SCANDINAVIAN JOURNAL OF WORK AND ORGANIZATIONAL PSYCHOLOGY

Congruence Rules! Increased Self-efficacy after Occupational Health Interventions—if Leaders and Teams Agree on the Participative Safety Climate

ORIGINAL ARTICLE

CARINA LOEB
ULRICA VON THIELE SCHWARZ
HENNA HASSON
SUSANNE TAFVELIN

*Author affiliations can be found in the back matter of this article

STOCKHOLM UNIVERSITY PRESS

ABSTRACT

To succeed with participatory occupational health and safety (OHS) interventions it is not sufficient to consider only the employees' perspective, as perceptual distance between leaders and teams is known to have an effect on outcomes. The aim of this paper is to investigate the impact of leaders' and teams' perceptions of a non-threatening interpersonal atmosphere of trust and support (i.e., a participative safety climate) on employees' changes in confidence in their ability at work to 1) interact socially (social self-efficacy), 2) manage emotions (emotional self-efficacy), and 3) solve tasks (cognitive self-efficacy) following a participatory OHS intervention. Thirty leaders and 348 employees in 28 teams from 5 organizations completed surveys before and after the intervention. Polynomial regression with response surface analyses revealed that agreement between leaders and teams regarding participative safety before the intervention related positively to all three self-efficacy dimensions after the intervention. These results exemplify how leaders' and their teams' different perceptions of the climate before implementing an intervention may affect changes in intervention-relevant outcomes. The findings contribute to the emergent understanding of how interventions are dependent on the organizational context where they are implemented. It also points to the need to consider non-linear relations in intervention research. The findings suggest that in practice, organizations conducting participatory OHS interventions should assess and address pre-intervention climate factors to succeed. Congruence matters.

CORRESPONDING AUTHOR:

Carina Loeb

School of Health, Care and Social Welfare, Mälardalen University, Box 883, SE 721 23 Västerås, SE

carina.loeb@mdu.se

KEYWORDS:

Participative safety climate; self-efficacy; participatory OHS intervention; contextual factors

TO CITE THIS ARTICLE:

Loeb, C., von Thiele Schwarz, U., Hasson, H., Tafvelin, S. (2022). Congruence Rules! Increased Self-efficacy after Occupational Health Interventions—if Leaders and Teams Agree on the Participative Safety Climate. *Scandinavian Journal of Work and Organizational Psychology*, 7(1): 8, 1–15. DOI: https://doi.org/10.16993/sjwop.153

INTRODUCTION

Occupational health and safety interventions typically involve organizational actions to support employees and leaders in improving employee health and wellbeing through a structured process involving screening, identification of goals, action planning, and follow-up (Nielsen et al., 2010). This type of organizational, participatory approach to improve occupational health and safety (OHS) is recommended by national and international policy bodies for managing psychosocial risk (EU-OSHA 2002; ILO 2001; Nielsen, 2017; Zoni & Lucchini, 2012). Yet these interventions often fail to live up to their potential, with meta-analyses and literature reviews showing mixed results on their effectiveness (Bambra et al., 2007; Egan et al., 2009; Egan, et al., 2007; Lamontagne et al., 2007; Nielsen & Miraglia, 2017; Richardson & Rothstein, 2008; Van der Klink, Blonk, Schene, & Van Dijk, 2001).

One reason OHS interventions often fail may be that they are highly dependent on context, that is factors related to individuals, group, organization and society that define the setting where an intervention is implemented but are not part of the intervention itself (Øvretveit, 2011; von Thiele Schwarz, Aarons, & Hasson, 2019). This means that the effect of interventions can be modified by factors related to the environment in which the intervention takes place (Montano, Hoven, & Siegrist, 2014; Nielsen & Simonsen Abildgaard, 2013; von Thiele Schwarz, Lundmark, & Hasson, 2016). Process evaluations thus far have often contained incomplete information about the context, making it difficult to identify which context factors matter for intervention outcomes (Murta, Sanderson, & Oldenburg, 2007). Thus, to gain a better understanding of the conditions under which organizational interventions are effective, it has been suggested that, in addition to process elements, context factors should be evaluated and related to intervention outcomes (Cox et al., 2007).

For OHS interventions that require teams, supported by their leaders, to engage in tasks, such as problem solving, goal setting, and development of action plans, the climate in the team may be a particularly important context-related factor that, in the end, influences to what degree the intervention is effective. Team climate is a construct intended to capture how the quality of the social interactions are perceived in the team and has been defined as the shared perception of the "proximal work group" (West, 1990). This is a more or less permanent team "to which individuals are assigned, whom they identify with, and whom they interact with regularly in order to perform work-related tasks" (Anderson & West, 1998, p. 236). Martin, Karanaki-Murray, Biron, and Sanderson (2016) posit that consideration of the roles of shared experiences and resources of individuals working in a given workplace, closely related to team climate, may strengthen intervention engagement and delivery and, thus, the ultimate effectiveness of the intervention. Team climate can be regarded as a context-related factor, as it refers to the immediate social environment in which individuals create reality to formulate and express joint perceptions, attitudes, and behaviors. Lehman, Brauchli, and Bauer (2019) examined the associations between the context and the impact of an OHS intervention by taking the perspective of goal pursuit theory into account. They found that team climate, as a context factor mediated by outcome expectancy as a goal-setting indicator, predicted the perceived impact of their OHS intervention.

Beyond the potential impact of the teams' ratings of their climate, the degree to which the leader perceives the climate in the same way as the team may also matter. This is in line with recent findings that the level of agreement between teams and leaders (i.e., perceptual distance) seems to have an effect on multiple outcomes, including employee wellbeing (Hasson et al., 2016) and team performance (Tafvelin & Hasson, 2019; Tafvelin, von Thiele Schwarz, & Hasson, 2017). Yet, the relationship between leader–team perceptual distance and changes in relevant outcomes after an intervention has only recently begun to be explored. We found two studies investigating leader–team perceptual distance in relation to intervention outcomes. First, Hasson and colleagues (2016) investigated the impact of perceptual distance on organizational learning following a leadership intervention. Organizational learning improved most when leaders and teams agreed that the organizational learning climate before the intervention was high, and the improvement was lowest when the leaders had overrated the learning climate as compared to the teams. The reasoning that similar perceptions of the climate can be reinforcing is consistent with research that falls within the similarity attraction paradigm (Byrne, 1971; Edwards & Cable, 2009). Second, Tafvelin and colleagues (2019) examined the effects of leaders' and teams' perceptual distance on safety leadership prior to leadership safety training. As in the first study, the study showed that agreement between leaders and their teams before training (concerning safety leadership) related positively to training outcomes, including safety leadership and the followers' safety self-efficacy. In addition, leaders who overrated themselves on safety leadership before training had less favorable training outcomes.

Thus, there is some support that leader–team perceptual distance before an intervention affects intervention outcomes, but these studies focused on leadership training. To the best of our knowledge, the impact of leader–team perceptual distance on outcomes of participatory OHS interventions remains to be investigated. Furthermore, the two prior studies (Hasson et al., 2016; Tafvelin et al., 2019) have focused on the leader–team perceptual distance on the intervention outcome measures (i.e., organizational learning, safety leadership),

rather than agreement levels on contextual factors such as team climate. Leader-team perceptual distance on contextual factors seem to predict organizational and employee outcomes, but how those play a role in organizational interventions is yet unclear (Bliese, 2000; Tinsley & Weiss, 1975; Toegel & Conger, 2003).

The aim of this study is to investigate how the impact of a participatory OHS intervention is influenced by the team climate before the intervention and whether the perceptual distance between leaders and their teams in a participative safety climate affects intervention outcomes in terms of self-efficacy related to work. Self-efficacy is a personal resource that may, in turn, mobilize other job resources, thereby having a positive impact on health as well as performance (Bakker & Demorouti, 2008; Gorgievski, Halbesleben, & Bakker, 2011; Hobfoll, 2002). Self-efficacy may be improved by a participatory OHS intervention by building up positive experiences (master experience), offering opportunities for role modeling (vicarious experience), and providing social support (social persuasion). More specifically, we aim to examine if leaders' and teams' perceptions of the participative safety climate predict improvements in employees' confidence in their ability to 1) interact socially at work (social self-efficacy), 2) manage emotions at work (emotional self-efficacy), and 3) solve tasks at work (cognitive self-efficacy) following an OHS intervention.

THE IMPORTANCE OF PARTICIPATIVE SAFETY FOR OHS INTERVENTIONS

There is substantial support for the importance of team climate on employees' work performance and organizational outcomes, such as innovation and team effectiveness (Andersson & West, 1998; Antino et al., 2014; Ouwens et al., 2008). Participatory OHS interventions include working together in teams to identify the most burning needs for improvement in the working environment, setting goals, and developing and implementing action plans. This makes participative safety a particularly important team climate construct that could moderate the relationship between intervention and outcome. A participative safety climate is a construct that focuses on employees' active involvement in group interactions characterized by a non-threatening interpersonal atmosphere of trust and support (Anderson & West, 1998; West, 1990). For example, this may promote the employee's confidence (i.e., self-efficacy) in proposing new ideas and solutions without risking judgment or asking for and sharing information and opinions that the group needs for their decision making.

A participatory OHS intervention should support the development of resources for the team to engage collaboratively in cognitive tasks, including making decisions on issues that may be emotionally charged. Bakker and Demorouti (2008) proposed that self-efficacy is one of the most important personal resources in mobilizing job resources, enhancing work engagement, and improving performance and other organizational outcomes. Those who have high levels of self-efficacy may be more capable of selecting, altering, and implementing their other resources to meet stressful demands (Georgievsky, Halbesleben, & Bakker, 2011; Hobfoll, 2002). This implies that, on the individual level, a successful participatory OHS intervention should lead to increased confidence in the employees' social, emotional, and cognitive abilities, leading to the first hypothesis:

> *Hypothesis 1:* The participative safety climate rated by leaders and by employees, respectively, will predict improvements in employees' a) social, b) emotional, and c) cognitive self-efficacy following a participatory OHS intervention.

THE IMPACT OF PERCEPTUAL DISTANCE ON OUTCOMES OF OHS INTERVENTIONS

One aspect overlooked in most previous studies on the way that climate influences how OHS interventions play out is the recognition that different stakeholders tend to perceive climate differently. Most prior studies evaluated climate only from the employees' perspective (Andersson & West, 1998; Antino et al., 2014; Ouwens et al., 2008), but there is evidence suggesting that teams and their leaders are particularly prone to forming different perceptions on organizational context (Bass & Yammarino, 1991; Beus et al., 2012).

Comparisons of the perceptions of leaders and their teams of organizational phenomena, such as communication, work performance, and goal accomplishment (Engle & Lord, 1997; Hatfield & Huseman, 1982; Heald et al., 1998; Hsiung & Tsai, 2009; Li & Thatcher, 2015; White, Crino, & Hatfield, 1985), have consistently found disagreement between leaders and teams. The reason leaders and teams rate climate differently may be that even when they objectively share the same environment—room, space, and time—what they experience may be quite different. Human understanding of the world is influenced by individual cognitive processes and social-cognitive processes whereby individuals shape their view of the world based on those around them (Benlian, 2014). Because teams and leaders may be oriented towards different social groups, their perceptions might diverge, making it harder for leaders to understand the teams' climate (Beus et al., 2012; Patterson, Warr, & West, 2004). Prior studies have confirmed this perceptual distance between leaders and employees is problematic. Disagreement between the two has been related to lower employee health, work performance, and work satisfaction (Fleenor et al., 2010; Hasson, Tafvelin, & von Thiele Schwarz, 2013; Ostroff, Shin, & Kinicki, 2005), illustrating the negative consequences such disagreement can have. Empirical findings suggest that the best outcomes are realized

when leaders and teams are in agreement on high ratings of contextual factors, such as organizational support (Bashshur Hernández, & González-Romá, 2011) and a climate of organizational diversity (McKay, Avery, & Morris, 2009). Thus, investigating climate from only one perspective represents a missed opportunity.

Gibson, Cooper, and Conger (2009) proposed the term "leader–team perceptual distance" to describe the phenomenon. They suggested that differences between leaders' and teams' perceptions cause misunderstandings that waste resources and distract from performing effectively. Perceptual distances impede the development of a shared understanding and deter the team from utilizing their resources optimally. They also prevent them from utilizing information in the environment in a beneficial way. According to this line of reasoning, perceptual distance between leader and team in a participative safety climate would impede the effectiveness of the intervention, here self-efficacy, by hindering the development of such things as a shared understanding of goals and responsibilities and diminishing the ability to use conflict to promote team performance (Gibson, 2001; Gibson & Earley, 2007).

Previous research has shown that pre-intervention context matters. Work units with a good starting point show the greatest improvement from interventions (Augustsson et al., 2014; Ulhassan et al., 2014), leading to a conclusion that organizations are more likely to successfully implement organizational interventions if the organization is reasonably well functioning to begin with (Nielsen et al., 2006). Following Gibson's and colleagues' (2009) reasoning, we argue that groups in which teams and leaders concur on their participative safety climate (i.e., congruence) will be able to make the best use of the intervention activities and trigger the best employee outcomes in terms of increased self-efficacy. More specifically, congruence between team and leader on participative safety climate may have a socially persuasive function, something that has been shown to have a positive effect on the individual's self-efficacy (Bandura, 1997). This leads to our second hypothesis:

> *Hypothesis 2:* Congruence between leaders' and teams' perceptions of the participative safety climate pre-intervention will positively predict outcomes of an OHS intervention in terms of employees' a) social, b) emotional, and c) cognitive self-efficacy.

METHODS

This study is based on the pre- and post-measurements of a longitudinal intervention study called REwarding and SUstainable health-promoting LEADership (RE-SU-LEAD). The participatory occupational health intervention took place between March 2011 and May 2012 and targeted both leaders and their teams. The intervention was initiated by researchers and was offered to participating organizations as part of a research project. The intervention was based on leadership as a relationship, where the outcomes largely depend on the social exchange between leaders and employees, aiming to develop leaders' behavior into a more rewarding and health supporting form and identify the mechanisms behind any improvement in employees' well-being and health. The aim included strengthening the employees' self-efficacy, which is relevant for mental health and may also facilitate the attainment of health-relevant goals. The intervention comprised an on-the-job training program consisting of 10 modules, which included both leadership training and activities for the teams. The effects of the intervention on leadership behaviors, employees' job characteristics, employees' personal resources, and wellbeing were previously reported (Rigotti et al., 2014).

PARTICIPANTS AND PROCEDURE

Five organizations characterized by high service demands and customer orientation participated in the intervention: finance (Germany), public administration, healthcare, service, and education (Germany and Sweden). The organizations were informed that a requirement for teams to participate in the intervention was that they work closely together and have frequent contact with their leaders. This can be considered a precondition of the effects of leadership on employee wellbeing. Overall, 30 leaders and their teams were invited to participate in the intervention.

All employees and their leaders completed questionnaires individually at their workplace before the intervention (T1, baseline), and the procedure was repeated after completion of the intervention (T2). Baseline data (T1) were provided by 348 of 499 (69.7%) participants and prospective data (both T1 and T2) by 205 (41.1%) employees. All 30 leaders filled in T1, and 27 filled in T2 questionnaires. At baseline, 93 (85.3%) employees and 9 leaders in Germany were female, and 14 (12.8%) employees and 3 leaders were male. In Sweden, 203 (84.9%) employees and 12 leaders were female, and 33 (13.8%) employees and 6 leaders were male. Five employees did not fill in information about gender. At T1, participants reported a mean age of 43.08 years (SD = 10.92) and a mean organizational tenure of 14.89 years (SD = 11.38). The average number of employees per team was 19.49 (SD = 9.06, range = 4–52).

MEASURES

For all scales, the distinctiveness of the subscales was previously assessed using confirmatory factor analysis in this sample, and appropriate psychometric properties were found (Blinded for review). All scales included for

this study were measured both before (T1) and after (T2) the intervention.

Team climate. For this study, the subscale participative safety climate consisting of five items from the short version of the Team Climate Inventory (TCI) (Anderson & West, 1998), developed and tested by Kivimäki and Elovainio (1999), was used to measure both leaders' and employees' perspectives. This subscale has demonstrated internal homogeneity, reliability, and normality across two large independent samples and acceptable predictive validity compared to the original TCI and, of the subscales, is considered the best predictor of perceived team effectiveness (Strating & Nieboer, 2009). Sample items are: "*People in the work unit feel understood and accepted by each other*," and "*People in the work unit cooperate to help develop and apply new ideas*." The items are rated on a 5-point response scale ranging from 1 (*to a very small extent*) to 5 (*to a very large extent*). Internal consistency (α) T1 = .91, T2 = .92.

Occupational Social Self-Efficacy Scale. Social self-efficacy was assessed with the Occupational Social Self-Efficacy Scale (Loeb et al., 2016) to measure an individual's confidence in her or his ability to engage in the social interactional tasks necessary to initiate, maintain, and develop interpersonal relationships at work. The scale has been shown to differentiate from cognitive, task-oriented occupational self-efficacy and is related to, yet distinct from, emotional self-efficacy (Loeb et al., 2016). The five items cover these areas of social interactions: conflict management, making friends, performance in groups, receiving help, and social assertiveness. Sample items include the following: "*How confident are you in your ability to ask someone at work for help when you need it*?" and "*How confident are you in your ability to cooperate with people at work who see things differently than you*?" Items were rated on a 5-point Likert-type scale ranging from 0 (*no confidence at all*) to 4 (*complete confidence*). Internal consistency (α) T1 = .86, T2 = .78.

Occupational emotional self-efficacy scale. Emotional self-efficacy was assessed with the occupational emotional self-efficacy scale (Loeb et al., 2016) to measure an individual´s confidence in their capability to perceive, understand, regulate, and use emotional information at work. This scale focuses on the work context as well as making a distinction in self-versus-other-oriented emotions (cf. Choi, Kluemper, & Sauley, 2013). The scale includes four other-oriented items, for example, "*How confident are you in your ability to correctly identify when other people are feeling negative emotions at work*?" and four self-oriented items, for example, "*How confident are you in your ability to correctly identify your own negative emotions at work*?" Items were rated on a 5-point Likert-type scale ranging from 0 (*no confidence at all*) to 4 (*complete confidence*). Internal consistency (α) T1 = .85, T2 = .81.

Occupational cognitive self-efficacy. The short version of the occupational self-efficacy scale (Rigotti, Schyns, & Mohr, 2008) with six items was used to measure cognitive self-efficacy. The occupational self-efficacy scale is a task-oriented cognitive scale. A sample item is "*When I am confronted with a problem in my job, I can usually find several solutions*." The items are rated on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Internal consistency (α) T1 = .79, T2 = .81.

ANALYSIS

To assess the impact of different perceptions of the participative safety climate between leaders and their teams, polynomial regression analyses with response surface analysis were used (Edwards, 1994; Shanock et al., 2010). This approach has two main advantages: it enables analyses of a combination of two predictor variables' relation to an outcome, and it considers the differences between predictor variables (Shanock et al., 2010). Following the recommendation of Fleenor and colleagues (2010), we examined the extent of agreement between leaders and teams on the participative safety climate measures at baseline. Disagreement is defined as more than half a standard deviation away from the mean on a standardized score on the two predictors in the polynomial regression (Fleenor et al., 1996). At least a 10% discrepancy is required to warrant further analysis. Before performing the polynomial regressions, we aggregated employee ratings of participative safety climate and the three dimensions of self-efficacy to the team level. To make sure that the aggregation of these variables was appropriate, we calculated their intraclass correlation and mean rWG (j) (see Table 1).

Then polynomial regression analysis was conducted (Edwards & Parry, 1993). Separate hierarchical ordinary least-squares regressions were computed for each dimension of self-efficacy, whereby Time 2 levels of either social, emotional, or cognitive self-efficacy (i.e., the outcomes) were regressed on teams' ratings, leaders' ratings, the cross product of teams' ratings and leaders' ratings, the square of teams' ratings, and the square of leaders' ratings of participative safety climate at Time 1. Also, we included the Time 1 measure of self-efficacy as a covariate. Measures were included in the regressions in scale-centered form in order to reduce multicollinearity, allow meaningful interpretation of coefficients on first-order terms, and facilitate interpretation of the coefficients on the x–y plane, where the origin of the x-axis and y-axis is located (Edwards, 1994). A significant R2 indicates that the predictors explain variance different from zero, and thus further analysis in terms response surface analysis is warranted. Next, surface test values were calculated to examine a response surface pattern and were later graphed to provide a three-dimensional visual presentation of the data that aids interpretation. Because agreement hypotheses involve the two quadratic

terms as well as the product term, the most direct way to test the hypothesis is to use these coefficients to test shapes along lines of interest using the response surface method. Four surface test values, a_1– a_4, were calculated using the unstandardized regression coefficients (see Table 4 on how to calculate these). The values present the slope and curvature of two lines. The line of congruence extends from the nearest to the farthest corners of the graph (Figures 1, 2, and 3) and is investigated by the surface test values a_1 and a_2, where a_1 is the slope and a_2 is the curvature along the line of congruence. The slope of the line represents how agreement between two predictor variables (in our study leader and team perception of a participative safety climate) relates to an outcome, and the curvature tells us whether the relationship between ratings that are in agreement and the outcome (in our study self-efficacy) is linear or nonlinear. The other line is the line of incongruence, which extends from the left corner to the right corner and is reflected by a_3 (slope) and a_4 (curvature). Significant curvature (a_4) captures how the degree of discrepancy between the two predictor variables may influence the outcome variable. The slope (a_3) tells us the extent to which the direction of the discrepancy matters, such

SUBSCALE	NUMBER OF ITEMS	ICC	MEAN RWG (J)
Social self-efficacy, time 1	5	.47**	.97
Social self-efficacy, time 2	5	.13**	.97
Emotional self-efficacy, time 1	8	.35**	.98
Emotional self-efficacy, time 2	8	.08*	.98
Cognitive self-efficacy, time 1	6	.13**	.92
Cognitive self-efficacy, time 2	6	.02	.89
Participatory safety, time 1	4	.28**	.85

Table 1 Subscale intraclass correlation coefficients (ICC) and within group agreement.

Note: K = 28 leaders.
*p < .05.

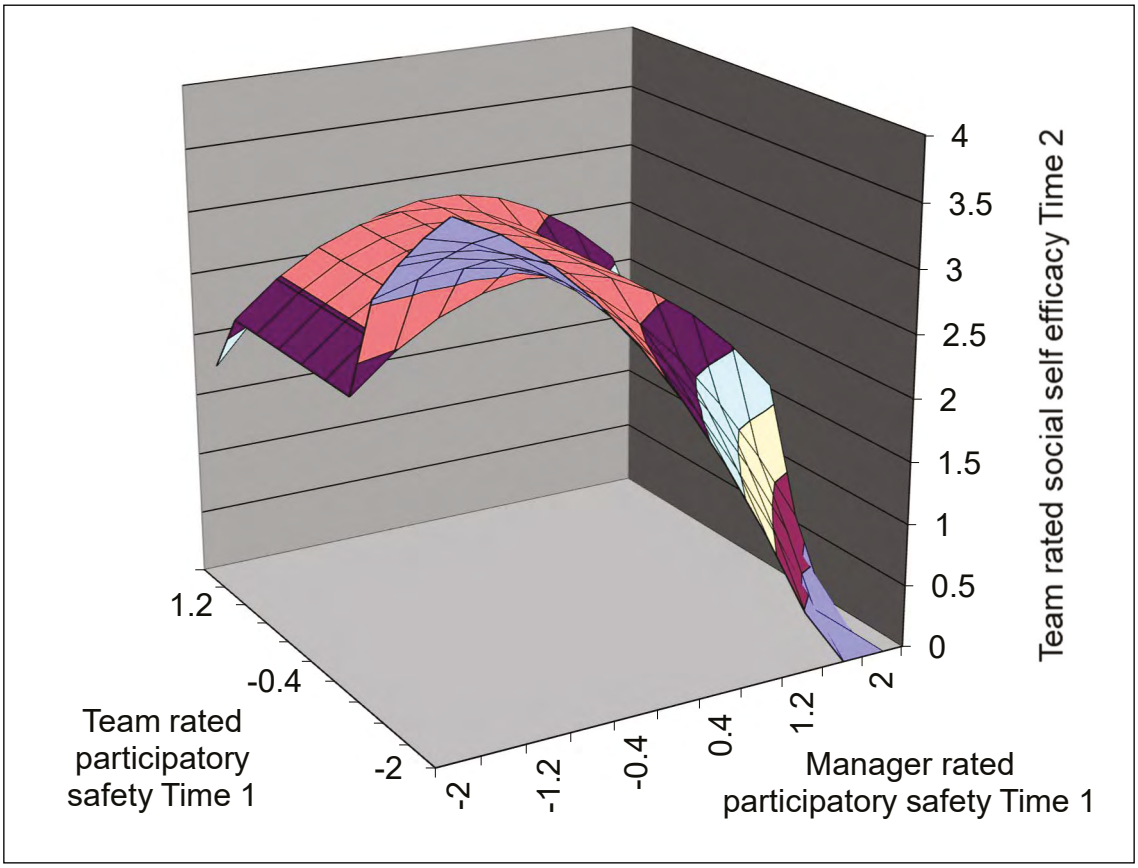

Figure 1 Leader–team perceptual distance pre-intervention (Time 1) on participatory safety climate and teams' ratings of social self-efficacy post-intervention (Time 2).

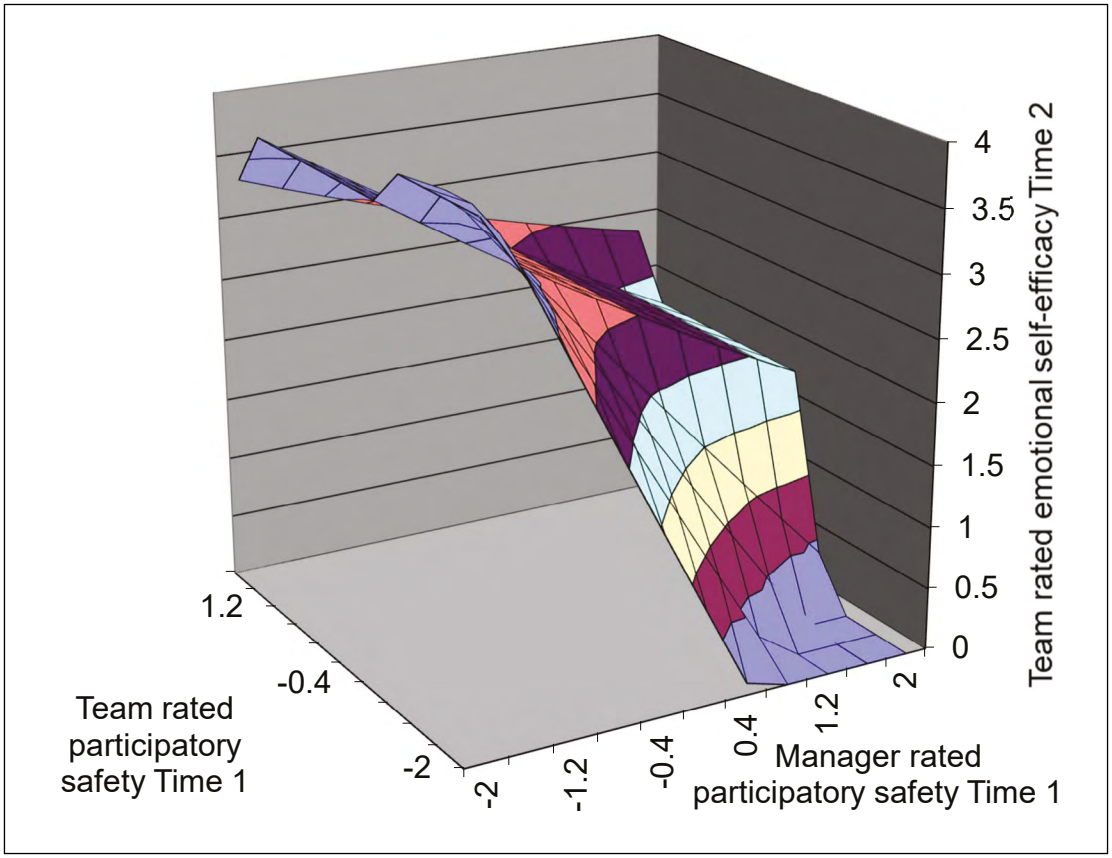

Figure 2 Leader–team perceptual distance pre-intervention (Time 1) on participatory safety climate and teams' ratings of emotional self-efficacy post-intervention (Time 2).

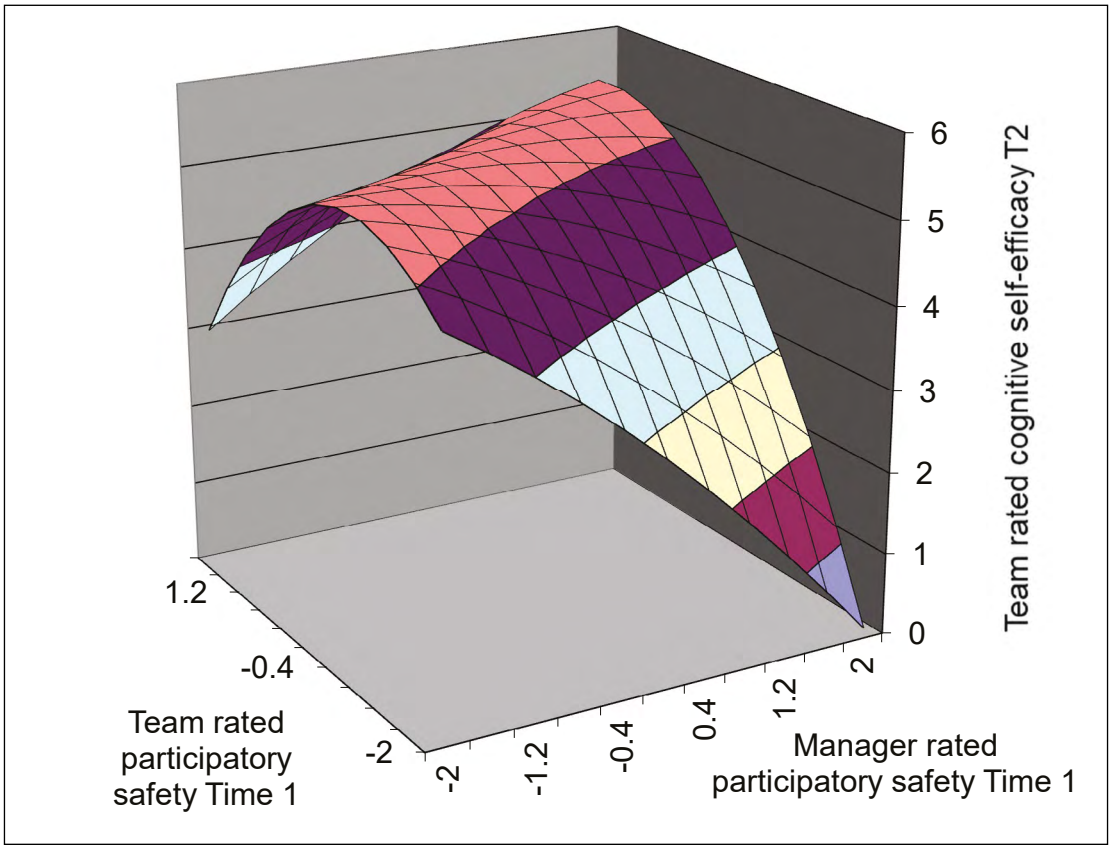

Figure 3 Leader–team perceptual distance pre-intervention (Time 1) on participatory safety climate and teams' ratings of cognitive self-efficacy post-intervention (Time 2).

that the outcome is potentially affected more when the discrepancy is in one direction or the other.

To support our congruence hypothesis, four criteria needed to be met (Humberg et al., 2019): The first principal axis (which corresponds to the ridge of the surface including the highest values and which forms a ridge line across the graph that extends from the nearest to the farthest corners of the graph) must not differ significantly from the line of congruence, meaning that the intercept of the first principal axis (p10) must not be significantly different from 0 (criterion 1), and the slope of the first principal axis (p11) must not be significantly different from 1 (criterion 2). Although the first principal axis and the line of incongruence often are parallel, this may not always be the case and needs to be tested. Moreover, the surface above the line of incongruence must be an inverted U-shape with a non-significant slope above the origin. Therefore, a_4 must be significantly negative (criterion 3) and a_3 must not be significantly different from 0 (criterion 4). This is to ensure that respondents with more and more incongruent predictor combinations have significantly lower outcomes values. In addition, when no main effect of the predictors is expected, the surface above the line of congruence must not differ significantly from a constant shape, meaning that there should be no slope along the line of congruence, thus a_1 and a_2 should be non-significant. For a more detailed description of response surface analysis, we recommend Humberg's and colleague's (2019) checklist for congruence hypotheses.

RESULTS

PRELIMINARY ANALYSES

Descriptive statistics and correlations among all study variables are presented in Table 2. The significant but rather low correlation between leader and team ratings of participative safety climate suggests that perceptual distance between leaders and teams may be present.

As polynomial regressions include aggregating employees' perceptions of their participative safety climate and self-efficacy to the team level, we first examined the ICC (1) and rWG (j). As presented in Table 1, our analysis supports the aggregation of our variables to the team level. Next, we examined the level of agreement between leaders and their teams on participative safety climate at baseline, and our analysis showed that 26.7% of the managers were in agreement with their team. Further, 43.3% of the leaders rated the climate higher than their team did, while 30.0% rated it lower. As more than 10% of leaders and teams disagreed, further analyses using polynomial regression and response surface analysis are warranted.

HYPOTHESIS TESTING

First, we examined the linear relationship between leaders' and teams' perceptions of participatory safety climate before training and its relationship to changes in self-efficacy post-training. We therefore performed three hierarchical regressions, presented in Table 3, in which self-efficacy at Time 2 was regressed on self-efficacy at Time 1, leaders' ratings of participative safety climate and teams' ratings of participatory safety climate. Our analysis revealed that neither leaders' nor teams' ratings of participative safety climate predicted changes in any of the self-efficacy outcomes. Thus, Hypothesis 1 was not supported.

Second, we performed three polynomial regressions, one for each of the self-efficacy outcomes (see Table 4). All three regressions explained significant variance in the dependent variable (self-efficacy at Time 2), and therefore we calculated the surface test values a_1–a_4 for all three regressions, also presented in Table 4. The surface test values were then used to calculate the response surface patterns, which are presented in Figures 1–3.

For social, emotional, and cognitive self-efficacy at Time 2, the pattern of the surface test values confirms our hypothesis. First, the *p10* value did not differ

	M	SD	1.	2.	3.	4.	5.	6.	7.	
1.	Participatory safety T1, team	3.65	0.48							
2.	Participatory safety T1, leader	3.69	0.62	.41*						
3.	SocialSE T1, team	2.65	0.66	.42*	.30					
4.	SocialSE T2, team	2.97	0.28	.30	.25	.55				
5.	EmotionalSE T1, team	2.47	0.51	.33	.19	.96**	.45			
6.	EmotionalSE T2 team	2.76	0.23	.26	.13	.14	.71**	.07		
7.	CognitiveSE T1, team	5.40	0.41	.52**	-.05	.29	.32	.29	.12	
8.	CognitiveSE T2, team	5.47	0.28	.40*	.05	.16	.58**	.14	.68**	.50**

Table 2 Descriptive statistics and correlations among all study variables.

Note: SE = self-efficacy.
* p < .05, ** p < .01.

	SOCIAL SE T2		EMOTIONAL SE T2		COGNITIVE SE T2	
	STEP 1	STEP 2	STEP 1	STEP 2	STEP 1	STEP 2
Self-efficacy T1	.55 **	.51 *	.07	–.03	.50 **	.39
Leader-rated participatory-safety T1		.05		.27		.21
Team rated participatory-safety T1		.08		.02		-.02
F-value	11.28 **	3.63*	.11	.59	8.73**	3.10*
R^2	.30	.31	.004	.07	.25	.28
DR^2		.01		.06		.03

Table 3 Hierarchical Regression Analyses for teams' ratings on subscales of self-efficacy (SE) at T2.

Note: T1 = Time 1, T2 = Time 2.
Number of Teams = 28.
Standardized Coefficients are presented.
* $p < .05$, ** $p < .01$.

	SUBSCALES SELF EFFICACY AT T2		
PARTICIPATORY SAFETY TIME 1	SSE	ESE	CSE
Constant	2.84 **	2.69 **	5.07 **
Self-efficacy T1	.32 *	.18	.26
Leader-rated (b_2)	–.14	–.48 *	–.27
Team-rated (b_1)	–.05	.27	.43
Leader-rated squared (b_5)	–.23 *	.02	–.09
Leader-rated * team-rated (b_4)	.57 *	–.60 *	.44 *
Team-rated squared (b_3)	–.15	–.35 *	–.36
R^2	.53 **	.32*	.26 *
Surface tests			
p10	.12	.52	.60
p11	1.15	.56	.55
$a_1 = (b_1 + b_2)$	–.19	–.21	.16
$a_2 = (b_3 + b_4 + b_5)$	.19	.27	–.02
$a_3 = (b_1 - b_2)$	–.09	–.74	–.70
$a_4 = (b_3 - b_4 + b_5)$	–.95 *	–.93 *	–.89 *

Table 4 Polynomial Regression Analyses and Surface Values for Teams ratings of Self-efficacy.

Note: sSE = social self-efficacy, eSE = emotional self-efficacy, cSe = cognitive self-efficacy.
Number of Teams = 28.
Unstandardized Coefficients are presented.
* $p < .05$, ** $p < .01$.

significantly from 0 (criterion 1), and the *p11* value did not differ significantly from 1 (criterion 2), suggesting that the first principal axis does not differ from the line of congruence. Also, for social, emotional, and cognitive self-efficacy at Time 2, a_4 was significant and negative (criterion 3), suggesting that the larger the discrepancy between leader and team perception of participative safety climate, the lower the levels of self-efficacy reported post-intervention will be. Moreover, the values of a_3 did not differ significantly from 0 (criterion 4), revealing that the surface above the line of incongruence has an inverted U-shape with a non-significant slope above the origin. Finally, a_1 and a_2 were non-significant, meaning that the surface above the line of incongruence did not differ from a constant shape. Taken together, these findings fully support Hypothesis 2, suggesting that when the leader's and the team's perceptions of the participative safety climate are aligned before the intervention, the better the outcomes of the intervention will be in terms of increasing social, emotional, and cognitive self-efficacy at post-intervention.

DISCUSSION

The aim of this study was to investigate if the outcome of a participatory OHS intervention is predicted by the participative safety climate before the intervention and if perceptual distance between leaders and their teams in participative safety climate is related to the outcome of the intervention. In brief, we found that the participative safety climate itself did not have a relation to the intervention outcomes in terms of improved self-efficacy. It was only when the leader's and the team's levels of *congruence* on the climate was introduced that a relationship to the outcomes was found. These findings are discussed below together with the implications for research and practice.

The first hypothesis suggested that participative safety climate at baseline would predict employees' improvements following a participatory OHS intervention in three outcomes: social, emotional, and cognitive self-efficacy. This hypothesis was not supported by our analysis. Thus, the mean level of the climate in each group was not sufficient to influence the intervention outcome. Although the participative safety climate has not been previously investigated in relation to intervention outcome, it encompasses important characteristics of the organizational climate and would thus have been expected to be related to intervention outcomes. Based on the analysis of team mean values, which is common in research and organizational practice, the conclusion would have been that participative safety climate does not affect the outcome of the intervention. These conclusions would have been suggestive of the participatory safety climate not being an important predictor of intervention outcome. Drawing such a conclusion would have erroneously suggested that participatory safety climate is not an important contextual factor for participatory OHS intervention outcomes, contrary to current conceptualizations and empirical studies (Biron & Karanika-Murray, 2014; Cox et al., 2007; Havermans et al., 2016; Montano et al., 2014; Murta et al., 2007; Nielsen et al., 2013; von Thiele Schwarz et al., 2016).

Our second hypothesis postulated that congruence between leaders' and teams' assessment of the participative safety climate at baseline would positively predict employees' development in the three self-efficacy outcomes. This hypothesis was supported: agreement between leaders and teams about the level of participatory safety climate was related to greater improvement in employees' social, emotional, and cognitive self-efficacy as a result of the intervention. Agreement affected the outcomes regardless of the level of climate ratings, that is, whether the climate was perceived as good or poor. This implies that it was the agreement itself between the leader and the team that benefited the outcome. Consequently, the lowest levels of employee self-efficacy post-intervention were found when there was incongruence, that is, when leaders and teams disagreed about the climate at baseline. This indicates that as long as leaders and teams perceive the climate the same way, a good platform for success of the intervention is established—even when they agree that there is a poor participative safety climate.

One interpretation for the positive consequences of the agreement between leaders and teams on self-efficacy may be that congruence on climate makes the leaders and teams initiate appropriate actions as a part of the intervention. Thus, in line with the similarity attraction paradigm (Byrne, 1971), shared perceptions of the climate may enable employees and leaders to make the best of the participatory intervention. This type of intervention builds on the assumption that the teams act based on their unique circumstances and that leaders support these actions. For this to happen, the two groups need to be able to share an understanding of the contextual factors in the organization. Previous research on the impact of climate on intervention outcomes has suggested that it may be necessary to think of climate as a fertile soil that is necessary for succeeding with an intervention (Andersson & West, 1998; Antino et al., 2014; Lehman et al., 2019; Ouwens et al., 2008). Our findings contradict this by suggesting that more important than good climate for successful OHS interventions is the thorough understanding of the climate from the perspective of the main stakeholders—employees and their leaders.

This study adds to the body of literature focusing on leader–team perceptual distance in relation to OHS interventions by highlighting the role of climate as a context factor in the equation. The literature on leader–team perceptual distance to date has shown that agreement between leaders and teams is related to employee wellbeing and performance (Hasson et al., 2013; Hasson et al., 2016; Tafvelin et al., 2017; Tafvelin & Hasson, 2019). Prior research has also shown that leader–team perceptual distance on the outcomes variables before the intervention can impact how improvements in these variables occur over time. For instance, Hasson and colleagues (2016) showed that organizational learning improved most when leaders and employees agreed that the organizational learning climate before the intervention was high. Also, Tafvelin and colleagues (2019) found that when leaders and their followers agreed on safety leadership before an intervention, greater development was found in safety leadership after the training, as compared to those who disagreed. The current study adds to this by emphasizing the role of context for intervention outcomes—pre-intervention agreement on context acts in similar ways. The next step in this line of research could be to investigate several other contextual factors from the perspective of leader–team perceptual distance through advanced statistics of polynomial regression analyses using response surface analysis.

PRACTICAL IMPLICATIONS

Our results have implications on how to use assessments and surveys, especially when conducting organizational interventions. When measuring context, frequently only one perspective is adopted, but using employee data, for example, is inadequate based on our findings. The team's mean values alone need not be decisive; there is a need to take both the leaders' and the employees' perspectives into account. This approach will require courage from the leaders, who are likely to have to deal with results showing that they are not aligned with their employees. Nevertheless, our findings show that transparently addressing any differences in perception may be worthwhile, as coming to an agreement in itself could be the most important thing. Acknowledging any existing differences may be the first—albeit not the only—step in addressing perceptual differences, with the aim of getting on the same page.

There are also practical implications specifically for leaders. Many leaders either over- or underestimate the work context. This implies that leaders are not in congruence with their employees. For many leaders, there are good reasons to assume that they probably *do not* perceive the work context in the same way as the employees. A useful starting point for leaders could be to approach these questions with an open mind as to how the team perceives the situation. It is of importance to discuss possible differences, which could enhance the possibilities to create a joint understanding of the contextual situation. If it is common procedure to gather information from only a few members of the team, it could be fruitful to broaden that group.

METHODOLOGICAL DISCUSSION

One of the main strengths of the study was that the sample consisted of multiple organizations, increasing the likelihood of the results being generalizable for different types of organizations, both private and public.

Another clear strength was the prospective study design allowing us to evaluate the effects over time together with multi-source ratings. The multi-source and prospective nature of our data means that common method bias is unlikely to pose a threat to our results (Podsakoff, Mackenzie, & Podsakoff, 2012). Further, the multilevel data (Hox, Moerbeek, & Van de Schoot, 2017) and the polynomial regressions, which include interactions (Siemsen, Roth, & Oliviera, 2010), reduce this threat even further.

One limitation may be that only one contextual factor—participative safety climate—was investigated. It is not possible to predict, based on these findings, whether other types of context factors would yield similar patterns. This study should be seen as pioneering, in terms of investigating leader–team perceptual distance on contextual factors in relation to intervention outcomes. Future studies should focus on other types of climate as well as context factors when examining the agreement levels between leaders and their teams.

In addition, we measured participative safety climate before and after the intervention. Leader–team perceptual distance on participative safety climate before the intervention was found to be related to changes in the outcomes post-intervention. However, no observations were made during the intervention, neither about the participative safety climate nor about any intervention process measures. Thus, this study is limited to an understanding of how congruence regarding one contextual factor at baseline influenced outcomes, without the ability to study possible interactions with process measures or understanding causality in the context factor.

CONCLUSIONS

The level of agreement between leaders and teams on the participative safety climate before introducing an OHS intervention influenced the outcomes obtained after the intervention. How the team alone rated the climate was not related to the outcomes. Instead, congruence between leaders and teams about the participative safety climate at baseline was related to greater improvement in employees' self-efficacy as a result of the intervention. The findings highlight the importance of shared perceptions in the organizational context for satisfactory outcomes of participatory OHS interventions. These findings take a step forward in research on context in terms of highlighting not only that context matters but also how it influences intervention outcomes.

DATA ACCESSIBILITY STATEMENT

The datasets used will be available from the corresponding author on reasonable request.

ACKNOWLEDGEMENTS

Thanks to the German Federal Institute for Occupational Safety and Health (under grant F2199) and Swedish AFA Insurance, (under grant 160070) for enabling this research.

The authors thank the leaders and employees who completed the questionnaire surveys and the organizations that participated in the research.

COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR CONTRIBUTIONS

- All authors made substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work.
- All authors contributed to the drafting the work and revising it critically for important intellectual content.
- All authors provided final approval of the version to be published and agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.
- All authors agreed to be named on the author list and approved of the full author list.

AUTHOR AFFILIATIONS

Carina Loeb orcid.org/0000-0002-2576-1944
School of Health, Care and Social Welfare, Mälardalen University, Box 883, SE 721 23 Västerås, SE

Ulrica von Thiele Schwarz orcid.org/0000-0002-4771-8349
School of Health, Care and Social Welfare, Mälardalen University, Box 883, SE 721 23 Västerås, SE; Procome research group, Medical Management Centre, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet, 171 77 Stockholm, SE

Henna Hasson orcid.org/0000-0002-3827-6841
Procome research group, Medical Management Centre, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet, 171 77 Stockholm, SE; Unit for implementation and evaluation, Centre for Epidemiology and Community Medicine (CES), Stockholm Region, 171 29, Stockholm, SE

Susanne Tafvelin orcid.org/0000-0003-4263-8080
Procome research group, Medical Management Centre, Department of Learning, Informatics, Management and Ethics, Karolinska Institutet, 171 77 Stockholm, SE; Department of psychology, Umeå University, 901 87 Umeå, SE

REFERENCES

Anderson, N. R., & **West, M. A.** (1998). Measuring climate for work group innovation: Development and validation of the team climate inventory. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 19*(3), 235–258. DOI: https://doi.org/10.1002/(SICI)1099-1379(199805)19:3<235::AID-JOB837>3.0.CO;2-C

Antino, M., Rodriguez, F. G., Ripoli, M. M., Barrasa, A., & **Borzillo, S.** (2014). Development and validation of the Spanish version of the Team Climate Inventory: A measurement invariance test. *Anales de psicologia, 30,* 597–607. DOI: https://doi.org/10.6018/ analesps.30.2.154011

Augustsson, H., von Thiele Schwarz, U., Stenfors-Hayes, T., & **Hasson, H.** (2014). Investigating Variations in Implementation Fidelity of an Organizational-Level Occupational Health Intervention. *International Journal of Behavioral Medicine*, 1–11. DOI: https://doi.org/10.1007/s12529-014-9420-8

Bakker, A. B., & **Demerouti, E.** (2008). Towards a model of work engagement. *Career Development International, 13*(3), 209–223. DOI: https://doi.org/10.1108/13620430810870476

Bambra, C., Egan, M., Thomas, S., Petticrew, M., & **Whitehead, M.** (2007). The psychosocial and health effects of workplace reorganisation. 2. A systematic review of task restructuring interventions. *J Epidemiol Community Health, 61*(12), 1028–1037. DOI: https://doi.org/10.1136/jech.2006.054999

Bashshur, M. R., Hernández, A., & **González-Romá, V.** (2011). When managers and their teams disagree: A longitudinal look at the consequences of differences in perceptions of organizational support. *Journal of Applied Psychology, 96*(3), 558. DOI: https://doi.org/10.1037/a0022675

Bass, B. M., & **Yammarino, F.** (1991). Congruence of self and others' leadership ratings of naval officers for understanding successful performance. *Applied Psychology, 40*(4), 437–454. DOI: https://doi.org/10.1111/j.1464-0597.1991.tb01002.x

Benlian, A. (2014). Are we aligned… enough? The effects of perceptual congruence between service teams and their leaders on team performance. *Journal of Service Research, 17*(2), 212–228. DOI: https://doi.org/10.1177/1094670513516673

Beus, J. M., Jarrett, S. M., Bergman, M. E., & **Payne, S. C.** (2012). Perceptual equivalence of psychological climates within groups: When agreement indices do not agree. *Journal of Occupational and Organizational Psychology, 85*(3), 454–471. DOI: https://doi.org/10.1111/j.2044-8325.2011.02049.x

Biron, C., & **Karanika-Murray, M.** (2014). Process evaluation for organizational stress and well-being interventions: Implications for theory, method, and practice. *International Journal of Stress Management, 21*(1), 85–111. DOI: https://doi.org/10.1037/a0033227

Bliese, P. D. (2000). Within-group agreement, non-independence, and reliability: Implications for data aggregation and analysis. In K. J. Klein & S. W. J. Kozlowski (Eds.), *Multilevel theory, research, and methods in organizations: Foundations, extensions, and new directions* (pp. 349–381). San Francisco, CA, US: Jossey-Bass.

Byrne, D. E. (1971). *The attraction paradigm.* Academic Press.

Choi, S., Kluemper, D. H., & **Sauley, K. S.** (2013). Assessing emotional selfefficacy: Evaluating validity and dimensionality with crosscultural samples. *Applied Psychology, 62*(1), 97–123. DOI: https://doi.org/10.1111/j.1464-0597.2012.00515.x

Cox, T., Karanika, M., Griffiths, A., & **Houdmont, J.** (2007). Evaluating organizational-level work stress interventions: Beyond traditional methods. *Work and Stress, 21*(4), 348–362. DOI: https://doi.org/10.1080/02678370701760757

Edwards, J. R. (1994). The study of congruence in organizational behavior research: Critique and a proposed

alternative. *Organizational Behavior and Human Decision Processes, 58*(1), 51–100. DOI: https://doi.org/10.1006/obhd.1994.1029

Edwards, J. R., & **Cable, D. M.** (2009). The value of value congruence. *Journal of Applied Psychology, 94*(3), 654–677. DOI: https://doi.org/10.1037/a0014891

Edwards, J. R., & **Parry, M. E.** (1993). On the Use of Polynomial Regression Equations as an Alternative to Difference Scores in Organizational Research. *Academy of Management Journal, 36*, 1577–1613. DOI: https://doi.org/10.2307/256822

EU-OSHA. (2002). *How to tackle psychosocial issues and reduce work-related stress.* Report of European Agency for Safety and Health at Work Luxembourg: Office for Official Publications of the European Communities.

Egan, M., Bambra, C., Petticrew, M., & **Whitehead, M.** (2009). Reviewing evidence on complex social interventions: Appraising implementation in systematic reviews of the health effects of organisational-level workplace interventions. *Journal of Epidemiology and Community Health, 63*(1), 4–11. DOI: https://doi.org/10.1136/jech.2007.071233

Egan, M., Bambra, C., Thomas, S., Petticrew, M., Whitehead, M., & **Thomson, H.** (2007). The psychosocial and health effects of workplace reorganisation. 1. A systematic review of organisational-level interventions that aim to increase employee control. *Journal of Epidemiology and Community Health, 61*(11), 945–954. DOI: https://doi.org/10.1136/jech.2006.054965

Engle, E. M., & **Lord, R. G.** (1997). Implicit theories, self-schemas, and leader-member exchange. *Academy of Management Journal, 40*(4), 988–1010. DOI: https://doi.org/10.5465/256956

Fleenor, J. W., McCauley, C. D., & **Brutus, S.** (1996). Self-other rating agreement and leader effectiveness. *The Leadership Quarterly, 7*(4), 487–506. DOI: https://doi.org/10.1016/S1048-9843(96)90003-X

Fleenor, J. W., Smither, J. W., Atwater, L. E., Braddy, P. W., & **Sturm, R. E.** (2010). Self–other rating agreement in leadership: A review. *The leadership quarterly, 21*(6), 1005–1034. DOI: https://doi.org/10.1016/j.leaqua.2010.10.006

Gibson, C. (2001). From accumulation to accommodation: The chemistry of collective cognition in work groups. *Journal of Organizational Behavior and Social Issues, 22*, 121–134. DOI: https://doi.org/10.1002/job.84

Gibson, C., Cooper, C. D., & **Conger, J. A.** (2009). Do you see what we see? The complex effects of perceptual distance between leaders and teams. *Journal of Applied Psychology, 94*(1), 62. DOI: https://doi.org/10.1037/a0013073

Gibson, C., & **Earley, P. C.** (2007). Collective cognition in action: Accumulation, interaction, examination, and accommodation in the development and operation of group efficacy beliefs in the workplace. *Academy of Management Review, 32*(2), 438–458. DOI: https://doi.org/10.5465/amr.2007.24351397

Gorgievski, M. J., Halbesleben, J. R. B., & **Bakker, A. B.** (2011). Expanding the boundaries of psychological resource theories. *Journal of Occupational and Organizational Psychology, 84*, 1–7. DOI: https://doi.org/10.1111/j.2044-8325.2010.02015.x

Hasson, H., Tafvelin, S., & **von Thiele Schwarz, U.** (2013). Comparing Employees and Managers' Perceptions of Organizational Learning, Health, and Work Performance. *Advances in Developing Human Resources*. DOI: https://doi.org/10.1177/1523422313475996

Hasson, H., von Thiele Schwarz, U., Nielsen, K., & **Tafvelin, S.** (2016). Are we all in the same boat? The role of perceptual distance in organizational health interventions. *Stress and Health, 32*(4), 294–303. DOI: https://doi.org/10.1002/smi.2703

Hatfield, J. D., & **Huseman, R. C.** (1982). Perceptual congruence about communication as related to satisfaction: Moderating effects of individual characteristics. *Academy of Management Journal, 25*(2), 349–358. DOI: https://doi.org/10.5465/255996

Havermans, B. M., Schelvis, R. M. C., Boot, C. R., Brouwers, E. P., Anema, J. R., & **Beek, A. J.** (2016). Process variables in organizational stress management intervention evaluation research: A systematic review. *Scand J Work Environ Health, 42*. DOI: https://doi.org/10.5271/sjweh.3570

Heald, M. R., Contractor, N. S., Koehly, L. M., & **Wasserman, S.** (1998). Formal and emergent predictors of coworkers' perceptual congruence on an organization's social structure. *Human Communication Research, 24*(4), 536–563. DOI: https://doi.org/10.1111/j.1468-2958.1998.tb00430.x

Hobfoll, S. E. (2002). Social and psychological resources and adaption. *Review of General Psychology, 6*, 307–324. DOI: https://doi.org/10.1037/1089-2680.6.4.307

Hox, J. J., Moerbeek, M., & **Van de Schoot, R.** (2017). *Multilevel analysis: Techniques and applications*. Routledge. DOI: https://doi.org/10.4324/9781315650982

Hsiung, H.-H., & **Tsai, W.-C.** (2009). Job definition discrepancy between supervisors and subordinates: The antecedent role of LMX and outcomes. *Journal of Occupational and Organizational Psychology, 82*(1), 89–112. DOI: https://doi.org/10.1348/096317908X292374

Humberg, S., Nestler, S., & **Back, M. D.** (2019). Response surface analysis in personality and social psychology: Checklist and clarifications for the case of congruence hypotheses. *Social Psychological and Personality Science*, *10*(3), 409–419. DOI: https://doi.org/10.1177/1948550618757600

ILO. (2001). ILO. Guidelines of the safety and health management systems (ILO-OSH-01). Geneva: International Labor Office.

Kivimäki, M., & **Elovainio, M.** (1999). A short version of the team climate inventory: Development and psychometric properties. *Journal of Occupational & Organizational Psychology, 72*(2), 241–246. DOI: https://doi.org/10.1348/096317999166644

Lamontagne, A. D., Keegel, T., Louie, A. M., Ostry, A., & **Landsbergis, P. A.** (2007). A systematic review of the job-

stress intervention evaluation literature, 1990–2005. *Int J Occup Environ Health, 13*(3), 268–280. DOI: https://doi.org/10.1179/oeh.2007.13.3.268

Lehman, A., Brauchli, R., & **Bauer, G. F.** (2019). Goal persuit in organizational health interventions: The role of team climate, outcome expectancy, and implementation intentions. *Frontiers in Psychology, 10*. DOI: https://doi.org/10.1111/ sjop.12274

Li, A., & **Thatcher, S. M. B.** (2015). Understanding the effects of self and teammate OCB congruence and incongruence. *Journal od Buisness and Psychology, 30*(4), 641–655. DOI: https://doi.org/10.1007/s10869-014-9387-0

Loeb, C., Stempel, C., & **Isaksson, K.** (2016). Social and emotional self-efficacy at work. *Scandinavian Journal of Psychology, 57*, 152–161. DOI: https://doi:10.1111/sjop.12274

Martin, A., Karanaki-Murray, M., Biron, C., & **Sanderson, K.** (2016). The psychosocial work environment, employee mental health and organizational interventions: Improving research and practice by taking a multileve approach. *Stress and Health, 32*, 201–215. DOI: https://doi.org/10.1002/smi.2593

McKay, P. F., Avery, D. R., & **Morris, M. A.** (2009). A tale of two climates: Diversity climate from subordinates' and managers' prespectives and their role in store unit sales performance. *Personnel Psychology*, *62*(4), 767–791. DOI: https://doi.org/10.1111/j.1744-6570.2009.01157.x

Montano, D., Hoven, H., & **Siegrist, J.** (2014). Effects of organisational-level interventions at work on employees' health: A systematic review. *BMC public health*, *14*(1), 135. DOI: https://doi.org/10.1186/1471-2458-14-135

Murta, S. G., Sanderson, K., & **Oldenburg, B.** (2007). Process evaluation in occupational stress management programs: A systematic review. *American Journal of Health Promotion*, *21*(4), 248–254. DOI: https://doi.org/10.4278/0890-1171-21.4.248

Nielsen, K. (2017). Organizational occupational health interventions: What works for whom in which circumstances? *Occupational Medicine, 67*, 410–412. DOI: https://doi.org/10.1093/occmed/kqx058

Nielsen, K., Fredslund, H., Christensen, K. B., & **Albertsen, K.** (2006). Success or failure? Interpreting and understanding the impact of interventions in four similar worksites. *Work & Stress, 20*(3), 272–287. DOI: https://doi.org/10.1080/02678370601022688

Nielsen, K., & **Miraglia, M.** (2017). What works for whom in which circumstances? On the need to move beyond the 'what works?' question in organizational intervention research. *Human relations, 70*(1), 40–62. DOI: https://doi.org/10.1177/0018726716670226

Nielsen, K., Randall, R., Holten, A.-L., & **Gonzalez, E. R.** (2010). Conducting organizational-level occupational health interventions: What works? *Work & Stress, 24*(3), 234–259. DOI: https://doi.org/10.1080/02678373.2010.515393

Nielsen, K., & **Simonsen Abildgaard, J.** (2013). Organizational interventions: A research-based framework for the evaluation of both process and effects. *Work & Stress, 27*(3), 278–297. DOI: https://doi.org/10.1080/02678373.2013 .812358

Ostroff, C., Shin, Y., & **Kinicki, A. J.** (2005). Multiple perspectives of congruence: Relationships between value congruence and employee attitudes. *Journal of Organizational Behavior, 26*(6), 591–623. DOI: https://doi.org/10.1002/job.333

Ouwens, M., Hulscher, M., Akkermans, R., Hermens, R., Grol, R., & **Wollersheim, H.** (2008). The Team Climate Inventory: Applications in hospital teams and methodological considerations. *Quality and Safety in Health Care, 17*, 275–280. DOI: https://doi.org/10.1136/qshc.2006.021543

Øvretveit, J. (2011). Understanding the conditions for improvement: Research to discover which context influences affect improvement success. *BMJ quality & safety*, *20*(Suppl 1), i18–i23.

Patterson, M., Warr, P., & **West, M.** (2004). Organizational Climate and Company Productivity: The Role of Employee Affect and Employee Level. *Journal of Occupational and Organizational Psychology, 77*(2), 193–216. DOI: https://doi.org/10.1348/096317904774202144

Podsakoff, P. M., Mackenzie, S. B., & **Podsakoff, N. P.** (2012). Sources of Method Bias in Social Science Research and Recommendations on How to Control It. *Annual Review of Psychology, 63*(1), 539–569. DOI: https://doi.org/10.1146/annurev-psych-120710-100452

Richardson, K. M., & **Rothstein, H. R.** (2008). Effects of occupational stress management intervention programs: A meta-analysis. *Journal of occupational health psychology, 13*(1), 69–93. DOI: https://doi.org/10.1037/1076-8998.13.1.69

Rigotti, T., Holstad, T., Mohr, G., Stempel, C., Hansen, E., Loeb, C., Isaksson, K., Otto, K., Kinnunen, U., & **Perko, K.** (Eds.). (2014). *Rewarding and sustainable healthpromoting leadership*. Dortmund: Bundesanstalt für Arbeitsschutz und Arbeitsmedizin.

Rigotti, T., Schyns, B., & **Mohr, G.** (2008). A short version of the occupational self-efficacy scale: Structural and construct validity across five countries. *Journal of Career Assessment, 16*, 238–255. DOI: https://doi.org/10.1177/1069072707305763

Shanock, L. R., Baran, B. E., Gentry, W. A., Pattison, S. C., & **Heggestad, E. D.** (2010). Polynomial regression with response surface analysis: A powerful approach for examining moderation and overcoming limitations of difference scores. *Journal of Business and Psychology, 25*(4), 543–554. DOI: https://doi.org/10.1007/s10869-010-9183-4

Siemsen, E., Roth, A., & **Oliviera, P.** (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods, 13*(3), 456–476. DOI: https://doi.10.1177/1094428109351241

Strating, M. M., & **Nieboer, A. P.** (2009). Psychometric test of the Team Climate Inventory-short version investigated in Dutch quality improvement teams. *BMC Health Serv Res 9*, 126. DOI: https://doi.org/10.1186/1472-6963-9-126

Tafvelin, S., & **Hasson, H.** (2019). Agreement of Safety Climate: Does it Affect Employees' and Managers' Health and Work Performance? *Journal of Occupational and Environmental*

Medicine, 61(4), e125–e131. DOI: https://doi.org/10.1097/JOM.0000000000001542

Tafvelin, S., von Thiele Schwarz, U., & **Hasson, H.** (2017). In agreement? Leader-team perceptual distance in organizational learning affects work performance. *Journal of Business Research, 75*, 1–7. DOI: https://doi.org/10.1016/j.jbusres.2017.01.016

Tinsley, H. E., & **Weiss, D. J.** (1975). Interrater reliability and agreement of subjective judgments. *Journal of Counseling Psychology, 22*(4), 358–376. DOI: https://doi.org10.1037/h0076640

Toegel, G., & **Conger, J. A.** (2003). 360-degree assessment: Time for reinvention. *Academy of Management Learning & Education, 2*(3), 297–311. DOI: https://doi.org/10.5465/amle.2003.10932156

Ulhassan, W., Westerlund, J. T., Thor, J., Sandahl, C., & **von Thiele Schwarz, U.** (2014). Does lean implementation interact with group functioning? *Journal of Health Organization and Management, 28*(2), 196–213. DOI: https://doi.org/10.1108/JHOM-03-2013-0065

van der Klink, J. J., Blonk, R. W., Schene, A. H., & **van Dijk, F. J.** (2001). The benefits of interventions for work-related stress. *American journal of public health*, *91*(2), 270–276. DOI: https://doi.org/10.2105/ajph.91.2.270

von Thiele Schwarz, U., Aarons, G. A., & **Hasson, H.** (2019). The Value Equation: Three complementary propositions for reconciling fidelity and adaptation in evidence-based practice implementation. *BMC Health Serv Res, 19*(1), 868. DOI: https://doi.org/10.1186/s12913-019-4668-y

Zoni, S., & **Lucchini, R. G.** (2012). European approaches to work-related stress: A critical review on risk evaluation. *Safety and health at work, 3*(1), 43–49. DOI: https://doi.org/10.5491/SHAW.2012.3.1.43

West, M. A. (1990). The social psychology of innovation in groups. In M. A. West & J. L. Farr (Eds.), *Innovation and creativity at work: Psychological and organizational strategies* (pp. 4–36). Wiley Chichester. https://eprints.lancs.ac.uk/id/eprint/58926

White, M. C., Crino, M. D., & **Hatfield, J. D.** (1985). An empirical examination of the parsimony of perceptual congruence scores. *Academy od Management Journal, 28*(3), 732–737. DOI: https://doi.org/10.5465/256129

von Thiele Schwarz, U., Lundmark, R., & **Hasson, H.** (2016). The dynamic integrated evaluation model (DIEM): Achieving sustainability in organizational intervention through a participatory evaluation approach. *Stress and Health, 32*(4), 285–293. DOI: https://doi.org/10.1002/smi.2701

TO CITE THIS ARTICLE:
Loeb, C., von Thiele Schwarz, U., Hasson, H., Tafvelin, S. (2022). Congruence Rules! Increased Self-efficacy after Occupational Health Interventions—if Leaders and Teams Agree on the Participative Safety Climate. *Scandinavian Journal of Work and Organizational Psychology*, 7(1): 8, 1–15. DOI: https://doi.org/10.16993/sjwop.153

Submitted: 05 March 2021 **Accepted:** 01 May 2022 **Published:** 08 June 2022