https://doi.org/10.20378/irb-51196

Poster presented at the 35th Annual Conference of the Society of Industrial & Organizational Psychology (SIOP), June 2020, Austin, TX

The Effect of Affective and Cognitive Reactions on Change Readiness over Time

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ABSTRACT
We examined how change management interventions influence employees' affective and cognitive (i.e., abstract versus concrete) reactions and how these in turn are associated with change readiness depending on their temporal distance to the implementation of a change. Findings indicate the assumed mediation models. However, the moderation by temporal distance could not be shown.

PRESS PARAGRAPH
Digitalization accelerates the pace of innovation and makes it increasingly important for organizations to adjust to the rapidly changing business environment. However, little research has examined the effect of employees' affect and cognitions towards a change on change readiness (i.e., change-supportive intentions; CR) during a digital transformation. This study addresses this limitation by investigating the moderating effects of temporal distance on the relationship of cognitions (about the how and the why of the change project) and affect with CR. We found that both aspects are important predictors of employees' CR and for their subsequent behavior. Moreover, the study indicates that the additionally examined change management interventions can promote both affect and cognitions.

CITE AS
Schuesslbauer, A. F., Kohnke, O., & Burger, A. M. (2020, June). *The Effect of Affective and Cognitive Reactions on Change Readiness over Time.* Poster presented at the 35th Annual SIOP Conference, Austin, TX.

The Effect of Affective and Cognitive Reactions on Change Readiness over Time

Today, many companies face the challenge of staying competitive in highly volatile, international markets driven by digitalization. Adjusting to these rapidly changing circumstances is increasingly important for organizations (Neves, 2011). Therefore, researchers emphasize the need to analyze the psychological processes underlying employees' change readiness (CR). We focus on CR defined as the individuals' intention to support an organizational change and investigate the role of affect and cognitions on CR during the change process.

This research is based on three theories: While the theory of planned behavior (TPB; Ajzen, 1991) has frequently been used as a theoretical framework to investigate CR (e.g., Jimmieson, Peach, & White, 2008; Straatmann, Kohnke, Hattrup, & Mueller, 2016), construal level theory (CLT; Trope & Liberman, 2010) and feelings-as-information theory (FIT; Schwarz, 2012) are new to this context and add value by incorporating novel theoretical perspectives regarding underlying cognitions and affect during change processes.

Theory

Theory of planned behavior

The TPB is "designed to predict and explain human behavior in specific contexts" (Ajzen, 1991, p. 181) conceptualizing a person's intention towards such behavior as the most proximal determinant (Ajzen, 1988). These intentions indicate the individual's motivation and reflect how much people are willing to perform a certain behavior and how much effort they are willing to exert (Ajzen, 1991). Therefore, intentions can be described as "readiness to perform a given behavior" (Fishbein & Ajzen, 2010, p. 39). Following the TPB, we focus on employees' CR as precursor of change supportive behavior (CSB) and propose:

H1*: There is a positive relationship between CR before the change and CSB after the change.*

According to the TPB, one crucial determinant of the intention to perform a behavior is the person's attitude towards this behavior. Going beyond the TPB as such, a closer look at this attitude-element of the model allows deriving hypotheses about how specific attitude components and temporal distance interact with each other in shaping CSB.

Attitudes usually involve beliefs, thoughts, and arguments about the attitude object, as well as evaluative feelings, and knowledge about past behavior towards it. Hence, attitudes are usually conceptualized as summary evaluations of objects that have cognitive, affective, and behavioral components (e.g., Rosenberg & Hovland, 1960). Attitudes can vary to the extent to which they are based on these components: For example, affective reactions are more relevant for attitudes toward some objects than others (Pham 1998) and individuals can differ in the extent to which they tend to base their attitudes on different components in general (e.g., Huskinson & Haddock, 2004). However, it is also possible that the attitude towards a particular object that the same person reports at different points in time varies to the extent to which it is based on different components (cf. Schwarz, 2007). Our research investigates whether and how the temporal distance to the implementation of an organizational change moderates the extent to which CR is influenced by affective reactions to the change as well as by different types of cognitions about the change. Our hypotheses regarding this question were derived from FIT and CLT.

Feelings-as-information theory

The core proposition of FIT is that feelings provide information to individuals that they can use in the process of forming judgments and decisions (Schwarz, 2012). The extent to which

feelings influence processes of judgment and decision making depends on the accessibility of other types of information as well as on the perceived relevance and informational value of feelings for the particular judgment. Accordingly, as individuals receive more and more factual information about an organizational change over time, the extent to which they rely on their affective reactions as a basis for their CR should diminish:

> ***H2:*** *The association of CR with affective reactions decreases with diminishing temporal distance to the implementation of the organizational change.*

Construal level theory

The most prominent theory conceptualizing temporal distance as a psychologically relevant variable is CLT (Trope & Liberman, 2010). It parts from the observation that the same event (e.g., an organizational change) can be mentally represented very differently depending on the circumstances. Specifically, CLT focuses on the level of abstraction of mental representations and posits that psychological distance versus proximity (on a temporal, spatial, social, or probabilistic dimension) facilitates the construction of more abstract mental representations. Changes in the abstractness of mental representations of events have implications for judgments, decisions, and behavior because they influence the impact of certain features of the events on their perception. For example, abstract representations of events (such as an organizational change) tend to emphasize *why* the event happens (e.g., "increasing our company's efficiency") while concrete representations tend to emphasize *how* the event happens ("switching to a new software"). Depending on the evaluative implications of the respective features, the overall evaluation of the event can change substantially. Based on CLT, we hypothesize:

> ***H3a:*** *The association of CR with abstract thoughts about the change decreases with diminishing temporal distance to the change.*

H3b: *The association of CR with concrete thoughts about the change increases with diminishing temporal distance to the change.*

Change management (CM) interventions

We test the relationship of perceived organizational support (POS), perceived supervisor support (PSS), participation, and communication with cognitive and affective reactions towards the change.

POS is defined as "global beliefs concerning the extent to which the organization values their [employees'] contributions and cares about their well-being" (Eisenberger, Huntington, Hutchison, & Sowa, 1986, p. 501). POS focuses on the entire organization. It can be conveyed by company policies, salaries, job security, job conditions, or the support of representatives such as employees who have high formal or informal status or power (Eisenberger et al., 1986; Eisenberger & Stinglhamber, 2011). In addition, Aselage and Eisenberger (2003) assume that high POS is associated with positive believes that the change is in the interest of the employees. Moreover, high levels of POS are associated with variables such as positive mood, trust, affective commitment, or organizational identification (Eisenberger & Stinglhamber, 2011). However, POS has not been intensively investigated in the change context so far. To contribute to bridging this research gap, we propose:

H4*: There is a positive relationship between POS and (H4a) cognitive and (H4b) affective reactions towards the change.*

PSS has frequently been noted as a key factor for organizational change (e.g., Armenakis & Bedeian, 1999). Supervisors act as role models for new change-related behavior, provide social support, resources, and information to employees. Rafferty and Griffin (2006) showed that PSS was positively associated with employees' perception of changes being better managed and less

radical, and this was in turn related to lower levels of psychological uncertainty. Additionally, PSS was positively related to affective commitment to change (Neves, 2011). Therefore, we hypothesize:

H5*: There is a positive relationship between PSS and (H5a) cognitive and (H5b) affective reactions towards the change.*

Communication has widely been recognized as an important variable positively influencing employees' acceptance of the change (e.g., Oreg, Vakola, & Armenakis, 2011). Typical examples for change-related communication channels are emails, newsletters, intranet sites, or events. Jimmieson et al. (2008) reported that employees provided with timely and accurate information about the change process develop favorable attitudes about the change. Moreover, high quality communication reduces uncertainty and anxiety during the change (Bordia, Hunt, Paulsen, Tourish, & DiFonzo, 2004). Thus, we propose:

H6*: There is a positive relationship between the quality of communication and (H6a) cognitive and (H6b) affective reactions towards the change.*

Participation refers to the perceived (direct or indirect) opportunities to partake in change-related decision making (e.g., Jimmieson et al., 2008; Straatmann et al., 2016). Examples for participation strategies are change agent networks to collect and forward employees' feedback to decision makers, or the involvement in workshops or test activities. Overall, participation can reduce resistance, is associated with feelings of empowerment, and has the potential to evoke a stronger psychological commitment to proposed changes (e.g., Rafferty, Jimmieson, & Armenakis, 2013). Thus, we expect:

H7*: There is a positive relationship between the level of participation and (H7a) cognitive and (H7b) affective reactions towards the change.*

Overall, it is assumed that CR is influenced by employees' cognitive and affective reactions towards change and that both variables in turn are influenced by CM variables. Accordingly, we propose:

> ***H8:*** *The effects of CM variables on CR will be fully mediated by cognitive and affective reactions towards the change.*

The research model is outlined in Figure 1.

Method

Change context

The investigated change project took place in a large international tech company aiming at a global harmonization and digitalization of the sales process.

In January 2018, the project team started the first informal communication activities via the supervisors. One month later, the project was announced at the global townhall meeting and a change agent network was established to operate in all regions and board areas as multipliers.

Furthermore, a monthly newsletter complemented the regular information by the managers. In April, the company officially announced the rollout plan phased from June to September. During the rollout, the employees received area-specific training on the new processes and digital tools; immediately after this, they should apply the learned content in their daily work.

Study design and sample

The study consisted of a three-part online survey. To investigate differences regarding the temporal distance before the change, the first measurement was conducted from end of April until beginning of May; when the employees had already received first information about the project but did not know about the specific changes in their individual work. At the same time, the temporal distance to the rollout was as large as possible. To capture a small temporal distance

while ensuring employees' awareness of the individual changes, the second survey took place during the training period in the course of the rollout. The third measurement was conducted in October to capture the individual behavior after the implementation.

Table 1 shows the measurement points of the variables, the corresponding scales, and sample items. To measure abstract and concrete cognitions, the authors developed four items, respectively. The abstract items depict the *why* of the change, the concrete items capture the *how* (cf. Trope & Liberman, 2010).

In total, 1163 individuals answered at least one survey, whereof 105 employees could be matched between time 1 (t1) and time 2 (t2); and 137 individuals between t2 and time 3 (t3). The regions of the subsamples are displayed in Table 2.

Analyses

Exploratory and confirmatory factor analyses validated the unidimensional structure of the constructs and showed the model's measurement invariance. To test the hypotheses, structural models were calculated using maximum likelihood method. Assessing the core model (abstract and concrete cognitions and affect as independent variables; CR as mediator; CSB as dependent variable) provided insights regarding H1. To evaluate H2 to H8, CR was used as criterion variable. To test H2, H3a, and H3b, the respective path between affect, abstract, or concrete cognitions and CR was fixed and compared to the unrestricted model. In the context of H4 to H8, all CM variables were incorporated in the core model. The simultaneous inclusion allows testing the predictors while controlling for the effect of the other CM variables. In the context of H8, the direct and indirect effects of the CM variables were estimated using bootstrapping (Preacher & Hayes, 2008).

Results

Table 3 and 4 show the descriptive statistics. H1 was fully supported as CSB was positively predicted by CR both at t1 and t2 (Table 5). H2 was not confirmed as affect was a significant predictor both at t1 and t2 but there were no differences between the models (Table 6 and 7). The analyses regarding the prediction of CR by cognitions showed the same pattern of results as for affect (Table 8 and 9) contradicting H3a and H3b. Testing H4, H6, and H7 provided support for the effects of POS, communication, and participation on cognitions and affect (Table 10). The assumed associations between PSS and the employees' affect could be confirmed as well (H5b). However, the relationship with cognitions was only significant at t2. Thus, H5a was partially supported (Table 10). In line with H8, POS, PSS (t2), communication (t1), and participation were fully mediated by cognitions and affect (Table 11). H8 was therefore partially supported. Overall, the CM variables explained 33% of the variance in CR.

Discussion

As postulated by the TPB (Ajzen, 1991), CR defined as intention predicted CSB at both t1 and t2 which is in line with previous research (e.g. Straatmann et al., 2016).

We did not find support for the hypothesis that the influence of affect on CR would be stronger under conditions of high rather than low temporal distance to the change. In fact, correlations tend to point in the opposite direction – in line with a theoretical perspective recently proposed by Chang and Pham (2013) which holds that "the affective system is inherently anchored in the present" (p. 42). For example, affective reactions towards outcomes close to the present tend to be more intense and more accessible than reactions to outcomes temporally more distant (e.g., Ekman & Lundberg, 1971). Consequently, individuals might rely more on affective

feelings in decisions whose outcomes or targets are closer to the present than in decisions whose outcomes or targets are more distant in time.

Contradicting our assumptions, there were no differences in the predictive validity of abstract or concrete cognitions depending on temporal distance. Both aspects were significant predictors of CR. Interestingly, we found that abstract cognitions were (descriptively) more important than concrete cognitions in general. This result was also found in previous studies concluding that abstract cognitions were generally more predictive (cf. Trope & Liberman, 2010). This means that it is crucial for the employees in the change process to understand the sense of the project not only at the beginning but also as the roll-out comes closer and process aspects become the focus of attention. Reasons for the smaller associations of CR with concrete cognitions could be a high trust of employees in the management that changes would be successfully implemented or that there were still unsolved aspects in the process (such as responsibilities) which is why the management could have focused especially on the Why of the project.

Consistent with our assumptions, POS, communication, and participation had positive effects on the employees' cognitive and affective reactions at both measurement points. This means, that if individuals feel supported by the organization, they seem to have a positive view on the change. Descriptively, communication was the most important predictor when the change was temporally distant but stayed relevant during the whole process. This indicates that particularly at the beginning of a change project, individuals need high quality information about the upcoming change. With lower temporal distance, the importance of participation became larger. Thus, as the change comes closer, it seems to get more relevant to involve the employees and provide them with opportunities to take part in the process. Thereby, the organization can

enhance their employees' coping potential and convey the feeling that their interests are met (Oreg, Bartunek, Lee, & Do, 2018).

Regarding PSS, the hypothesis could only partially be confirmed. Contradicting our assumption, there was no effect on cognitions when the implementation of the change was temporally more distant. That could be due to the small amount of detailed information as well as supporting measures available to the managers in the beginning of the process. Moreover, most of the CM measures happened via the global and regional change teams which could have reduced the managers' influence. Still, PSS had effects on affect at t1 as well as on cognitions and affect at t2 which indicates the importance of the supervisors' backing especially regarding the employees' emotions.

The full mediation of most CM variables on CR by affect and cognitions confirms that CR can be enhanced by shaping the employees' cognitions and affect towards the change.

Limitations

The response rates were quite low (10–15%). However, they reflected the experiences with previous surveys in the organization and also other research in organizational settings (cf. Baruch & Holtom, 2008). Many of the variables were highly correlated which may have hindered the disclosure of the FIT and CLT assumptions. Therefore, their relevancy for the change context cannot be rejected but has to be examined in future studies. The CM variables explained a considerable proportion of variance in CR (33%) in the mediation model. However, this indicates the investigation of additional influencing factors (e.g., content variables such as change impact). Lastly, data collection took place in one organization and one project. Thus, caution should be exercised in generalizing the results.

Practical implications

All CM variables contribute to foster CR and are important during the whole change process. Only PSS seems more suitable to form positive affect towards the change than to influence cognitive reactions in early stages of the project. Especially at the beginning of a project, it is crucial to provide high quality information. As the change nears, the involvement of employees becomes more important. POS was not specifically related to the project but still had an effect on CR. Thus, organizations should not only take measures in the face of a specific change but create a general culture of organizational support. In general, employees should be supported in making sense of the change during the whole process while considering the employees' emotions at the same time.

Conclusion

We examined the relation of cognitions and affect and their association with CR during a global digital transformation. For this purpose, several predicting, mediating, moderating, and dependent variables were tested at three measurement points. This design allowed to examine possible changes in the relations between the concepts as well as the effect of CR on CSB. With the CLT and FIT, two social- or consumer psychological theories were transferred into the context of work and organizational psychology and initiated further research in this direction.

References

Ajzen, I. (1988). *Attitudes, personality and behavior*. Milton Keynes, England: Open University Press.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*, 179-211.

Armenakis, A. A., & Bedeian, A. G. (1999). Organizational change: A review of theory and research in the 1990s. *Journal of Management, 25*, 293-315.

Aselage, J. & Eisenberger, R. (2003). Perceived organizational support and psychological contracts. A theoretical integration. *Journal of Organizational Behavior, 24,* 491–509.

Baruch, Y. & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations, 61*, 1139–1160.

Bordia, P., Hunt, L., Paulsen, N., Tourish, D., & DiFonzo, N. (2004). Uncertainty during organisational change: Is it all about control? *European Journal of Work and Organizational Psychology*, *13*, 345-365.

Chang, H. H., & Pham, M. T. (2013). Affect as a decision-making system of the present. *Journal of Consumer Research*, *40*, 42-63.

Eisenberger, R., Huntington, R., Hutchison, S. & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71,* 500–507.

Eisenberger, R. & Stinglhamber, F. (2011). *Perceived organizational support. Fostering enthusiastic and productive employees*. Washington DC, US: American Psychological Association.

Ekman, G., & Lundberg, U. (1971). Emotional reaction to past and future events as a function of temporal distance. *Acta Psychologica*, *35*, 430-441.

Field, A. P. (2013). *Discovering statistics using IBM SPSS statistics* (4. Ed.). London: Sage.

Fishbein, M. & Ajzen, I. (2010). *Predicting and changing behavior. The reasoned action approach*. New York: Psychology Press.

Huskinson, T. L., & Haddock, G. (2004). Individual differences in attitude structure: Variance in the chronic reliance on affective and cognitive information. *Journal of Experimental Social Psychology*, *40*, 82-90.

Jimmieson, N. L., Peach, M., & White, K. M. (2008). Utilizing the theory of planned behavior to inform change management: An investigation of employee intentions to sup- port organizational change. *Journal of Applied Behavioral Science, 44*, 237-262.

Kohnke, O. (2015). *Anwenderakzeptanz unternehmensweiter Standardsoftware. Theorie, Einflussfaktoren und Handlungsempfehlungen*. Wiesbaden: Springer.

Kohnke, O. & Mueller, K. (2010). Evaluation von Change Management-Maßnahmen bei der Einführung unternehmensweiter Standardsoftware auf Basis des "Technology Acceptance Models". *Wirtschaftspsychologie, 12,* 90–103.

Neves, P. (2011). Building commitment to change: The role of perceived supervisor support and competence. *European Journal of Work and Organizational Psychology, 20*, 437-450.

Oreg, S., Bartunek, J. M., Lee, G. & Do, B. (2018). An affect-based model of recipients' responses to organizational change events. *Academy of Management Review, 43*, 65–86.

Oreg, S., Vakola, M., & Armenakis, A. (2011). Change recipients' reactions to organizational change: A 60-year review of quantitative studies. *Journal of Applied Behavioral Science, 47*, 461-524.

Pham, M. T. (1998). Representativeness, relevance, and the use of feelings in decision making. *Journal of Consumer Research, 25*, 144-159.

Preacher, K. J. & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879–891.

Rafferty, A. E. & Griffin, M. A. (2006). Perceptions of organizational change. A stress and coping perspective. *The Journal of Applied Psychology, 91,* 1154–1162.

Rafferty, A. E., Jimmieson, N. L., & Armenakis, A. A. (2013). Change readiness: A multilevel review. *Journal of Management, 39*, 110-135.

Rosenberg, M. J., & Hovland, C. I. (1960). Cognitive, affective, and behavioral components of attitudes. In M. J. Rosenberg, C. I. Hovland, W. J. McGuire, R. P. Abelson, & J. W. Brehm (Eds.), *Attitude organization and change: An analysis of consistency among attitude components* (pp. 1-14). New Haven, CT: Yale University Press.

Schwarz, N. (2007). Attitude construction: Evaluation in context. *Social Cognition*, *25*, 638-656.

Schwarz, N. (2012). Feelings-as-information theory. In P. M. Van Lange, A. W. Kruglanski, E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 289-308). Thousand Oaks, CA: Sage.

Shanock, L. R. & Eisenberger, R. (2006). When supervisors feel supported. Relationships with subordinates' perceived supervisor support, perceived organizational support, and performance. *The Journal of Applied Psychology, 91,* 689–695.

Straatmann, T., Kohnke, O., Hattrup, K. & Mueller, K. (2016). Assessing employees' reactions to organizational change. An integrative framework of change-specific and psychological factors. *The Journal of Applied Behavioral Science, 52,* 265–295.

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review*, *117*, 440-463.

Watson, D., Clark, L. A. & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect. The PANAS scales. *Journal of Personality and Social Psychology, 54,* 1063–1070.

Table 1

Scales and Measurement Points of the Variables

Variable	Sample item	Source	Cronbach's alpha	t1	t2	t3
CR (4 items)	"I am willing to adopt new processes as defined by [the change project]."	adapted from Straatmann et al. (2016)	.94-.96	x	x	-
CSB (4 items)	"I have adopted the new processes as defined by [the change project]."	adapted CR scale from Straatmann et al. (2016)	.95	-	-	x
Cognitions		developed by the authors	.94	x	x	-
Abstract (4 items)	"[The change project] entails a lot of benefits for [the organization]."		.95-.96			
Concrete (4 items)	"The employees will be able to adopt the required processes and procedures."		.91-.92			
Affect (4 items)	"When I think about the upcoming change due to [the change project], I feel excited."	adapted from Watson, Clark, & Tellegen (1988)	.97	x	x	-
POS (4 items)	"[The organization] really cares about my well-being."	adaptad from Shanock & Eisenberger (2006)	.91-.92	x	x	-
PSS (4 items)	"My direct manager explains to me the benefits of the changes resulting from [the change project] for my job."	adapted from Kohnke (2015)	.95-.96	x	x	-
Communication (4 items)	"I am satisfied with the frequency of information about [the change project]."	adapted from Straatmann et al. (2016)	.96-.97	x	x	-
Participation (4 items)	"If I wanted to, I could use the change agent network to provide feedback on proposed changes within [the change project]."	adapted from Straatmann et al. (2016) and Kohnke & Mueller (2010)	.84-.89	x	x	-

Notes. CR = change readiness. CSB = change supportive behaviors. POS = perceived organizational support. PSS = perceived supervisor support. All items were answered on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). x = part of the survey. - = not part of the survey.

Table 2

Regions of the Sample

Region	%
APJ	20.6
EMEA	28.5
LAC	13.6
MEE	17.0
NA	20.3

Notes. APJ = East Asia, Southeast Asia, and Oceania. EMEA = Europe, Middle East, and Africa. LAC = Latin America. MEE = Central, and Eastern Europe. NA = North America

Table 3

Means (M), Standard Deviations (SD), and Correlations Between the Variables at t1, t2, and CSB at t3 (All Participants)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. POS t1	(.91)																
2. PSS t1	.66***	(.96)															
3. Communication t1	.60***	.70***	(.97)														
4. Participation t1	.43***	.54***	.64***	(.89)													
5. Abstract cogn. t1	.41***	.47***	.51***	.41***	(.95)												
6. Concrete cogn. t1	.59***	.59***	.73***	.56***	.66***	(.91)											
7. Affect t1	.54***	.62***	.67***	.54***	.71***	.79***	(.97)										
8. CR t1	.32***	.44***	.42***	.39***	.63***	.54***	.58***	(.96)									
9. POS t2	.72**	.58**	.49**	.32**	.38**	.50**	.44**	.22*	(.92)								
10. PSS t2	.48**	.75**	.57**	.44**	.46**	.44**	.49**	.34**	.65***	(.95)							
11. Communication t2	.43**	.49**	.69**	.27**	.40**	.57**	.53**	.17**	.58***	.58***	(.96)						
12. Participation t2	.42**	.53**	.54**	.54**	.38**	.48**	.43**	.35**	.45***	.48***	.61***	(.84)					
13. Abstract cogn. t2	.31**	.46**	.51**	.37**	.64**	.58**	.56**	.46**	.43***	.46***	.50***	.45***	(.96)				
14. Concrete cogn. t2	.42**	.45**	.53**	.32**	.50**	.58**	.51**	.28**	.59***	.58***	.69***	.57***	.71***	(.92)			
15. Affect t2	.44**	.54**	.67**	.44**	.57**	.67**	.68**	.41**	.52***	.55***	.64***	.52***	.73***	.78***	(.97)		
16. CR t2	.23*	.38**	.39**	.32**	.48**	.44**	.44**	.54**	.34***	.37***	.40***	.43***	.66***	.57***	.60***	(.94)	
17. CSB t3	.23*	.42***	.43***	.38***	.28**	.43***	.41***	.33***	.36***	.47***	.49***	.54***	.45***	.51***	.45***	.48***	(.95)
M	5.27	5.22	4.43	3.80	5.48	4.70	4.74	5.72	5.42	5.53	5.00	4.57	5.70	5.13	4.87	5.90	4.88
SD	1.27	1.53	1.66	1.72	1.29	1.27	1.47	1.13	1.20	1.43	1.42	1.51	1.15	1.25	1.49	1.03	1.60

Notes. n = 479 for the variables at t1; for their correlations with CSB n = 101. n = 496 for the variables at t2; for their correlations with CSB n = 137. n = 484 for CSB. n = 105 for the correlations between t1 and t2 variables. The diagonal shows the reliability values (Cronbach's alpha). Cogn. = Cognitions. CR = change readiness. CSB = change supportive behavior. t1 = measurement time 1. t2 = measurement time 2. t3 = measurement time 3. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4

Means (M), Standard Deviations (SD), and Correlations Between the Variables for the Participants Who Took Part in Both t1 and t2

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. POS t1																
2. PSS t1	.57***															
3. Communication t1	.51***	.70***														
4. Participation t1	.32***	.53***	.57***													
5. Abstract cogn. t1	.48***	.52***	.59***	.41***												
6. Concrete cogn. t1	.57***	.62***	.78***	.54***	.68***											
7. Affect t1	.50***	.70***	.70***	.50***	.70***	.90***										
8. CR t1	.28**	.43***	.36***	.43***	.62***	.44***	.42***									
9. POS t2	.72**	.58**	.49**	.32**	.38**	.50**	.44**	.22*								
10. PSS t2	.48**	.75**	.57**	.44**	.46**	.44**	.49**	.34**	.66***							
11. Communication t2	.43**	.49**	.69**	.27**	.40**	.57**	.53**	.17**	.60***	.66***						
12. Participation t2	.42**	.53**	.54**	.54**	.38**	.48**	.43**	.35**	.51***	.65***	.67***					
13. Abstract cogn. t2	.31**	.46**	.51**	.37**	.64**	.58**	.56**	.46**	.41***	.56***	.56***	.56***				
14. Concrete cogn. t2	.42**	.45**	.53**	.32**	.50**	.58**	.51**	.28**	.59***	.59***	.69***	.58***	.72***			
15. Affect t2	.44**	.54**	.67**	.44**	.57**	.67**	.68**	.41**	.56***	.61***	.73***	.57***	.72***	.77***		
16. CR t2	.23*	.38**	.39**	.32**	.48**	.44**	.44**	.54**	.28**	.49***	.46***	.52***	.66***	.51***	.60***	
M	5.27	5.14	4.37	3.77	5.54	4.72	4.57	5.80	5.27	5.14	4.37	3.77	5.54	4.72	4.57	5.80
SD	1.28	1.67	1.76	1.80	1.20	1.40	1.52	0.97	1.28	1.67	1.76	1.80	1.20	1.40	1.52	0.97

Notes. $n = 105$. Cogn. = Cognitions. CR = change readiness. t1 = measurement time 1. t2 = measurement time 2. Grey values are equivalent to table 3. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5

Results of the Structural Equation Modeling Regarding H1 (CR as Predictor, CSB as Dependent Variable)

Predictor	*b*	*SE*	β	*t*	*p*	R^2
CR at time 1	.54	.15	.34	3.52	< .001	.12
CR at time 2	.68	.12	.44	5.43	< .001	.19

Notes. CR = change readiness. CSB = change supportive behavior.

Table 6

Overview of the Results Regarding Hypothesis 2: Affect as Predictor, CR as Criterion

Sample	*b*	*SE*	β	*t*	*p*
Time 1 (all participants at t1; *n* = 479)	.45	.03	.58	14.50	< .001
Time 2 (all participants at t2; *n* = 496)	.38	.03	.54	13.57	< .001
Time 1 (participants at t1, who also took part in t2; *n* = 105)	.27	.06	.43	4.45	< .001
Time 2 (participants at t2, who also took part in t1; *n* = 105)	.37	.06	.55	6.51	< .001

Notes. CR = change readiness. t1 = measurement time 1. t2 = measurement time 2.

Table 7

Model Comparisons Between t1 and t2 Regarding Hypothesis 2: Affect as Predictor, CR as Criterion

Model	χ^2-Wert	df	CFI	RMSEA	$\Delta\chi^2$	Δdf	*p*	ΔCFI
All participants at t1 and t2					3.20	1	.07	.000
Unconstrained	553.40	38	.952	.12				
Fixed	556.61	39	.952	.12				
Only participants who took part in both t1 and t2					1.39	1	.24	.000
Unconstrained	160.88	38	.956	.13				
Fixed	162.26	39	.956	.12				

Notes. CR = change readiness. t1 = measurement time 1. t2 = measurement time 2. The respective models with fixed path between affect and CR were compared to the unrestricted models.

Table 8

Overview of the Results Regarding Hypothesis 3: Abstract or Concrete Cognitions as Predictor, CR as Criterion

Sample	*b*	*SE*	β	*t*	*p*
H3a: Abstract cognitions					
Time 1 (all participants at t1; *n* = 479)	.60	.04	.62	14.87	< .001
Time 2 (all participants at t2; *n* = 496)	.66	.04	.63	15.49	< .001
Time 1 (participants at t1, who also took part in t2; *n* = 105)	.51	.07	.64	7.22	< .001
Time 2 (participants at t2, who also took part in t1; *n* = 105)	.64	.09	.61	7.00	< .001
H3b: Concrete cognitions					
Time 1 (all participants at t1; *n* = 479)	.49	.04	.56	13.06	< .001
Time 2 (all participants at t2; *n* = 496)	.46	.03	.57	13.51	< .001
Time 1 (participants at t1, who also took part in t2; *n* = 105)	.32	.07	.47	4.92	< .001
Time 2 (participants at t2, who also took part in t1; *n* = 105)	.31	.07	.43	4.52	< .001

Notes. CR = change readiness. t1 = measurement time 1. t2 = measurement time 2.

Table 9

Model Comparisons Between t1 and t2 Regarding Hypothesis 3: Abstract or Concrete Cognitions as Predictor, CR as Criterion

Model	χ^2-Wert	df	CFI	RMSEA	$\Delta\chi^2$	Δdf	*p*	ΔCFI
H3a: Abstract cognitions								
All participants at t1 and t2					1.37	1	.24	.000
Unconstrained	464.92	38	.955	.11				
Fixed	466.29	39	.955	.11				
Only participants who took part in both t1 and t2					1.13	1	.29	.000
Unconstrained	168.52	38	.952	.13				
Fixed	169.64	39	.952	.13				
H3b: Concrete cognitions								
All participants at t1 and t2					.40	1	.53	.000
Unconstrained	380.45	38	.956	.10				
Fixed	380.86	39	.956	.10				
Only participants who took part in both t1 and t2					.01	1	.94	.001
Unconstrained	118.88	38	.966	.10				
Fixed	118.00	39	.967	.10				

Notes. CR = change readiness. t1 = measurement time 1. t2 = measurement time 2. The respective models with fixed path between abstract and concrete cognitions and CR were compared to the unrestricted models.

Table 10

Overview of the Results Regarding Hypotheses 4-7

Predictor	Criterion	*b*	*SE*	β	*t*	*p*
POS						
Time 1						
	Cognitions	.18	.04	.25	5.01	< .001
	Affect	.20	.06	.17	3.27	.001
Time 2						
	Cognitions	.13	.04	.18	3.71	< .001
	Affect	.17	.07	.14	2.67	.01
PSS						
Time 1						
	Cognitions	-.01	.03	.19	-.28	.78
	Affect	.19	.06	.19	3.33	< .001
Time 2						
	Cognitions	.10	.03	.16	3.26	.001
	Affect	.17	.06	.15	3.00	.003
Communication						
Time 1						
	Cognitions	.31	.04	.53	8.32	< .001
	Affect	.32	.06	.32	5.46	< .001
Time 2						
	Cognitions	.21	.04	.32	5.70	< .001
	Affect	.38	.07	.32	5.56	.001
Participation						
Time 1						
	Cognitions	.08	.03	.16	3.21	.001
	Affect	.16	.05	.18	3.45	< .001
Time 2						
	Cognitions	.20	.04	.30	5.47	< .001
	Affect	.28	.06	.25	4.35	< .001

Notes. n = 479–496. CR = change readiness. POS = perceived organizational support. PSS = perceived supervisor support.

Table 11

Results of the Mediation Analysis (Indirect Effects) Predicting CR by the Change Management Variables, Mediated by Affect and Cognitions (H8)

Effect (direct/indirect)	*b*	β	*SE*	95% *CI*
Time 1				
POS as predictor				
Indirect effect	0.13	0.14**	0.05	[0.05, 0.25]
Direct effect	-0.07	-0.08	0.08	[-0.23, 0.07]
PSS as predictor				
Indirect effect	0.05	0.07	0.04	[-0.01, 0.15]
Direct effect	0.06	0.08	0.06	[-0.04, 0.20]
Communication as predictor				
Indirect effect	0.24	0.34***	0.10	[0.17, 0.55]
Direct effect	-0.11	-0.15	0.12	[-0.40, 0.05]
Participation as predictor				
Indirect effect	0.07	0.10**	0.04	[0.02, 0.20]
Direct effect	0.02	0.03	0.06	[-0.10, 0.15]
Time 2				
POS as predictor				
Indirect effect	0.11	0.13**	0.05	[0.04, 0.25]
Direct effect	-0.11	-0.12	0.07	[-0.27, 0.01]
PSS as predictor				
Indirect effect	0.08	0.10**	0.04	[0.03, 0.23]
Direct effect	-0.03	-0.04	0.07	[-0.18, 0.10]
Communication as predictor				
Indirect effect	0.22	0.27***	0.08	[0.14, 0.44]
Direct effect	-0.19	-0.23**	0.08	[-0.40, -0.08]
Participation as predictor				
Indirect effect	0.14	0.18***	0.06	[0.07, 0.32]
Direct effect	0.01	0.01	0.07	[-0.13, 0.15]

Notes. n = 479–496. Bootstrap sample size = 5,000. CR = change readiness. POS = perceived organizational support. PSS = perceived supervisor support. t1 = measurement time 1. t2 = measurement time 2.
* $p < .05$. ** $p < .01$. *** $p < .001$.

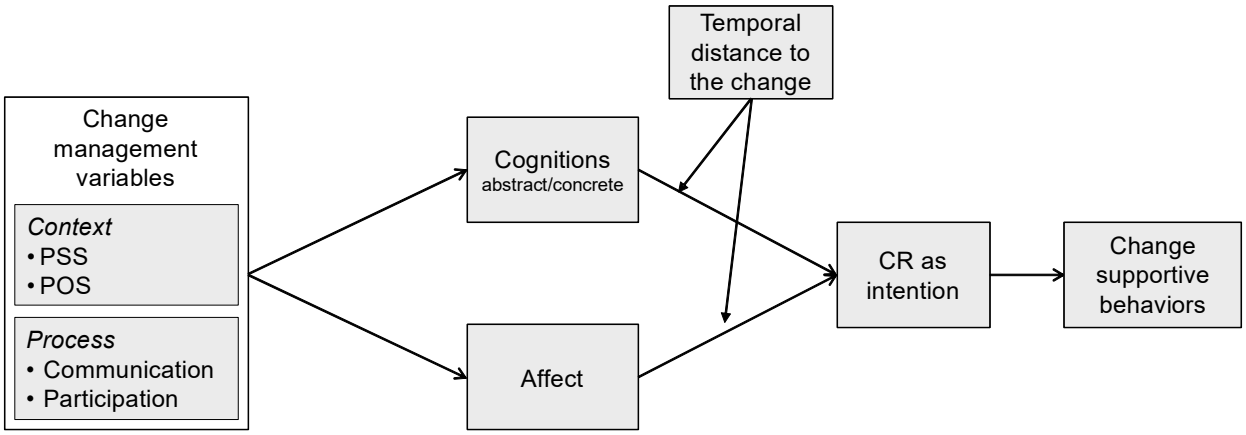

Figure 1: Research model.