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Monograph

Cognitive adjustment as an indicator of psychological health at work: Development and validation of a measure

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ABSTRACT

Based on organizational socialization literature (e.g., Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007; Kammeyer-Mueller & Wanberg, 2003; Saks, Uggerslev, & Fassina, 2007) and Conservation of Resources theory (COR theory; Hobfoll, 1989, 2001), this article aims to develop a conceptualization and a measurement of cognitive adjustment at work (CAW), as an indicator of psychological health in the workplace. Two studies, including three independent samples ($N_A = 296$, $N_B = 350$, $N_C = 139$), were conducted to test an operational proposal of CAW. In Study 1, exploratory and confirmatory factor analyses, as well as reliability and temporal invariance analyses, were performed to test the structure of both the construct and the instrument. In Study 2, nomological network analysis was conducted. Results suggest strong empirical support for the structure and validity of CAW, defined as a second-order factor, which includes task adjustment, work group adjustment and organizational adjustment.

1. Cognitive adjustment as an indicator of psychological health at work: development and validation of a measure

In line with the World Health Organization (1948), which defined health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (p. 2), researchers have become more interested in researching both negative and positive indicators of psychological health at work (Boudrias et al., 2014). Psychological distress and psychological well-being at work are some of the main indicators that have been studied (Gilbert, Dagenais-Desmarais, & Savoie, 2011).

Beyond the subjective experience of distress and well-being, psychological health at work also should include an assessment of the individual's functioning in the workplace (Gilbert, 2009; Warr, 1990). Notably, individual functioning is considered as one of the criteria to consider in establishing a clinical diagnosis (e.g., DSM-IV; American Psychiatric Association, 2000). In an organizational context, an employee's functioning differs from other spheres of life because of the singularity of the workplace (e.g., rules, norms, need to ensure livelihood; Dagenais-Desmarais & Savoie, 2012; Hakanen & Schaufeli, 2012). However, few studies focusing on occupational health have examined such a component of psychological health. Now, more than ever, a person's ability to function is constantly being challenged, especially because people face many changes in their workplace (e.g., financial market instability, mergers and restructurings, shifts in the demographic composition of the working population; DeArmond et al., 2006; Griffin, Neal, & Parker, 2007). Thus, it is crucial to focus on individual functioning in order to understand and measure psychological health at work.

To tackle this issue, we draw on previous work in the areas of organizational socialization (e.g., Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007; Kammeyer-Mueller & Wanberg, 2003; Saks, Uggerslev, & Fassina, 2007) and Conservation of Resources theory (COR theory; Hobfoll, 1989, 2001) to propose a conceptualization and a measurement of a construct that captures

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individual functioning in a work environment. Two studies were conducted from this perspective. The former tested the construct structure, while the latter examined a partial nomological network for the construct through the lens of psychological health at work.

2. Theoretical underpinning

The worker's functioning in the workplace has been the subject of analysis in various theoretical fields of study (e.g., set-point theory, Diener, Lucas, & Scollon, 2006; dynamic equilibrium theory, Headey & Wearing, 1989; appraisal theory, Lazarus & Folkman, 1984; opponent-process theory, Solomon & Corbit, 1973). Many labels are used to name the phenomenon (Luhmann, Hofmann, Eid, & Lucas, 2012). Adaptation and adjustment are often employed interchangeably (e.g., Bravo, Peiro, Rodriguez, & Whitely, 2003; Reio & Sutton, 2006), creating additional confusion. However, some people have made the effort to distinguish between both constructs (e.g., Kammeyer-Mueller & Wanberg, 2003; Matsumoto, Hirayama, & LeRoux, 2006). Adaptation refers to the process by which people change their cognitions and behaviors to better meet the workplace demands (Matsumoto et al., 2006), while adjustment is considered as a result of an adaptation process (Bauer et al., 2007; Matsumoto et al., 2006). These definitions offer a clear distinction between the variables inherent in the adaptation process and those resulting from the process. This paper has been prepared from this perspective.

Several scholars specializing in organizational socialization have focused on the positive indicators of adjustment at work (e.g., Bauer et al., 2007; Wanberg & Kammeyer-Mueller, 2000). Some made a distinction between distal and proximal positive indicators (Bauer et al., 2007; Cooper-Thomas & Anderson, 2006; Saks et al., 2007). Distal positive indicators refer to organizational outcomes such as job satisfaction, organizational commitment, and performance (Bauer et al., 2007; Saks et al., 2007). Many people consider these results to constitute secondary adjustment measures because more proximal adjustment indicators would influence them (Kammeyer-Mueller & Wanberg, 2003; Saks et al., 2007).

Proximal positive indicators have to do with “how to” act in a suitable manner given the work environment. They are grouped together into different dimensions and multiple terminologies exist to describe them (e.g., Kammeyer-Mueller & Wanberg, 2003; Taormina, 2004). By examining organizational socialization literature (e.g., Haueter, Macan, & Winter, 2003; Reio & Sutton, 2006), we have extracted three proximal adjustment indicators, namely task adjustment, work group adjustment and organizational adjustment. Task adjustment refers to the knowledge and skills required to deal with the different aspects of the job (Morton, 1994;

Table 1
Summary of the positive proximal indicators of adjustment at work instruments.

Instrument	Occupation	Sample	Validation[a]	Comments
Chao et al. (1994)	Engineering, management, academic	$N_{T1} = 780$; $N_{T2} = 609$; $N_{T3} = 522$; $N_{T4} = 472$; $N_{T5} = 432$ Engineers, managers, employed college graduates, newcomers and old employees	A B C E	Confirmatory factor analysis is not performed.
Haueter et al. (2003)	Academic, financial institution, brewery, computer support company	$N_{T1} = 492$; $N_{T2} = 240$ Working graduate and undergraduate students at an urban mid-western university N = 320 Newcomers (type of job non specified)	A B C D E F	Instrument discards the understanding of interpersonal interactions. A statistical model is tested separately for each of the three dimensions of organizational socialization.
Morrison (1993)	Accounting firms	$N_{T1\text{-}3} = 240$ Newly recruited staff Accountants	A B C E	Some items measure task performance. Confirmatory factor analysis is not performed.
Morton (1994)	Administration	N = 513 General services administration and professional recruits	A C	Confirmatory factor analysis is not performed. Some items load on more than one factor. A communality of less than .30 for some items.
Reio (1998)	Service-industry organizations	N = 233 Sales and marketing personnel, managers, customer service representatives, customer service trainees and administrative aides	A C E	One item measures satisfaction of task performance, which does not correspond to the conceptualization that was adopted in this study. Confirmatory factor analysis is not performed. The total sample is made up of subgroups that were used to make comparisons. Their sizes were small and unequal.
Taormina (2004)	Banking, trade and manufacturing, public service, retailing, education, social work, telecommunications	N = 193 Clerks, secretaries, trainees, operators, salespersons, technicians, engineers, teachers and supervisors	A C D	Some items confuse antecedents and results. Inferences are included in some items. Some indicators of model of adjustment do not respect the generally recognized standards.

[a] Forms of statistical analyses conducted: A = reliability (Cronbach's alpha for internal consistency); B = reliability (test-retest); C = exploratory factor analysis; D = confirmatory factor analysis of the measurement model; E = nomological network analysis; F = cross-validation analysis with new sample.

Reio & Callahan, 2004). Work group adjustment consists in learning about one's peers, identifying one's allies and understanding how to act in order to function well as part of the team (Morton, 1994; Reio & Callahan, 2004). Finally, organizational adjustment corresponds to an employee's understanding of the formal and informal rules, power relationships, as well as norms and values that define workplace climate and organizational culture (Morton, 1994; Reio & Callahan, 2004). Taken together, these three forms of adjustment translate the perception of having the necessary knowledge and skills to bind the worker to the organization and its goals (Kammeyer-Mueller & Wanberg, 2003), which constitutes adjustment at a cognitive level.

Conceptualizing workplace adjustment in this manner has many advantages. First, cognitive adjustment at work (CAW) reflects a positive description of what characterizes a well-adjusted employee. This conceptualization appears appropriate given our aim to propose an indicator of psychological health at work that captures individual functioning. Second, CAW, as presented above, describes some components of the three recognized levels of adjustment: (1) task adjustment, (2) group adjustment, and (3) organizational adjustment (Haueter et al., 2003; Saks & Ashforth, 1997). This conceptualization stands out from others which did not account for these three levels (e.g., Morrison, 1993; Taormina, 2004), in addition to being holistic and parsimonious. Furthermore, CAW would be an antecedent of distal measures of workplace adjustment (e.g., performance), and therefore, considered as a more direct representation of the construct (Kammeyer-Mueller & Wanberg, 2003; Saks et al., 2007). This reasoning is consistent with cross-sectional studies in organizational socialization (e.g., Bauer et al., 2007; Saks et al., 2007). Thus, based on those arguments, this study relies on CAW to operationalize one of the indicators of psychological health at work.

3. Measurement of CAW

Despite the significant amount of documentation that is available on adjustment at work, different problems affect the quality of the measurement of cognitive adjustment indicators. These problems relate to the content and the validation of these scales. Table 1 offers a summary of the different tools listed [Table 1 near here].

3.1. Content of the instruments

In terms of content for the measures, there is relative confusion between CAW and the related constructs (i.e., Haueter et al., 2003; Morrison, 1993; Taormina, 2004). For example, task adjustment seems to be confused with task performance (i.e., Morrison, 1993). While task adjustment refers to the knowledge and skills needed to perform the required tasks of a job (Morton, 1994; Reio, 1998), task performance corresponds to behaviors such as those defined in a job description (Borman & Motowidlo, 1992). In this perspective, items such as “I rarely make mistakes when conducting my job assignments” translate into behaviors that have to do with performance more than they do with knowledge or skills relative to the task. In addition to the confusion between adjustment and performance, one of the scales confuses antecedents and adjustment indicators (i.e., Taormina, 2004). The following item: “This organization has provided excellent job training for me” is an example of a strategy that has been documented as leverage to support adjustment (Bauer et al., 2007; Saks et al., 2007). Finally, some authors have discarded the relational component of the measurement (i.e., Haueter et al., 2003). Yet, interpersonal interactions would be an essential component of adjustment for theorists of organizational socialization (e.g., Feldman, 1981; Fisher, 1986). In light of these observations, it would be beneficial to re-examine the measurement of adjustment based on conceptual grounds.

3.2. Validation of instruments

While most of the scales have only been validated based on reliability and exploratory factor analyses (i.e., Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994; Morrison, 1993; Morton, 1994; Reio, 1998), only two of the instruments (i.e., Haueter et al., 2003; Taormina, 2004) were tested with confirmatory factor analyses. The three dimensions of the first instrument (i.e., Haueter et al., 2003) were tested separately using three statistical models. This type of analysis does not allow for the measurement of adjustment as a unified construct as suggested by some authors and based on theoretical grounds (Hobfoll, 1989, 2001; Reio, 1998; Reio & Sutton, 2006), which forces one to use subscales of the tool independently from one another. Moreover, adjustment indices relating to the second instrument (i.e., Taormina, 2004) do not meet the standards generally allowed (Hu & Bentler, 1999; Kline, 2011; Marsh & Hocevar, 1985).

Based on those conceptual and methodological considerations, Study 1 aims to test a sound conceptualization and a measurement of CAW by examining the following hypotheses:

Hypothesis 1. . Exploratory factor analyses will group CAW measurement items into three factors, namely task adjustment, work group adjustment, and organizational adjustment.

Hypothesis 2. . A second-order of CAW factor encompassing task adjustment, work group adjustment and organizational adjustment will provide a good fit to the data in the confirmatory factor analyses.

Hypothesis 3. . The measure of CAW will emerge as being internally consistent (Hypothesis 3a; alpha over .70; Kaplan & Saccuzzo, 1993), similar to the task adjustment (Hypothesis 3b), work group adjustment (Hypothesis 3c), and organizational adjustment subscales (Hypothesis 3d).

Hypothesis 4. . The factorial structure of the CAW measure will be invariant across time.

3.3. Conservation of resources theory and CAW

In order to conceptualize CAW as a component of psychological health at work, we build on Conservation of Resources theory (COR theory; Hobfoll, 1989, 2001), one of the leading theories of psychological health at work (Gorgievski & Hobfoll, 2008). According to this theory, "people strive to retain, protect, and build resources and that what is threatening to them is the potential or actual loss of these valued resources" (Hobfoll, 1989, p. 516). COR theory (Hobfoll, 1989, 2001) therefore underpins a motivational process brought about by the actual or anticipated loss or gain of resources. Resources reflect what is personally valued and involve psychological characteristics, objects, energy and conditions (e.g., job security, social support; Hobfoll, 1998, 2001). Individuals with fewer resources are more vulnerable to resource loss, are less able to invest resources to gain new ones and have limited motivation and energy to allocate to work, whereas those with a greater pool of resources are less vulnerable to resource loss, in addition to being more motivated and better equipped to make resource gain possible and to have enough energy for their work (Gorgievski & Hobfoll, 2008; Hobfoll, 1989, 2001; Meyer, Becker, & Vandenberghe, 2004).

In keeping with COR theory, CAW reflects important resources as it includes knowledge and skills in relation to work (Hobfoll, 1998, 2001). To obtain this knowledge and these skills, workers must invest their resources, most notably time and energy. For instance, studies have shown that seeking information and exchanging with colleagues reinforce employee adjustment (Bauer et al., 2007; Gruman, Saks, & Zweig, 2006; Saks et al., 2007). In this respect, CAW reflects the result of the investments made by employees to develop their resources within their organization, which appears to be an outcome of resource gain (Hobfoll, 1989, 2001). Consequently, CAW should be linked differently to correlates of psychological health at work according to the dynamic regarding resource loss and resource gain inherent to these variables. In the next paragraphs, we present the hypotheses examined in Study 2.

3.4. Proactive personality

Proactive personality corresponds to a dispositional tendency to behave with confidence, to work actively to control an environment, and to seek out information (Bateman & Crant, 1993; Crant, 2000). According to COR theory (Hobfoll, 1998, 2001), positive self-belief like confidence reflects valuable resources, which may protect a person from resource threat and enable the individual to orchestrate resource gain. Thus, we argue that proactive people, who tend to behave with confidence and who seek to have control over their environment, should be motivated to find the necessary information on the task, on their group and on their organization in order to be cognitively adjusted. From the perspective of occupational health psychology, proactive personality has been found to have favorable effects on positive indicators of psychological health (e.g., work engagement, Van der Heijden, Van Vuuren, Kooij, & de Lange, 2015; job satisfaction, Spitzmuller, Sin, Howe, & Fatimah, 2015). In socialization literature, meta-analyses have pointed to a positive relationship between proactive personality and adjustment (Spitzmuller et al., 2015; Thomas, Whitman, & Viswesvaran, 2010). In light of those theoretical explanations and results, the following hypothesis is proposed:

Hypothesis 5. . Proactive personality will be positively related to CAW.

3.5. Psychological well-being at work

Psychological well-being at work represents one of the main indicators of psychological health in the workplace (Gilbert et al., 2011; Keyes, 2003). Psychological well-being at work refers to a psychological state characterized by valuable resources identified by Hobfoll (1998, 2001). As it reflects positive cognitions and affects related to a positive rapport with oneself, others and the job (Gilbert et al., 2011), psychological well-being at work includes many valuable resources (e.g., positive feelings about oneself; Hobfoll, 1998, 2001). Furthermore, these resources render individuals less vulnerable to resources loss, while putting them in a motivational state that allows them to gather more resources (Gorgievski & Hobfoll, 2008; Hobfoll, 1989, 2001). Thus, greater psychological well-being would translate into an increased reservoir of resources, which would decrease an individual's fear of resource loss (Gorgievski & Hobfoll, 2008; Hobfoll, 1989, 2001). Being in that state, individuals would be able to invest more resources to acquire new ones (Gorgievski & Hobfoll, 2008; Hobfoll, 1989, 2001), particularly to become cognitively adjusted. Hence, we hypothesize that:

Hypothesis 6. . Psychological well-being at work will be positively related to CAW.

3.6. Task performance

Psychological health at work is related to different outcomes, including performance (Brien, Hass, & Savoie, 2012; Demerouti, Bakker, & Halbesleben, 2015). Motowidlo, Borman, and Schmit (1997) stressed that tasks executed by individuals are the cornerstone of job performance. Task performance refers to individual behaviors achieved in a way that produces organizational goods and services over a certain period of time (Motowidlo, 2003) and comprises in-role duties (Borman & Motowidlo, 1992). Based on COR theory (Hobfoll, 1998, 2001), we propose that the more workers are cognitively adjusted, the more they should benefit from resources in terms of knowledge and abilities, which would place them in a better position to invest resources in their work.

Given this fact, employees are more likely to perform better. In support of this claim, meta-analyses have shown that adjustment was positively associated with performance (Bauer et al., 2007; Saks et al., 2007). Thus, the following hypothesis is proposed:

Hypothesis 7. . CAW will be positively related to task performance.

4. Study 1: instrument development and psychometric examination

4.1. Method

4.1.1. Participants and procedure

Three samples of francophone teachers were collected in 25 public schools in Quebec, a province of Canada, representing a large variety of school characteristics. Sample A was composed of 296 teachers (68% women). Respondents had a mean teaching tenure of 12.45 years ($SD = 8.65$). For Sample B, 350 teachers (69% women) were recruited. Participants had an average of 13.92 years of teaching experience ($SD = 9.47$). Sample C included 139 teachers. Participants completed the CAW instrument on two occasions with a one-year interval between them (at Time 1, 396 respondents took part in the study; the response rate at Time 2 was 35%). Participants (71% women) had been employed as teachers for an average of 12.33 years ($SD = 6.90$).

4.1.2. Instrument development

The development of a CAW scale was inspired by the Work Adaptation Questionnaire (Reio, 1998) because this tool measures task, work group and organizational adjustment. Reio (1998) items 2, 13, 14, 15, 16 and 18 were selected, adapted and translated into French. On the basis of their theoretical relevance and their representativeness (Hogan, 2014), thirteen items (i.e., items 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 17, 19) were then formulated to better capture the subtleties of each of the three dimensions (task adjustment, e.g., "I know all of the requirements entailed in my task"; work group adjustment, e.g., "I know whom I can speak to when I feel overwhelmed by my work"; organizational adjustment, e.g., "I know how decisions in my school are taken"). A 6-point response scale (ranging from 1 = completely disagree to 6 = completely agree) was used for each item. Following recommendations by several scholars (Bouletreau, Chouanïère, Wild, & Fontana, 1999; Hogan, 2014), this pool of items was reviewed by a panel from the departments of psychology and education at *Université de Montréal* and by Ph.D. students to establish face validity and to verify the accuracy, relevance, clarity, spelling, bias sensitivity, technical adequacy, and readability of items.

4.1.3. Analysis of the instrument

Four forms of statistical analyses were conducted: (a) exploratory factor analyses of the data in Sample A to examine the factor structure of the instrument, (b) confirmatory factor analyses to test the fit of the measurement model to the data in Sample B, (c) reliability analyses (internal consistency) of the data in Samples A, B and C, and (d) an invariance analysis of the instrument in Sample C.

4.2. Results

4.2.1. Exploratory factor analyses

The participants in Sample A completed the 19-item instrument, and the data were analyzed with exploratory factor analyses. The Promax method of oblique rotation was performed with SPSS 20.0 because, consistent with previous research (Reio, 1998; Reio & Callahan, 2004; Reio & Sutton, 2006), factors were assumed to be correlated. The exploratory factor analysis yielded three eigenvalues over one and the scree plots also indicated a 3-factor solution (Tabachnick & Fidell, 2007), providing support for Hypothesis 1. However, one item of the organizational adjustment subscale (i.e., item 19) loaded on the work group adjustment subscale and one item (i.e., item 5) did not load on any subscale; both items were subsequently eliminated. This elimination brought the cognitive adjustment scale down to 17 items. Table 2 shows the factor loadings, communalities, factor correlations, as well as the percentage of the variance for the Promax rotation [Table 2 near here].

4.2.2. Confirmatory factor analyses

The factor structure composed of 17 items remaining after the analysis of the Sample A data was cross-validated with the Sample B data using AMOS 19 software for confirmatory factor analyses (CFA). Table 3 summarizes the CFA results [Table 3 near here].

An examination of the model modification indices suggests that the withdrawal of three out of the seven items for work group adjustment (i.e., items 7, 8, 17) and two out of the six items for organizational adjustment (i.e., items 9, 18), which have higher residual errors or complex relationships not expected, could improve model fit. Modification indices highlight the possibility to correlate these items or their residuals with other items to improve the model fit. Having no theoretical basis to justify these additions, we preferred to remove those items. A new version of the 12-item scale was examined.

A three-factor structure with a second-order factor yielded a good fit to the data (M_6; $\chi2\ (51) = 119.25$, $p < .001$, $\chi2/df = 2.34$, CFI = .94, TLI = .92, SRMR = .05; RMSEA = .06, 90% CI = .05, .08; Hu & Bentler, 1999; Kline, 2011; Marsh & Hocevar,

Table 2
Factor loadings, communalities (h^2), factor correlations, and percentage of variance for promax rotation.

Item[a]	Factor loading			h^2
	1	2	3	
1. *Je suis capable de répondre aux exigences de ma tâche.* I am able to meet the demands of my work.			.78	.56
2. *Je sais comment être performant dans mon travail.* I know how to perform in my work.			.86	.69
3. *Je maîtrise les tâches requises à mon travail.* I master the tasks required for my work.			.87	.73
4. *Je connais toutes les exigences que comporte ma tâche.* I know all of the requirements entailed in my task.			.60	.47
5. *Je connais en quoi consiste le travail de mes collègues.* I know what my colleagues' work involves.	—	—	—	.59
6. *Je sais à qui m'adresser lorsque je me sens dépassé par mon travail.* I know whom I can speak to when I feel overwhelmed by my work		.39		.57
7. *Je suis accepté par mes collègues de travail.* I am accepted by my colleagues.		.91		.79
8. *J'ai l'impression que je cadre bien (fit) avec mes collègues de travail.* I feel like I fit in well with my colleagues.		.91		.83
9. *J'ai une bonne compréhension des motifs qui sous-tendent les comportements des personnes dans mon école.* I have a good understanding of the reasons underlying the behavior of the people in my school.	.70			.55
10. *Je sais comment les décisions se prennent dans mon école.* I know how decisions in my school are taken.	.83			.66
11. *Je vois les jeux politiques qui se passent dans mon école.* I see the political games that go on in my school.	.93			.75
12. *Je suis capable de tirer parti des jeux politiques.* I am able to take advantage of the political games.	.61			.70
13. *Je connais les règles informelles, les politiques et les procédures de l'école.* I know the informal rules, policies and procedures of the school.	.63			.50
14. *Je sais à qui m'adresser lorsque je ne trouve pas de réponses à mes questions.* I know who to turn to when I cannot find answers to my questions.		.42		.72
15. *Je sais quels sont les collègues qui sont disposés à m'aider.* I know which colleagues are willing to help me.		.50		.57
16. *Je sais qui aller voir lorsque je veux que les choses avancent.* I know who to go to when I want to make things happen.		.40		.67
17. *Je connais suffisamment mes collègues pour savoir comment interagir avec eux.* I know enough about my colleagues to know how to interact with them.		.60		.65
18. *Je sais qui a le pouvoir d'obtenir des choses dans l'école.* I know who has the power to obtain things in the school.	.67			.59
19. *Je crois que je cadre bien (fit) avec mon école.* I believe that I fit in well with my school.		.67		.67
Factor correlations				
Factor 1 – Organizational adjustment	—			
Factor 2 – Group adjustment	.37	—		
Factor 3 – Task adjustment	.45	.34	—	
Percent of variance	30.26	11.96	9.04	

[a] Only the French version of the instrument was validated in this paper. Original French items are italicized.

1985). This model improved significantly over more parsimonious models, including the first-order three-factor model (M_5), $\Delta\chi^2(3) = 94.40$, $p < .001$, and the single-factor model (M_4). These results provide evidence supporting the use of a global score for CAW in other studies. Hypothesis 2 is therefore supported. Standardized estimates for the parameters of the final model (M_6) are presented in Fig. 1.

Internal consistency. The Cronbach's alpha values for Samples A, B and C data were between .80 and .84 for CAW, and between .74 and .83 for subscales. All of the alpha values met or exceeded the generally recognized standard (.70; Kaplan & Saccuzzo, 1993). This lends support to Hypotheses 3a-d. The complete results, as well as descriptive statistics and correlations among variables, are reported in Table 4.

4.2.3. Invariance analysis

The temporal invariance of the CAW measurement model was assessed through CFA for Sample C data. The tenability of equality restrictions on loadings, intercepts, and residual variances was tested as per recommendations by Vandenberg and Lance (2000). Results are presented in Table 4. Judging by all fit indices, all the conditions have been respected, yielding support for Hypothesis 4.

Table 3
Fit statistics.

Model	χ^2	*df*	χ^2/df	$\Delta\chi^2$	CFI	TLI	SRMR	RMSEA and 90% CI
M_1 – Single-factor model (17 items)	1016.35***	119	8.54		.53	.46	.12	.15 [.14, .16]
M_2 – Three-factor model (17 items)	667.80***	119	5.61	348.55***	.71	.67	.16	.12 [.11, .12]
M_3 – Three-factor with a second-order factor model (17 items; baseline model for comparison with $M_{1\text{-}2}$)	555.96***	116	4.79		.77	.73	.08	.10 [.10, .13]
M_4 – Single-factor model (12 items)	536.38***	54	9.93		.58	.49	.12	.16 [.15, .17]
M_5 – Three-factor model (12 items)	213.65***	54	3.96	94.40***	.86	.83	.15	.09 [.08, .11]
M_6 – Three-factor with a second-order factor model (12 items; baseline model for comparison with $M_{4\text{-}5}$)	119.25***	51	2.34		.94	.92	.05	.06 [.05, .08]
M_7 – Configural invariance: equal factor loading patterns across occasions (baseline model for comparison with $M_{8\text{-}10}$)	337.33***	230	1.47		.91	.90	.07	.06 [.05–.07]
M_8 – Metric invariance: equal factor loadings across occasions	356.32***	242	1.47	18.99	.91	.90	.08	.06 [.05, .07]
M_9 – Scalar invariance: equal item intercepts across occasions	363.65***	254	1.43	26.33	.91	.90	.08	.06 [.04, .07]
M_{10} – Uniqueness invariance: equal residual variances across occasions	381.11***	266	1.43	43.78	.91	.90	.08	.06 [.04, .07]

*** $p < .001$.

1. Study 2: nomological network analysis

1.1. Method

1.1.1. Participants and procedure

A second set of data was collected from Sample B participants ($N = 350$) when the data for Study 1 was gathered for the purpose of this sample. The procedure was the same as in Study 1.

1.1.2. Measures

All measures were administered in French.

1.1.3. CAW

The instrument used was the CAW scale, which was validated on a preliminarily basis in Study 1.

1.1.4. Proactive personality

Proactive personality was measured using five items (e.g., "When an important situation for me occurs, I tend to be ahead of it") inspired by Bateman and Crant's English questionnaire (1993) and translated into French (back translation; Brislin, 1986). Each item was rated on a 5-point scale (1 = almost never, 5 = almost always). The Cronbach's alpha in this study was .76 for the entire set of items.

1.1.5. Psychological well-being at work

The 23-item French scale developed by Gilbert et al. (2011) was used to assess psychological well-being at work. Sample items included "My morale is good", and all items used a 5-point scale ranging from 1 (almost never) to 5 (almost always). In the present data set, the Cronbach's alpha was .92.

1.1.6. Task performance

A 21-item French scale validated by Brien, Lapointe, Boudrias, and Brunet (2011) was used to measure self-reported task performance. Items were rated on a 5-point scale (1 = not at all, 5 = very much so; e.g., "I covered the content proposed by the program"). The Cronbach's alpha of the global task performance score was .84.

1.2. Results

Preliminary analyses were performed. Results confirm the assumptions of normality and show no evidence of singularity or multicollinearity. Analyses indicated that proactive personality was positively related to CAW ($r = .28$, $p < .001$). Similarly, psychological well-being at work was positively related to CAW ($r = .43$, $p < .001$). Also as expected, CAW was positively related to task performance ($r = .39$, $p < .001$). Hence, Hypotheses 5, 6 and 7 are supported.

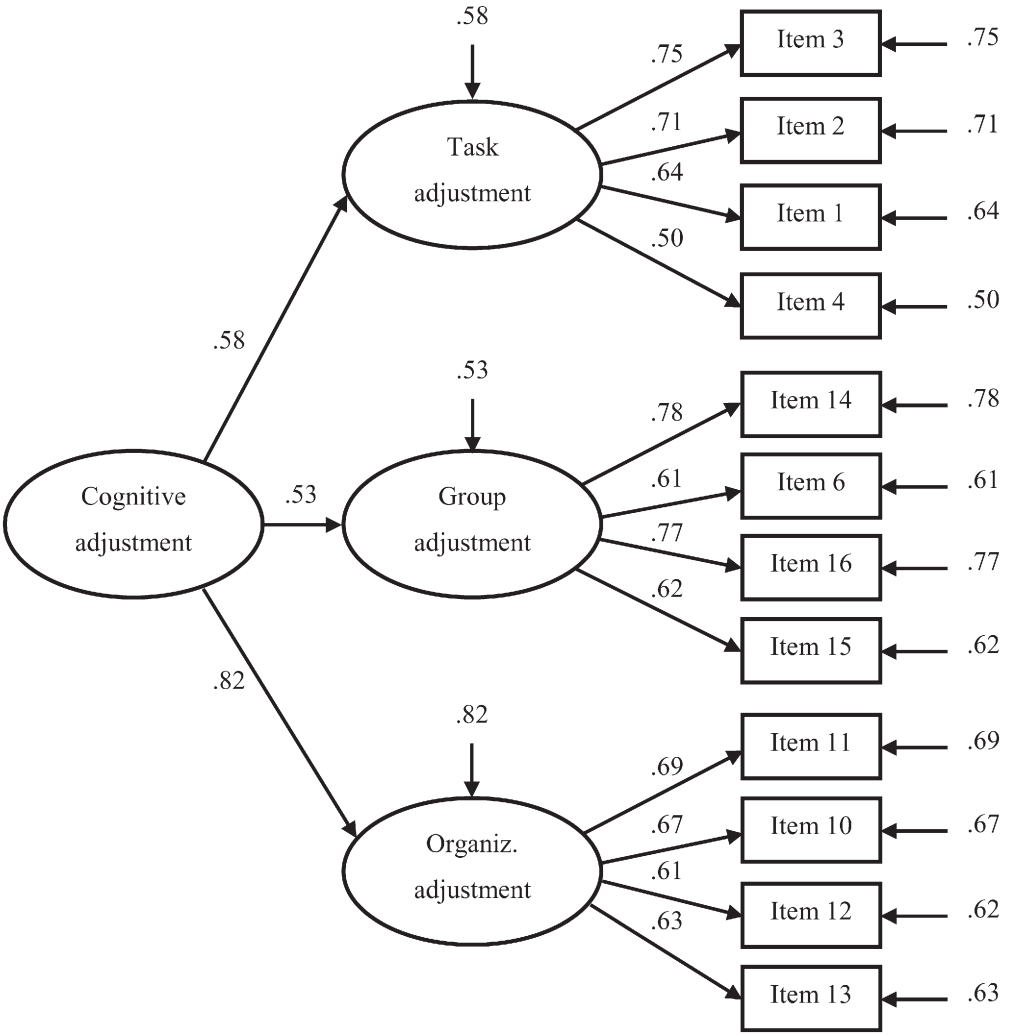

Fig. 1. Standardized estimates for the final measurement model M_6.

2. Discussion

Building on work in the areas of organizational socialization (e.g., Bauer et al., 2007; Kammeyer-Mueller & Wanberg, 2003; Saks et al., 2007) and COR theory (Hobfoll, 1989, 2001), this paper makes a number of contributions to literature in the field of occupational health psychology. Responding to previous calls (Gilbert, 2009; Warr, 1990), we provide initial evidence regarding employee functioning in the workplace in contrast to prior work that focused on psychological distress or well-being. Addressing the conceptual and methodological shortcomings of past research, Study 1 offered a test of the second-order three-factor CAW model through exploratory and confirmatory factor analyses, reliability analysis, and temporal invariance analysis.

Study 2 revealed that CAW was positively associated with proactive personality, psychological well-being at work and task performance. As proactive personality and psychological well-being include several valuable resources (e.g., positive feelings about oneself), they could enhance people's available resources. In line with COR theory (Hobfoll, 1989, 2001), those with more resources at their disposal will more likely be able to invest resources (e.g., in actions like information seeking) in order to become cognitively adjusted. Since individuals with a high level of cognitive adjustment possess valuable knowledge and skills regarding different organizational realities (i.e., task, work group and organization), they would be motivated to devote more energy towards their work and, therefore, would be better able to perform their tasks. These results are in line with organizational socialization literature and COR theory (Hobfoll, 1989, 2001), and confirm previous evidence (Bauer et al., 2007; Saks et al., 2007). In regard to the reviewed measures (i.e., Table 1), these findings are also consistent with Reio's results (1998) regarding performance, thus providing additional support for the scale's criterion validity. Furthermore, we went beyond other instrument validation studies (Chao et al., 1994; Haueter et al., 2003; Morrison, 1993; Morton, 1994; Reio, 1998; Taormina, 2004) by testing the

Table 4
Descriptive statistics and correlations among variables for samples A, B and C.

Variable	*M*	*SD*	1	2	3	4	5	6	7
Sample A									
1. Cognitive adjustment	4.61	.63	(.84)						
2. Task adjustment	5.16	.61	.67**	(.78)					
3. Group adjustment	4.81	.80	.77**	.35**	(.78)				
4. Organizational adjustment	3.86	1.03	.84**	.37**	.42**	(.80)			
Sample B									
1. Cognitive adjustment	4.68	.56	(.80)						
2. Task adjustment	5.18	.58	.65**	(.74)					
3. Group adjustment	4.86	.80	.71**	.23**	(.79)				
4. Organizational adjustment	4.00	.91	.81**	.36**	.30**	(.74)			
5. Proactive personality	3.58	.58	.28**	.22**	.14**	.27**	(.76)		
6. Psychological well-being at work	3.97	.49	.43**	.38**	.40**	.21**	.33**	(.92)	
7. Task performance	3.88	.38	.39**	.42**	.25**	.21**	.36**	.46**	(.84)
Sample C									
1. Cognitive adjustment	4.67	.58	(.81)						
Time 1 **(Time 2)**	**(4.70)**	**(.55)**	**(.81)**						
2. Task adjustmentTime 1 **(Time 2)**	5.15	.61	.61**	(.79)					
	(5.16)	**(.61)**	**(.56**)**	**(.80)**					
3. Group adjustmentTime 1 **(Time 2)**	4.82	.85	.75**	.24**	(.83)				
	(4.91)	**(.67)**	**(.77**)**	**(.23**)**	**(.75)**				
4. Organizational adjustment	4.07	.91	.79**	.30**	.35**	(.74)			
Time 1 **(Time 2)**	**(4.03)**	**(.95)**	**(.83**)**	**(.17*)**	**(.48**)**	**(.79)**			

Note. Reliability coefficients are reported in parentheses on the diagonal.
* $p < .05$.
** $p < .01$.

measure's criterion validity in regard to known aspects of personality and psychological well-being at work, both of which are important components of the nomological network of psychological health at work (Gilbert et al., 2011; Spitzmuller et al., 2015).

By empirically testing a conceptual proposition, this research opens up exciting new avenues of research in the area of occupational health psychology. More specifically, we developed a sound and useful instrument that will be of use to both scholars and practitioners. While researchers will be able to study psychological health at work from a broader perspective, practitioners will benefit from a more encompassing diagnostic tool to identify the manifestations of psychological health at work. In addition, our research adds new insights to the nomological network of psychological health at work by testing the relationships between important variables examined in past studies (Demerouti et al., 2015; Van der Heijden et al., 2015; Spitzmuller et al., 2015) with our proposed construct.

2.1. Limitations and directions for future research

The current research has certain limitations. On the methodological front, the type of data, collected through self-reported scales, is potentially sensitive to common variance biases, particularly with the measurement of task performance. Future studies could limit these biases by using objective measures of performance. Although this article went further than past research by surveying workers from the public sector, additional replications are nonetheless needed using varied samples of occupations, such as nurses, police officers and other public sector employees.

On the conceptual front, in order to have a broader understanding of CAW, antecedents and additional consequences could be explored. Seeking information and exchanging with colleagues, as mentioned earlier, are examples of potentially important determinants of adjustment (Bauer et al., 2007; Saks et al., 2007). In terms of outputs, CAW would be a proximal indicator of adjustment and would influence distal indicators such as job satisfaction and organizational commitment (Bauer et al., 2007; Saks et al., 2007). While CAW is conceptualized to capture workers' functioning in their organization, other indicators of adjustment should likely be defined (e.g., negative indicators of adjustment). It would be beneficial for future studies to focus on this and to include these factors in an integrated model of psychological health at work that includes indicators such as well-being, distress and CAW.

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