a higher degree of decision latitude under such leadership. A change centered leadership style is also associated with supporting employees. Supportive leadership helps to build effective interpersonal relationships, and is strongly related to follower satisfaction with the leader (Yukl, 1998). As change-centered leadership is associated with promoting the necessity of change, consulting employees, supporting employees and clarifying expectations, it is expected that this leadership style will act as a buffer in the relationship between organizational change and job satisfaction and depression.

H5 Change oriented leadership T1 will buffer the negative impact of organizational change T1 on job satisfaction T2

H6 Change oriented leadership T1 will buffer the negative impact of organizational change T1 on depression T2.

Method

Procedure

The present study is based on longitudinal survey data from a representative sample of the Norwegian workforce, drawn from the Norwegian Central Employee Register (NCER) by Statistics Norway (SSB). The sampling criteria were adults between 18 and 67 years of age who were registered in the NCER as being employed during the preceding six months, with a staff of five or more, working a mean of at least 15 hours per week. Data was collected through anonymous self-reporting questionnaires that were distributed to 4500 employees during the spring of 2005. A total of 2539 questionnaires were returned, which constitutes a response rate of 56,4%.

Data were collected at three time points, with a time lag of two years between T1 and T2, and three years between T2 and T3. Time 1 and time 2 were included in the present study.

Sample and drop-out

More female (T1=52% : T2= 55%) than male (T1=48%; T2=45%) employees participated in the study. Mean age was 43, 8 years (T1) and 46, 5 (T2), with ages ranging from 19 to 66 years. The mean working hours per week was 37,5, pertaining to the normal weekly working hours in Norway. The majority of the respondents were in full-time (77%) or part-time (13%) employment. Among the respondents, 15% were managers with personnel responsibilities, and 13% were elected union representatives

A logistic regression analysis tested if participation in the two waves (0 = drop-out; 1 = retention) was predicted by age, gender (0 = male; 1 = female) and all study variables at Time 1. Age and gender were entered in Step 1. Organizational change, participation in decision making, change-centered leadership, job satisfaction and depression were entered in Step 2. Participation in wave two was predicted by gender and age. Men were less likely to respond at Time 2 (EXP B = 0.64, $p=0.00$) and older participants were 1, 5 times more likely to participate in wave two (EXP B = 1.04, $p=0.00$). Step 2 did not add to the prediction. In sum, participants of both waves did not differ in any of the study variables, suggesting limited selection effects.

The missing item analysis revealed missing at random for all items except for item 16 that was not missing at random. Individuals who did not respond to item 16 had a lower score on change-centered leadership.

Measures

We adopted a full two-wave panel design in which all variables were measured at both Time 1 and 2 (Zapf et. al, 1996). Organizational changes were measured with Skogstad, Mathiesen & Einarsen `s (2007) modified and culturally anchored version of a scale by Baron and Neuman (1996; 1998). Respondents were asked to assess the degree to which 13 forms of organizational changes had occurred in their organization the last 12 months. Response categories were "never", "to a small degree" and "to a high degree". Eight of the items were included in our measure of organizational change: "downsizing of the workforce", "layoffs", "budget cuts, " changes concerning who is executing which work tasks", "changes in management", "restructuring", "fissions or fusions" and "changes in overarching goals and strategies" (Cronbachs alpha for

T1=.82, variance 45%, Cronbachs alpha for T2= .79, variance 41%). The items were selected on the basis of an Principal Component Analysis. Different solutions based on theories of different forms of organizational change (level of change and downsizing) were explored (Freeman, & Cameron, 1993; Jackson, Schuller and Vredenbourgh, 1987). However, the reliability of the different categories were low. Finally, the items were selected by removing the lowest loading items, under the threshold of .4 (Tabachnick & Fidell, 2007).

Participation in decision making was measured with the Short Inventory to Monitor Psychosocial Hazards by Notelaers, De Witte, Veldhoven and Vermunt, (2007). The participation in decision making construct consist of the following items: “Can you participate in decisions affecting areas related to your work?”, “Can you consult satisfactorily with your directs boss about your work?” and “Can you participate in deciding what does and what does not pertain to your tasks?”, “Can you participate in deciding the priority of your work tasks?”, “Can you influence what happens at your work area? (Cronbachs alpha for T1= .81, Cronbachs alpha for T2=.79)

Change-centered leadership was measured by Ekvall and Arvonens measure of leadership styles (1991). The measure of change-centered leadership consist of ten items, however, only two were included in the SBB study: “Encourages thinking along new lines”, “Offers ideas about new and different ways of doing things”. Response categories were "never", "sometimes", “quite often” and "often" (Cronbachs alpha for T1=.71, Cronbachs alpha for T2=.70).

Job satisfaction was measured by using Brayfield and Arthurs (1951) index of job satisfaction. The index consist of 18 items describing overall job satisfaction. Five items out of 18 were used in the SBB study: “I feel fairly satisfied with my present job”,

“I am satisfied with my job for the time being”, “Each day of work seems like it will never end”, “I find real enjoyment in my work”, “I consider my job rather unpleasant” (Cronbach`s alpha for T1=.80, Cronbachs alpha for T2=.81).

Depression was measured by the The Hopkins Symptom Checklist (HSCL) by Derogatis, Lipman, Rickles, Uhlenhuth & Covi, (1974). The HSCL is a self-report symptom inventory compromised of 58 items which are representative of the symptom configurations commonly observed among outpatients. The depression measure in the SBB study consist of 10 items, with the following introduction: Below is a list of common symptoms or health problems. Estimate how much the following symptoms have bothered you the last seven days: “Loss of sexual interest or pleasure”, “Poor appetite”, “A feeling of being trapped or caught”, “Blaming yourself for things”, “Feeling lonely”, “Feeling blue”, “Feeling hopeless about the future”, “Crying easily”, “Worrying or stewing about things”, “Feeling no interest in things” (Cronbachs alpha for T1=.87, Cronbachs alpha for T2=.88).

Control variables

The socio-demographic variables Age (years) at Time 1 and Gender (0= male; 1= female) were controlled for, as studies have reported age and gender differences in both job satisfaction and depression (Glenn, Taylor & Weaver, 1977; Mirowsky & Ross, 1992; Picinelli & Wilkinson, 2000; Sloane & Williams, 2000; Sousa-Poza & Sousa-Poza, 2000).

Analysis

(Table 1 about here)

Statistical analyses were conducted using the Statistical Package for Social Sciences (SPSS), version 22.0. Prior to running the moderated hierarchical regression

analysis, data screening so as to meet the assumptions for the conducted analyses was performed. A lagged moderated regression analysis was used since this design has been considered advantageous when changes in the independent variable are related to changes in the dependent variable (Zapf et. al, 1996). The level of significance chosen for all statistical analyses was 95%. List wise exclusion was used for dealing with missing data. Job satisfaction at Time 2 was predicted by the control variables age and gender (Step 1), Time 1 job satisfaction (Step 2), Time 1 organizational change and Time 1 participation in decision making (Step 3) and Time 1 interaction of organizational change and participation in decision making, and Time 1 interaction of organizational change and change centered leadership (Step 4). The same steps were performed for depression T2 in a separate analysis, with depression T1 as control. The interaction terms was calculated by multiplying the centered organizational change and participation in decision making scale, and the centered organizational change and change centered leadership scale. Finally, slope analyses for all measurement units of organizational change and change-centered leadership were analyzed to test the statistical significance of the interaction slopes. The slope analysis was performed with PROCESS (Hayes, 2012).

Additional tests for the reversed hypotheses (Zapf et. al, 1996) were performed. Organizational change, participation in decision-making and change-centered leadership at Time 2 were predicted by a) control variables, b) organizational change, participation in decision-making and change-centered leadership Time 1, and c) job satisfaction and depression at Time 1.

Results

(Table 2 about here)

The results revealed a significant main effect of organizational change at Time 1 on job satisfaction at Time 2. Controlling for job satisfaction T1, results show that T1 organizational change was negatively related to job satisfaction T2 ($\beta = -.05$; $p = .035$). Hence, hypothesis 1 concerning main effects of organizational change on job satisfaction was supported. For depression, the results revealed a significant main effect of organizational change at Time 1 on depression Time 2. T1 organizational change was positively related to job satisfaction T2 ($\beta = .06$; $p = .00$). Therefore, hypothesis 2 concerning the main effect of organizational change on depression was supported.

There was also a significant main effect of Time 1 participation in decision making on Time 2 job satisfaction, in a positive direction ($\beta = .13$, $p = .00$). Higher scores on participation in decision making at Time 1 is thus associated with higher job satisfaction at Time 2. However, there was no significant main effect of participation in decision making at Time 1 on depression T2. As for the effect of change centered leadership on job satisfaction and depression, we did not find significant main effects.

There were no buffer effects of participation in decision making and change-centered leadership. Hypothesis 3 and 4 concerning an interaction between organizational change and participation in decision making on job satisfaction and depression was not supported. Hypothesis 6 concerning a buffer effect of change-centered leadership on depression T2 was not supported. There was a significant Time 1 organizational change x change-centered leadership interaction on job satisfaction at Time 2 (see Table 2, Step 4). The slope analysis revealed that 50th ($B = -.08$ $p = .00$), 75th ($B = -.11$ $p = .00$) and 90th ($B = -.15$ $p = .00$) percentile of organizational changes were significant for the interactive effect of change-centered leadership style. However, the interaction had a negative effect on job satisfaction ($\beta = -.073$, $p = .004$). Thus,

hypothesis 5 concerning a buffer effect of change centered leadership on organizational change in regards to job satisfaction was not supported.

There were lagged effects of job satisfaction and depression on organizational change, participation in decision making and change-centered leadership style.

Depression at Time 1 predicted organizational change at Time 2 ($\beta = .063$ $p = .010$). Job satisfaction at Time 1 predicted participation in decision-making at Time 2 ($\beta = .054$ $p = .025$), and age predicted change-centered leadership at Time 2 ($\beta = -.081$ $p = .001$).

Discussion

This study aimed at longitudinal testing of the relationship between organizational change and employee well-being, on the one hand, and identifying potential moderating effects of participation in decision-making and change-centered leadership, on the other.

Main effects of organizational change and moderators

There was a significant main effect of organizational change on employee job satisfaction and depression, whereby employees exposed to a high degree of organizational changes scored lower on job satisfaction and higher on depressive symptoms over time (Hypotheses 1 and 2). The negative effects of organizational change on employee well-being is in line with previous studies (Nelson et. al, 1995; Niedhammer et. al, 2006), however, the use of a longitudinal design gives further support to that these negative effects also last over time. This enhances insight in the negative effects of organizational change, as the effects of organizational change on employee well-being has been tested almost exclusively cross-sectionally (Oreg et. al, 2011). In addition, our sample size of 2539 respondents gives great power and suggest that the null hypothesis were correctly rejected (Ellis, 2010).

The results yielded a direct effect of participation in decision-making upon job satisfaction, which suggest that PDM has a positive effect on job satisfaction irrespective of the level of organizational change. This is line with the theoretical assumptions of Ganster & Fusilier (1989) who argues that PDM has a direct effect upon job satisfaction, that reflects an intrinsic need to influence the environment. As for change-centered leadership, the results revealed no main effect of this leadership style upon employee job satisfaction and depression. This finding goes against previous findings that change-centered leadership is associated with employee job satisfaction (Arvonen, 1994; Ekvall, 1991). The fact that only two items of the ten item change-centered leadership measure was selected in the SBB study may have affected the vailidity of the measure, and thereby the results in the present study. One can not know if the two items selected are representative of the whole measure. Other items in the overall measure, such as “my leader likes to discuss new ideas” and “my leader sees possibilities rather than problems”, may be more related to employee job satisfaction. Thus, our measure may not be representative of the overall change-centered leadership concept, as these two items may only have measured one facet of this leadership style.

In general, as only two previous studies (Arvonen, 1994; Ekvall, 1991) have found positive relations between a change-centered leadership and employee job satisfaction, further research is needed to establish if this leadership style has a positive main effect on employee job satisfaction or not.

Moderating effects of participation in decision-making and change-centered leadership style

In regards to the buffer hypotheses, the results revealed no buffering effect of participation in decision making and change centered leadership on employee job

satisfaction nor depression (Hypothesis 3, 4, 5 & 6). However, there was an interesting interaction effect of organizational change and change-centered leadership on job satisfaction, in the opposite direction of what was hypothesized. Individuals that were exposed to a high degree of organizational change, and to a leader with a high degree of change-centered leadership style, had a decrease in job satisfaction at Time 2. This finding is particularly interesting since change-centered leadership has previously been related to employee job satisfaction (Arvonen, 1994; Ekvall, 1991). It appears that, under conditions of high organizational change, the change-centered leadership style had a negative effect on employee job satisfaction. The results revealed a similar negative effect of the interaction between organizational changes and change-centered leadership on depression, although this interaction effect was not significant (see table 2, step 4). One possible explanation for this result might be the change promoting aspects of this leadership style. A change-centered leader in a context of a high degree of organizational change may pose additional demands on the employees, by making the work environment even more altered and inconsistent. The slope analysis revealed that the negative interaction effect of change-centered leadership on job satisfaction was not significant under conditions of low organizational change. In other words, a change-centered leadership was only negative under conditions of high organizational change. Adding or omitting a broad range of control variables did not alter the results, suggesting the above-mentioned effects to be relatively robust and consistent.

As previously mentioned, there were no buffering effect of PDM and change-centered leadership style on employee depression. This lack of buffering might be due to individual differences in the duration of depressive episodes. There are substantial individual differences in the duration of depression, some people remain depressed for

only a few days whereas others remain depressed for months or years (Aneshensel, 1985; Keller, Shapiro, Lavori, & Wolfe, 1982). People who have a longer duration of depression are characterized by rumination tendencies, that is focusing on their negative emotional state (Nolen-Hoeksema, 1991). Thus, the individuals showing an increase of depression at Time 2 due to organizational change at Time 1 may differ from individuals who only show an immediate depressive reaction or a reaction of shorter duration. The individuals that report an increase in depression over time may constitute a subgroup of the overall group that had a depressive reaction to the organizational changes. It might be that this subgroup is more resistant to possible influences of their depressive mood, such as being able to participate in decision making and having a change-centered leader.

Another possible explanation of the lacking moderation effects on depression may be that effect of organizational change on depression could be non linear. According to the dynamic accumulation model (Zapf et. al, 1996), an inner dynamic in the individual may lead to a further increase in strain even after the stressor has been removed. It is assumed that the original stressor has a general weakening effect on the psychophysical system so that new stressors have a higher impact than normal. Thus, being able to participate in decision making at Time 1 or having a change-centered leader at Time 1 may not be sufficient resources for buffering the additional effects of the stressor at Time 2.

The lack of buffering effect of PDM on job satisfaction, may be due to the measure of PDM used in the present study. A possible interaction effect may not have been revealed because of the adoption of a global measure of participation in decision making. A more specific measure measuring change related PDM, e.g the employees

ability to actually influence the change process, may have been able to act as a buffer by being more proximal to job satisfaction during organizational change. Previous studies have revealed that the effect of PDM is depend on which type of decisions the employees are able to participate in (Sagie & Koslowsky, 1994).

In summary, there were main effects of organizational change on employee job satisfaction and depression, which indicates that organizational change is negative for employee well-being. No buffering effect of the moderators were found. However, a change-centered leadership style appears to be negative for employee job satisfaction during higher levels of organizational change.

Limitations

There are some limitations to the present study, pertaining to details about the design and the results, and unmeasured third variables.

Design. A first concern could be that the study relied on self-reports. Using self-reports as a measure might lead to common method variance, however, a two-wave full panel design diminishes this risk (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

As for the analysis chosen, a two-wave design offers considerable advantages to cross-sectional design (Zapf et. al, 1996). However, a stronger test of the hypotheses would involve structuring equation modeling which allow for testing two outcomes in the same analysis (Gilliespie & Perron, 2007). A meta analysis by Faragher et. al (2005) revealed that low levels of job satisfaction is associated with anxiety and depression. Thus, there may have been a correlation between the outcome variables that is not controlled for, since the outcomes had to be tested in two separate analysis.

There is also a concern referring to the time lag between Time 1 and Time 2 of two years. A two year time lag was tailored in relation to the measurement of workplace

bullying in the SBB survey, and may not be specifically relevant for job satisfaction and depression. If the selected time lag does not correspond with the underlying “true” time lag, the effects of the causal variables on the outcomes might be biased (Taris, 2000). The effects of the causal variables may be underestimated if the chosen time lag is shorter than the underlying process, that is the causal variable might not have fully impacted the outcome variables. On the other hand, other processes may have influenced the outcome variable if the time lag is too long (Taris, 2000). There is little information on the right length of time lags in occupational health research, and it is debated whether one should use the same time lag for all outcome variables in a study or employ different time lags (Dormann & Zapf, 2002; Taris & Kompier, 2003; Zapf et. al, 1996; Frese, 1984). In regards to depression as an outcome, Dormann and Zapf (2002) found a time lag of two years to be most adequate for depressive symptoms. Thus, our time lag of two years may be appropriate for the depression measure even though it was not selected for this specific measure. In relation to job satisfaction, there is a discrepancy in time lags used, ranging from one month (Côté & Morgan, 2002), two months (Wanous, 1974) and even five years (Judge & Watanabe, 1993). Therefore, we can not be sure that a time lag of two years is appropriate for measuring job satisfaction.

Results. There might be a bias in the results since those who had missing scores on item 16 measuring change-centered leadership had lower scores on the scale change-centered leadership. In addition, older participants were 1, 5 times more likely to participate in wave two. However, age was not related to the study variables, suggesting limited selection effects. Even though, the missing scores and the differences in participation suggest that the results should be interpreted with caution.

Another concern is that the lagged effects between Time 1 organizational change

and Time 2 job satisfaction and depression were rather small. However, the size of the effect is in line with other longitudinal studies on work-related strain (Zapf et. al, 1996). The test for reversed causality (Zapf et. al, 1996) restricts the interpretation that organizational change predicts employee well-being, as a lagged effect of depression on organizational change was revealed. The lagged effect was smaller than the lagged effect of organizational change on depression, suggesting that organizational change was an antecedents rather than a consequence of employee depression, to some degree. The present results needs to be replicated, however, it can be tentatively suggested that the lagged effects of depression on organizational change may be a reflection of a reciprocal relation between these variables. A negative bias is often evident among depressed subjects, that is evaluating situations as more negative than non depressed (Gotlib, 1983), which may in part explain the lagged effects of employee depression on scores of organizational change.

Third variables. An additional limitation to this present study is the possible effect of unmeasured third variables. Individual factors may play a role in the effect of organizational change and change-centered leadership upon job satisfaction, as individuals with a high resistance to change are more likely to experience negative emotional reactions to change when it is imposed upon them (Oreg, 2006). A high resistance to change is perceived as a trait like concept (Oreg, 2006), and may particularly have affected the relationship between organizational change and job satisfaction, as employee resistance to change is associated with lower levels of job satisfaction (Wanberg & Banas, 2000)

Moreover, there might have been several contextual factors influencing the observed relations. Pettigrew, Woodman & Cameron (2001) emphasize the role of

contexts as a necessary part of the investigation of organizational change. As the study was based on respondents from a wide range of different organizations, there is no information on the contexts in which the changes were implemented. Therefore, it is not known if the measures were taken before the changes were fully implemented, and whether they were terminated two years later. Some of the employees might have been exposed to additional organizational changes close to the follow up survey two years later, which might have influenced their scores on well-being.

Future research

Two main recommendations for future research may be derived from this study:

Test the effect of different leadership styles. Our results stress the importance of investigating how different leadership styles can affect employee well-being under varying working conditions. Particularly, it would be interesting to investigate how different forms of leadership, such as transformational leadership, relates to working conditions of high or low organizational changes.

Employ different time lags for the same measure. Since there is little information on the right length of time lags in occupational health research (Dormann & Zapf, 2002; Taris & Kompier, 2003; Zapf et.al, 1996; Frese, 1984), including several time lags will broaden our understanding of when moderators exert their effects. As previously mentioned, there might be a difference between individuals having shorter and longer durations of depressive episodes, thereby affecting the moderators potency. There is also a need to investigate other possible moderators of organizational change on employee well-being, to broaden our understanding on how the adverse effects of organizational change can be mitigated.

Conclusion

This present paper shows, using longitudinal analysis, a long lasting negative effect of organizational change on employee job satisfaction and depression. As such it supports the notion that organizational change is associated with reduced employee well-being. In addition, this study contributes to organizational change literature by controlling for initial levels of well-being and including several types of organizational change. Also, the identification of a possible reciprocal relationship between organizational change and employee well-being further adds to our understanding of the the organizational change phenomena. The findings underlines a more complex view of how leadership may influence employee well being, by pointing to the possible alternating nature of leadership styles dependent upon context. The finding that a leadership style previously identified as positively related to job satisfaction, can reduce job satisfaction under certain working conditions, adds to a more complex picture of the interactions between work stressors and leadership styles. These results gives cause for further investigations on how the effect of different forms of leadership styles may appear in an organizational change context. Such efforts might contribute to a better understanding of the role of leadership during organizational change, and as result reveal useful guidelines for practitioners who wish to mitigate the adverse effects of organizational change.

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Table 1.

Means, standard deviations, reliabilities, and correlations for Times 1 (T1) and 2 (T2) study variables. (N=2539)

Measure	1	2	3	4	5	6	7	8	9	10	M	SD
1. Org. Changes T1	(.82)										1.8	.57
2. Org. Changes T2	.504**	(.79)									1.7	.51
3. PDM T1	-.161**	-.121**	(.81)								2.7	.65
4. PDM T2	-.125**	-.167**	.590**	(.79)							2.7	.63
5. Leadership T1	-.005	.046	.420**	.295**	(.70)						1.3	.74
6. Leadership T2	.062*	.020	.216**	.360**	.432**	(.69)					1.3	.74
7. Job satisfaction T1	-.162**	-.100**	.442**	.295**	.328**	.133**	(.80)				4	.71
8. Job satisfaction T2	-.119**	-.192**	.283**	.451**	.191**	.295**	.418**	(.81)			4	.69
9. Depression T1	.179**	.154**	-.232**	-.143**	-.115**	-.044	-.355**	-.217**	(.87)		1.4	.45
10. Depression T2	.175**	.212**	-.172**	-.221**	-.069**	-.104**	-.261**	-.261**	.625**	(.87)	1.4	.46

Note. Cronbach's alphas are shown in parentheses on the diagonal. Correlations shown are zero-order correlations. Correlations marked with * are significant on a $p < .05$ level. Correlations marked with ** are significant on a $p < .01$ level.

Table 2

Hierarchical Multiple Regression Analyses Predicting Employee Job satisfaction and Depression From Organizational change, Participation in Decision Making and Change-centered Leadership.

Predictor	Job satisfaction T2		Depression T2	
	ΔR^2	β	ΔR^2	β
Step 1	.010**		.009**	
Control variables				
Step 2	.168**		.379**	
Job satisfaction T1		.41**		
Depression T1				.621**
Step 3	.017**		.004*	
Org. Changes T1		-.047*		.058*
PDM T1		.128**		-.021
Leadership T1		.014		.007
Step 4	.005*		.001	
Org. Changes T1 x PDM T1		.048		.021
Org. Changes T1 x Leadership T1		-.073**		-.027

Note: Control variables included age and gender. $p < .05$ * $p < .001$ **

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