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La santé psychologique au travail : une modélisation ancrée dans la théorie de la conservation des ressources

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Résumé

Si la santé psychologique au travail retient de plus en plus l'attention de la communauté scientifique et des milieux de pratique, certains aspects du phénomène restent néanmoins à explorer. Notamment, les études se sont peu attardées au fonctionnement de l'individu dans l'organisation, focalisant plutôt sur les expériences subjectives associées au bien-être et à la détresse psychologiques. En outre, l'état des connaissances sur les mécanismes sous-jacents à la santé psychologique au travail demeure embryonnaire. Faute d'écrits sur la question, la compréhension du construit s'avère partielle.

Devant ce constat, la présente thèse vise à modéliser la santé psychologique au travail en y intégrant des indicateurs du fonctionnement de l'employé. Dans cette optique, cinq études, regroupées en deux articles, ont été menées auprès de quatre échantillons indépendants (Article 1 : N_A = 296, N_B = 350, N_C = 139; Article 2 : N_B = 330, N_C = 128; N_D = 389).

Le premier article a pour objet de développer une conceptualisation et une mesure du fonctionnement de l'individu dans l'organisation. Prenant appui sur les travaux en socialisation organisationnelle et sur la théorie de la conservation des ressources (Hobfoll, 1989, 2001), l'ajustement cognitif au travail est proposé à titre d'indicateur additionnel de la santé psychologique au travail. Des analyses factorielles exploratoires et confirmatoires, de même que des analyses de cohérence interne, d'invariance temporelle et de régression, confirment les qualités psychométriques de l'instrumentation et étayent la validité de l'ajustement cognitif au travail comme indicateur de la santé psychologique au travail.

Le second article s'appuie sur la conceptualisation du fonctionnement de l'employé présentée dans le premier article pour tester une modélisation de la santé psychologique au travail. Se fondant sur la théorie de la conservation des ressources (Hobfoll, 1989, 2001), la santé psychologique au travail est modélisée comme un processus incluant quatre indicateurs, soit le bien-être psychologique, la détresse psychologique, l'ajustement cognitif et les réponses comportementales de stress au travail. Deux mécanismes distincts sont mis de l'avant pour expliquer les relations unissant les indicateurs positifs de santé psychologique au

travail (c.-à-d., le bien-être psychologique et l'ajustement cognitif) et celles caractérisant les indicateurs négatifs (c.-à-d., la détresse psychologique et les réponses comportementales de stress). Des analyses acheminatoires et d'invariance transculturelle révèlent la présence des deux mécanismes et montrent que, au-delà de l'influence des demandes en emploi, le bien-être psychologique exerce un effet médiateur sur la relation positive entre des ressources personnelles (c.-à-d., optimisme et résilience) et organisationnelle (c.-à-d., climat de travail) et l'ajustement cognitif au travail. Les résultats mettent également en exergue le rôle médiateur de la détresse psychologique sur la relation négative entre les mêmes ressources et les réponses comportementales de stress au travail. Une discussion générale précise la portée des résultats présentés dans le cadre des deux articles.

Mots-clés : Santé psychologique au travail, ajustement cognitif au travail, bien-être psychologique au travail, détresse psychologique au travail, réponses comportementales de stress au travail, optimisme, résilience, climat de travail, théorie de la conservation des ressources

Abstract

While psychological health at work is gaining attention from academics and practitioners, certain aspects of the phenomenon need deeper exploration. Notably, scant research has examined individual functioning in the workplace; the majority of studies focused on subjective experiences related to psychological well-being and distress instead. Moreover, little is known about the mechanisms underlying psychological health at work. These shortcomings result in a partial understanding of the construct.

In light of these observations, the present thesis aims to develop a model of psychological health at work, integrating indicators of employee functioning. To achieve this goal, five studies divided into two articles were conducted using four independent samples (Article 1: N_A = 296, N_B = 350, N_C = 139; Article 2: N_B = 330, N_C = 128; N_D = 389).

The first article proposes a conceptualization and a measurement of individual functioning at work. Building on organizational socialization literature and on conservation of resources theory (Hobfoll, 1989, 2001), we conceptualize cognitive adjustment as a psychological health indicator. Exploratory and confirmatory factor analyses, as well as reliability, temporal invariance and regression analyses, confirm the psychometric qualities of the instrument and support the validity of cognitive adjustment at work as, indeed, an indicator of psychological health.

Drawing from the conceptualization of employee functioning reported in the first article, the second article tests a model of psychological health at work. Based on conservation of resources theory (Hobfoll, 1989, 2001), psychological health at work is conceptualized as a process, which includes four indicators, namely psychological well-being, psychological distress, cognitive adjustment, and behavioural stress responses at work. Two distinct mechanisms are put forward explaining the relations between positive indicators (i.e., psychological well-being and cognitive adjustment), and the relations between negative indicators (i.e., psychological distress and behavioural stress responses). Path and cross-cultural invariance analyses acknowledge both mechanisms, and demonstrate that, beyond

the impact of job demands, psychological well-being exercises a mediating effect on the positive relations between personal (i.e., optimism and resilience) and organizational (i.e., work climate) resources, and cognitive adjustment at work. Results also highlight that psychological distress mediates the negative relations between the same resources and behavioural stress responses at work. A general discussion covers in deeper details the implications of the findings emanating from both articles.

Keywords: Psychological health at work, cognitive adjustment at work, psychological well-being at work, psychological distress at work, behavioural stress responses at work, optimism, resilience, work climate, conservation of resources theory

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Liste des abréviations

COR theory	Conservation of Resources theory
CFA	Confirmatory factor analysis

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Introduction

Alors que la productivité obnubilait les organisations du 20e siècle, la santé psychologique au travail gagne en intérêt depuis les dernières années (Baptiste, 2008; Barling & Griffiths, 2011; Kersley et al., 2013). Symptomatique d'un changement de perspective, la santé psychologique au travail retient maintenant l'attention des leaders de ce monde. À titre d'exemple, le 43e Forum économique mondial de Davos, qui réunissait l'élite de la finance en janvier 2013, s'est déroulé sous le thème de la santé et du bien-être des employés. L'empire multimilliardaire Google, déclaré meilleur employeur en 2014 selon Fortune (2014), offre latitude décisionnelle, programme de conciliation travail-famille, repas gratuits, nombreuses installations de divertissement et autres commodités pour favoriser le bien-être de ses salariés. Au Canada, un rapport du Conference Board publié en 2012 fait la promotion des investissements dans les programmes de prévention et de promotion de la santé et du mieux-être en milieu de travail (Chénier, Hoganson, & Thorpe, 2012). Au Québec, le Conseil du patronat et la Société québécoise de psychologie du travail et des organisations ont tenu, au printemps 2013, des activités portant sur la santé psychologique au travail (Conseil du patronat du Québec, 2013; Société québécoise de psychologie du travail et des organisations, 2013). Comment expliquer cette popularité grandissante?

Les enjeux de la santé psychologique au travail se dessinent à l'échelle individuelle, organisationnelle et sociétale, et les chiffres associés aux problématiques sous-jacentes sonnent l'alarme. Quotidiennement, 31% des employés se sentent tendus au travail et 64% estiment que leur employeur ne fournit pas les ressources suffisantes pour les aider à gérer leur stress (American Psychology Association, 2014). Le salaire, la surcharge de travail, le manque de reconnaissance et d'opportunités de développement figurent parmi les sources de stress au travail les plus rapportées par les salariés (American Psychology Association, 2014). Le stress fait partie des causes reconnues de différents troubles physiques et psychologiques, notamment la dépression (Becker & Kleinman, 1991; Meier, Semmer, & Gross, 2014; Welberg, 2014). Plus de 350 millions de personnes dans le monde souffrent de dépression et elle

représente la première cause d'invalidité au travail (Organisation mondiale de la santé, 2012). Les troubles de l'humeur, comme la dépression, entraîneraient des pertes de productivité de plus de 50 milliards de dollars américains par année (Kessler et al., 2006).

Ces statistiques préoccupantes contrastent avec les effets de la bonne santé des travailleurs. En effet, les employés jouissant d'un haut niveau de bien-être bénéficieraient de bonnes conditions physiques (Shier & Graham, 2011; Straume & Vittersø, 2014), feraient preuve de créativité et d'innovation (Dolan & Metcalfe, 2012; Vinarski-Peretz, Binyamin, & Carmeli, 2011), émettraient des comportements de citoyenneté organisationnelle (Cartwright & Cooper, 2014; Gore et al., 2014; Madrid, Patterson, Birdi, Leiva, & Kausel, 2014; Rego, Ribeiro, & Cunha, 2010) et offriraient une meilleure performance (Brien, Hass, & Savoie, 2012; Gilboa, Shirom, Fried, & Cooper, 2008; Wood, Van Veldhoven, Croon, & de Menezes, 2012). Au niveau organisationnel, les entreprises employant des travailleurs en bonne santé seraient plus performantes, avec une probabilité deux fois plus grande d'avoir une marge BAIIA (c.-à-d., bénéfice avant intérêts, impôts et amortissement, soit le meilleur indicateur de performance économique) se situant au-dessus de la médiane (Keller & Price, 2011).

Au regard de ces importants enjeux, chercheurs et praticiens s'efforcent de mieux comprendre comment favoriser la santé psychologique au travail. En dépit d'efforts et d'avancées considérables, plusieurs questions restent néanmoins sans réponse et la documentation scientifique comporte des lacunes à la fois conceptuelles et méthodologiques.

Examen critique de la documentation scientifique actuelle

Vers une conception multidimensionnelle de la santé psychologique au travail

L'Organisation mondiale de la santé formulait, en 1946, la proposition suivante : « La santé est un état de complet bien-être physique, mental et social, et ne consiste pas seulement en une absence de maladie ou d'infirmité » (Organisation mondiale de la santé, 1948, p. 2). Cette définition émise depuis près de 70 ans sous-tend que la santé inclut à la fois des manifestations négatives et positives. Or, une conception unidimensionnelle de la santé

psychologique au travail domine les écrits scientifiques encore de nos jours (Bruchon-Schweitzer, 2002). En ce sens, sous l'influence du paradigme médical privilégiant le traitement de la maladie, les chercheurs ont longtemps concentré leurs efforts sur la compréhension des symptômes négatifs (Bakker & Derks, 2010; Nelson & Simmons, 2003; Seligman, 2002), tels que le stress, la détresse psychologique et l'épuisement professionnel. Il aura fallu attendre le crépuscule des années 90 pour que la communauté scientifique, dans le sillage des tenants de la psychologie positive, se penche plus massivement sur le fonctionnement optimal de l'individu (Bakker & Derks, 2010; Seligman & Csikszentmihalyi, 2000). D'unidimensionnelle, la conception de la santé psychologique au travail a progressé vers une compréhension multidimensionnelle, intégrant des indicateurs négatifs et positifs de santé psychologique. Si la perspective multidimensionnelle gagne du terrain (p. ex., Achille, 2003; Barbier, Peters, & Hansez, 2010; Massé et al., 1998), l'état des connaissances sur le sujet demeure embryonnaire. Il en résulte un déséquilibre entre le bagage de connaissances portant sur la mauvaise santé psychologique au travail et celui qui intègre la bonne santé psychologique au travail (Bakker & Demerouti, 2007; Diener, Suh, Lucas, & Smith, 1999). Devant ce constat, l'impératif de réduire l'écart et d'élargir la compréhension de la santé psychologique au travail s'impose.

Lacunes relatives au fonctionnement de l'employé dans son environnement de travail dans l'appréhension de la santé psychologique au travail

Dans la volonté d'étudier la santé psychologique au travail sous ses facettes positives et négatives, deux principaux indicateurs ont été explorés, soit le bien-être et la détresse psychologiques au travail (Gilbert, Dagenais-Desmarais, & Savoie, 2011; Keyes, 2003; Massé et al., 1998). Au-delà de ces deux composantes, Gilbert (2009), qui s'appuie sur une recension exhaustive des définitions de la santé, soutient que la recherche sur la santé psychologique devrait également s'attarder au fonctionnement de l'employé dans son environnement de travail. Toutefois, les écrits abordent peu cette question, les recherches n'ayant pas inclus cette composante dans un modèle intégré de santé psychologique au travail. Cet état de fait soulève trois questions : (1) comment conceptualiser le fonctionnement de l'individu dans son environnement de travail selon une perspective de santé psychologique?, (2) comment le

mesurer?, et (3) comment l'intégrer aux autres composantes de santé psychologique au travail? En l'absence d'indicateurs basés sur une compréhension théorique adéquate et d'instruments de mesure appropriés, la compréhension de la santé psychologique au travail s'en trouve donc incomplète.

Compréhension limitée des mécanismes sous-jacents à la santé psychologique au travail

Hormis une compréhension partielle des indicateurs de santé psychologique au travail, l'examen de ses déterminants paraît problématique. En effet, plusieurs études ont privilégié une approche de type « liste d'épicerie » pour explorer les antécédents de la santé psychologique au travail, mettant en lien la détresse et le bien-être psychologiques avec une série de variables (Bakker & Demerouti, 2007). D'autres auteurs ont néanmoins proposé des modèles (p. ex., Cotton & Hart, 2003; Danna & Griffin, 1999) incluant divers déterminants et des indicateurs positifs et négatifs de santé psychologique au travail. Toutefois, ces modèles ne s'appuient pas sur des fondements théoriques permettant d'expliquer comment les antécédents exercent une influence sur la santé psychologique au travail. Conséquemment, la connaissance des mécanismes qui sous-tendent la santé psychologique au travail demeure insuffisante.

Lacunes méthodologiques dans l'étude de la santé psychologique au travail

Sur le plan méthodologique, l'étude de la santé psychologique au travail comporte certaines failles. D'une part, la majorité des recherches emploie un devis transversal pour tester les liens unissant les déterminants de la santé psychologique au travail à ses indicateurs et ses résultantes (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009; Xanthopoulou, Bakker, & Ilies, 2012). Ce faisant, l'interprétation de la direction des résultats appelle à la prudence, surtout lorsque les études ne reposent pas sur de solides fondements théoriques. D'autre part, rares sont les chercheurs qui répliquent leurs études, limitant la généralisation de leurs résultats (Asendorpf et al., 2013; Cook, Campbell, & Day, 1979; Koole & Lakens, 2012). Considérant que les déterminants et les manifestations de santé psychologique au travail

varient selon les travaux, la vérification empirique des variables impliquées dans l'explication du phénomène représente un défi à relever.

Objectifs et description de la recherche doctorale

Cet examen critique de la documentation scientifique suscite une question générale : comment modéliser la santé psychologique au travail? Afin de répondre à cette question de recherche, la présente thèse poursuit trois objectifs, soit (1) développer et valider un indicateur de santé psychologique en matière de fonctionnement de l'employé dans son environnement de travail, (2) élaborer une nouvelle modélisation de la santé psychologique au travail qui s'appuie sur des fondements théoriques solides, et (3) en faire la vérification empirique auprès de trois échantillons indépendants. Ainsi, l'exercice doctoral vise à apporter une contribution originale et significative à l'avancement des connaissances en regard des défis scientifiques et des enjeux pratiques associés à la santé psychologique au travail.

Pour mener à bien ces objectifs, la recherche doctorale s'appuie sur deux articles empiriques. Le premier article, intitulé "Cognitive adjustment at work as an indicator of psychological health at work: Development and validation of a measurement", a pour but de développer et de valider une conceptualisation et une mesure de santé psychologique au travail en termes de fonctionnement de l'employé dans son environnement de travail (objectif 1). Dans cette optique, deux études, menées auprès de trois échantillons (N_A = 296, N_B = 350, N_C = 139), ont été réalisées pour tester une proposition opérationnelle du construit. La première étude cherche à en vérifier la structure à l'aide d'analyses factorielles exploratoires et confirmatoires, et d'analyses de cohérence interne et d'invariance temporelle. La deuxième étude a pour objet de mettre à l'épreuve la validité du construit et de sa mesure en examinant partiellement le réseau nomologique auquel il appartient.

Le second article, ayant pour titre "Psychological health at work through the lens of conservation of resources theory", poursuit les objectifs de développer (objectif 2) et de tester (objectif 3) une modélisation processuelle de la santé psychologique au travail. Prenant appui sur la théorie de la conservation des ressources (Hobfoll, 1989, 2001), trois études ont été

conduites dans le but de vérifier, indépendamment de l'influence des demandes en emploi, (a) l'effet médiateur du bien-être psychologique au travail dans la relation unissant des ressources personnelles (c.-à-d., l'optimisme et la résilience), organisationnelle (c.-à-d., le climat de travail), et l'ajustement cognitif au travail, et (b) l'effet médiateur de la détresse psychologique au travail dans la relation unissant l'optimisme, la résilience, le climat de travail, et les réponses comportementales de stress au travail. Ayant recours à un devis transversal, la première étude vise à tester le modèle proposé auprès d'enseignants québécois, tandis que la deuxième étude a pour objet de répliquer la première auprès d'enseignants français. À partir d'un devis intégrant deux temps de mesure, la troisième étude tend à fournir une démonstration additionnelle de la robustesse des conclusions.

Afin de situer la santé psychologique au travail dans les théories existantes et d'en définir les composantes, une description des assises conceptuelles précède la présentation des articles. Puis, à la lumière des deux articles, se dégage une conclusion qui fait état des principaux résultats et constats de la thèse. La conclusion vise également à souligner les contributions à l'avancement des connaissances et les retombées scientifiques générées par cet exercice doctoral. En dernier lieu, un regard critique est posé sur la démarche entreprise et des pistes de recommandation pour les recherches futures sont formulées.

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Assises conceptuelles

Afin de proposer une modélisation de la santé psychologique au travail, l'impératif d'en jeter les fondements théoriques s'impose. Pour ce faire, les théories mises de l'avant pour l'étudier seront d'abord abordées. Particulièrement traitée sous son volet négatif (Bakker & Demerouti, 2007; Bakker & Derks, 2010; Diener, Suh, Lucas, & Smith, 1999; Nelson & Simmons, 2003; Seligman, 2002), la santé psychologique au travail repose sur un considérable bagage de connaissances fondées sur les théories sur le stress. Le présent examen de la documentation poursuit non pas l'objectif de présenter une recension exhaustive de toutes les théories sur le stress, mais plutôt d'en refléter l'évolution afin d'ancrer la conceptualisation actuelle de la santé psychologique au travail dans une réflexion théorique critique.

Dans un second temps, les indicateurs de santé psychologique au travail, retenus dans le cadre de cet exercice doctoral, seront définis. Spécifiquement, ces indicateurs réfèrent à la détresse psychologique au travail, au bien-être psychologique au travail et aux réponses comportementales de stress au travail.

Évolution des théories sur le stress

Au regard des travaux de Cox (1978; Cox & Griffiths, 2010), qui a proposé une taxonomie des théories sur le stress, on peut distinguer les premières théories du stress des écrits contemporains sur le sujet. Les premières théories incluent, d'une part, des conceptualisations basées sur le stimulus, et d'autre part, basées sur les réponses.

Premières théories du stress

Théories basées sur le stimulus

S'inspirant des principes physiques et de l'ingénierie, les théories basées sur le stimulus empruntent une perspective linéaire du stress (Cox & Griffiths, 2010). En effet, selon ce courant théorique, le stress renvoie à une caractéristique de l'environnement externe qui entraîne des réactions chez l'individu (Cox & Griffiths, 2010; Harris, 1956; Holmes & Rahe,

1967; Masuda & Holmes, 1967). Ainsi formulé, le stress traduit ce qui arrive à l'individu et non ce qui se produit en lui. Deux principales limites restreignent la portée de cette conceptualisation du stress, à savoir (1) la difficulté à identifier avec certitude ce qui, dans l'environnement, correspond à du stress, et (2) le manque d'explications relatives à la variabilité individuelle des réactions au stress (Cox, 1978; Cox & Griffiths, 2010; Hobfoll, 1989; McGrath, 1970).

Théories basées sur les réponses

Contrairement aux théories basées sur le stimulus, les théories basées sur les réponses reposent sur une perspective médicale et s'intéressent aux réactions de l'individu (c.-à-d., physiologiques et comportementales) pour définir le stress (Cox & Griffiths, 2010). À cet égard, les travaux fondateurs de Selye (1946, 1956) décrivent le stress en termes de réponse indifférenciée, pouvant être négative ou positive. Si encore de nos jours une myriade d'écrits étudie uniquement la réponse négative du stress (p. ex., Friedman-Krauss, Raver, Morris, & Jones, 2014; Jourdain & Vézina, 2013; Kouvonen et al., 2013; Zeller & Levin, 2013), la notion de réponse positive constitue un legs important pour certains théoriciens (p. ex., Modèle holistique du stress, Nelson & Simmons, 2003). À l'instar des théories basées sur le stimulus, les théories basées sur les réponses sont linéaires et ne prennent pas en considération les différences individuelles dans l'explication du stress (Cox & Griffiths, 2010; Hobfoll, 1989; Lyon, 2000; Mason, 1971; McGrath, 1970; Monat & Lazarus, 1991). Par ailleurs, peu d'appuis empiriques permettent de soutenir cette conceptualisation (Cox & Griffiths, 2010; Lindsey, 1993; Lyon, 2000).

Théories contemporaines du stress

En réaction aux premières théories du stress, les théories contemporaines font leur entrée dans les années 70 et marquent un tournant important (Cox & Griffiths, 2010). Autrefois linéaire, la conceptualisation du stress devient dynamique. On s'intéresse maintenant à la compréhension de l'interaction entre la personne et son environnement, et l'on mise sur le rôle actif de l'individu en introduisant des concepts psychologiques (p. ex., les

perceptions, les cognitions et les émotions) dans l'étude du stress (Cox & Griffiths, 2010). Les théories contemporaines regroupent les théories interactionnelles et transactionnelles (Cox, 1978; Cox & Griffiths, 2010).

Théories interactionnelles

Sur le plan interactionnel, les théories prennent racine dans le courant de l'épidémiologie sociale en mettant l'accent sur l'architecture des situations responsables de l'expérience de stress (Cox & Griffiths, 2010). Le stress correspond à une mauvaise adéquation entre l'individu et son environnement (Caplan, 1983; Cox & Griffiths, 2010; Edwards, Caplan, & Van Harrison, 1998; Johnson & Hall, 1988; Karasek, 1979; Van Harrison, 1978). La théorie de l'adéquation personne-environnement (en anglais : *Person-Environment Fit theory*, Caplan, 1983; Edwards et al., 1998) et celle proposée par Karasek (en anglais : *Job demand-Control theory*, 1979) constituent deux modèles dominants des théories interactionnelles (Cox & Griffiths, 2010; Nelson & Simmons, 2003). Selon la théorie de l'adéquation personne-environnement (Caplan, 1983; Edwards et al., 1998; Johnson & Hall, 1988; Van Harrison, 1978), le stress résulte de trois possibles scénarios, soit (1) les demandes de l'environnement excèdent les capacités de la personne, (2) l'environnement ne peut satisfaire les besoins de la personne, ou (3) la combinaison des éléments précédents. En dépit de la forte popularité de cette théorie, elle a reçu un soutien empirique mitigé, notamment en raison de la difficulté à mesurer la notion d'adéquation (Cox & Griffiths, 2010; Le Fevre, Matheny, & Kolt, 2003).

De façon différente, Karasek (1979) décrit le stress comme la résultante d'une combinaison de fortes demandes en emploi et d'une faible latitude décisionnelle. L'auteur présente également des indicateurs positifs de santé psychologique au travail (p. ex., bien-être, développement personnel) qui émaneraient de la combinaison de faibles demandes en emploi et d'une forte latitude décisionnelle. Tout comme pour la théorie de l'adéquation personne-environnement, les données probantes concernant le modèle de Karasek (1979) sont équivoques, principalement en raison de la grande variabilité de l'opérationnalisation des construits des demandes en emploi et de la latitude décisionnelle (Bakker & Demerouti, 2007; Cox & Griffiths, 2010; de Jonge, Mulder, & Nijhuis, 1999; Van der Doef & Maes, 1999). Par

ailleurs, si le modèle permet d'identifier une combinaison optimale de certaines caractéristiques de travail pour les employés, peu d'efforts empiriques ont été consentis pour le tester (Nelson & Simmons, 2003). Enfin, certains auteurs lui reprochent de simplifier la réalité et de réduire l'explication de la santé psychologique au travail à quelques caractéristiques en emploi (Bakker & Demerouti, 2007; de Jonge et al., 1999).

Théories transactionnelles

Proposant une approche dynamique plutôt que statique, les théories transactionnelles prennent comme assises la psychologie clinique et sociale et s'intéressent au processus du stress en accordant une place plus importante à l'individu dans la détermination des résultantes du stress (Cox & Griffiths, 2010). Figures marquantes pour les théoriciens du stress, Lazarus et Folkman (1984) conçoivent le stress en termes de conjoncture entre une personne (p. ex., ses caractéristiques personnelles, ses croyances, ses buts) et son environnement qui présente des menaces et des défis. Plus précisément, leur modèle de l'évaluation cognitive (Lazarus, 1966; Lazarus & Folkman, 1984) décrit les processus (p. ex., perceptions, cognitions, émotions) par lesquels l'exposition à l'environnement détermine le stress, la réaction de l'individu, ses tentatives d'adaptation et les effets sur son comportement. Alors que le modèle marque une avancée importante en circonscrivant le caractère dynamique du phénomène du stress, il est néanmoins plus difficile à opérationnaliser (Cox & Griffiths, 2010; Hobfoll, 1989). En outre, bien que Larazus et Folkman (1984) soutiennent que les réactions de l'individu peuvent être positives, ils font abstraction des mécanismes sous-jacents à ces réactions (Nelson & Simmons, 2003).

Théories du stress et l'influence de la psychologie positive

Avec la montée en force de la psychologie positive dans les années 90, qui s'intéresse au fonctionnement optimal des individus, les théories du stress mettent davantage de l'avant les composantes positives de la santé psychologique au travail en adoptant une approche multidimensionnelle (Bakker & Derks, 2010; Seligman & Csikszentmihalyi, 2000). Notamment, le modèle holistique du stress (Nelson & Simmons, 2003) s'inspire des travaux de Selye (1946,

1956) et de ceux de Lazarus et Folkman (1966; 1984). Plus précisément, Nelson et Simmons (2003) reprennent des éléments du modèle de l'évaluation cognitive en y ajoutant la notion d'eustress (c.-à-d., des aspects positifs d'une réponse de stress) et un mécanisme d'adaptation associé (en anglais : *savouring*). Malgré l'effort d'ajouter le volet positif à l'expérience du stress, les auteurs fournissent une explication partielle du mécanisme de *savouring*, limitant l'utilisation du modèle. Cette imprécision conceptuelle apparaît une piste d'explication probable à la faible portée empirique du modèle.

Plus populaire que le modèle holistique du stress (Brough et al., 2013; Schaufeli & Taris, 2014), le modèle des demandes et des ressources en emploi (en anglais : *Job Demands-Resources model*, Bakker & Demerouti, 2007; Bakker, Demerouti, De Boer, & Schaufeli, 2003) inclut des composantes négatives (p. ex., stress, tensions et problématiques de santé) et positives (p. ex., engagement au travail, engagement organisationnel) de santé psychologique au travail. Selon ce modèle, les composantes négatives résulteraient d'un processus de détérioration de la santé activé par des demandes en emploi qui exigeraient trop d'efforts soutenus de la part de l'employé. Différemment, les composantes positives découleraient d'un processus motivationnel où les ressources, par leur potentiel de motivation intrinsèque et extrinsèque, encourageraient les employés à atteindre leurs buts et à obtenir des résultats positifs. Bien que ce modèle adopte une approche multidimensionnelle de la santé psychologique au travail et qu'il fournit une explication des mécanismes impliqués, il se concentre sur les caractéristiques du travail en écartant des antécédents importants de la santé psychologique, soit les ressources personnelles (Llorens, Schaufeli, Bakker, & Salanova, 2007; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009a; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009b).

Non seulement la théorie de la conservation des ressources de Hobfoll (1989, 2001) tient compte des ressources personnelles, elle couvre aussi un éventail plus large de ressources, conceptualisées comme « des objets (p. ex., matériel de bureau), des caractéristiques personnelles (p. ex., estime de soi), des conditions (p. ex., ancienneté) et des ressources énergétiques (p. ex., temps) qui sont valorisées par l'individu ou qui favorisent

l'atteinte ou la protection de ressources importantes » (Hobfoll, 1989, p. 516, traduction libre). S'inscrivant dans une conception multidimensionnelle de la santé psychologique au travail, la théorie de la conservation des ressources est utilisée pour en étudier les composantes négatives (p. ex., épuisement professionnel, Gorgievski & Hobfoll, 2008) et positives (p. ex., engagement au travail, Gorgievski & Hobfoll, 2008). Elle s'appuie sur l'idée maîtresse suivante : « les individus cherchent à retenir, protéger et consolider leurs ressources et c'est la perte, potentielle ou effective, de ressources importantes qui est menaçante pour eux » (Hobfoll, 1989, p. 516, traduction libre). Cette prémisse conceptuelle sous-tend un processus motivationnel activé par la perte et le gain de ressources. Dans cette lignée, le stress se définit comme une réaction de l'individu lorsque (1) ses ressources sont menacées, (2) perdues, ou (3) lorsqu'il n'obtient pas de nouvelles ressources après en avoir investies. En l'absence de pertes réelles ou anticipées, les gens seraient motivés à alimenter leur réservoir de ressources. Plus le réservoir est grand, plus le bien-être augmenterait. Si certains détracteurs reprochent à la théorie son manque de spécificité (p. ex., Lazarus, 2001), car elle ne précise pas le mécanisme singulier associé à chacune des ressources, elle offre néanmoins plusieurs avantages. En premier lieu, en décrivant le processus de perte et de gain de ressources, elle fournit un éclairage sur les mécanismes sous-jacents aux composantes négatives et positives de santé psychologique au travail. En deuxième lieu, elle s'applique à une multitude de contextes de travail, en intégrant autant des ressources organisationnelles que personnelles (Halbesleben, 2006; Hobfoll, 2002; Lee & Ashforth, 1996). Enfin, elle a reçu de nombreux appuis empiriques (p. ex., Halbesleben, 2006; Lee & Ashforth, 1996; Westman, Hobfoll, Chen, Davidson, & Laski, 2004; Xanthopoulou et al., 2009a). Considérant ces arguments et s'imposant comme la théorie la plus complète, la théorie de la conservation des ressources sert de fondement conceptuel pour la présente thèse dans le but de proposer un modèle de santé psychologique au travail. La prochaine section vise à délimiter les indicateurs de santé psychologique inclus dans la modélisation.

Indicateurs de santé psychologique au travail

Conceptualisation de la détresse psychologique et du bien-être psychologique

Selon les défenseurs de l'approche multidimensionnelle (p. ex., Achille, 2003; Bakker & Derks, 2010; Barbier, Peters, & Hansez, 2010; Fineman, 2006; Keyes, 2003; Massé et al., 1998b; Nelson & Simmons, 2003), la santé psychologique au travail serait caractérisée par différents indicateurs. Parmi les plus étudiés, se trouvent la détresse psychologique et le bien-être psychologique (Gilbert, Dagenais-Desmarais, & Savoie, 2011; Keyes, 2003; Massé et al., 1998b).

Angle abondamment adopté dans les travaux portant sur la santé psychologique (Bakker & Demerouti, 2007; Bakker & Derks, 2010; Diener et al., 1999; Nelson & Simmons, 2003; Seligman, 2002), l'étude de la détresse psychologique suscite de la dissidence au sein de la communauté scientifique. En effet, certains auteurs privilégient une conceptualisation unidimensionnelle où la détresse psychologique reflète un regroupement de symptômes (p. ex., Gotlib, 1984; Tanaka & Huba, 1984; Zurawski & Smith, 1987), tels le désespoir et la tristesse. Or, les symptomatologies diffèrent selon les écrits (Massé et al., 1998a), allant de la démoralisation à l'affectivité négative. À cette conception unidimensionnelle s'oppose une perspective multidimensionnelle de la détresse psychologique. En ce sens, selon une majorité de travaux, la détresse psychologique comprend minimalement deux composantes, soit la dépression et l'anxiété (p. ex., Costa & McCrae, 1988; Massé et al., 1998a; Préville, Potvin, & Boyer, 1995), auxquelles s'ajoutent d'autres construits qui varient selon les auteurs, comme l'irritabilité, la somatisation et l'obsession-compulsion (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). Ainsi, la structure de la détresse psychologique, quelle que soit l'approche privilégiée, fluctue selon les écrits à un point tel que sa conceptualisation paraît floue.

À l'instar de la détresse psychologique, l'étude du bien-être psychologique ne fait pas consensus (Danna & Griffin, 1999; Gilbert et al., 2011; Harris & Cameron, 2005; Massé et al., 1998c). Si la nature affective et cognitive du bien-être psychologique trouve appui dans la documentation scientifique (Andrews & McKennell, 1980; Diener, 1994; Gilbert et al., 2011;

Lent, 2004), une confusion entoure néanmoins sa conceptualisation (Dagenais-Desmarais & Savoie, 2012; Massé et al., 1998c). D'une part, le construit est confondu par certains avec la santé qu'ils décrivent comme une composante du bien-être (Danna & Griffin, 1999; Gilbert et al., 2011). Toutefois, une majorité d'écrits soutient que le bien-être psychologique constitue une composante de la santé psychologique et non l'inverse (Karademas, 2007; Keyes, 2003; Massé et al., 1998b). D'autre part, deux courants théoriques s'affrontent pour conceptualiser le bien-être psychologique, soit l'approche eudémonique et l'approche hédonique (Dagenais-Desmarais, 2010; Ryan & Deci, 2001). Selon l'approche eudémonique, qui s'inspire de la philosophie d'Aristote (McMahon, 2006), le bien-être psychologique renvoie à la réalisation du plein potentiel et à l'autodétermination (Dagenais-Desmarais, 2010; Deci & Ryan, 2008; Ryff, 1989, 1995; Ryff & Keyes, 1995; Ryff & Singer, 1998). L'approche hédonique, dans les traces des philosophes de la Grèce antique comme Épicure, Aristippe de Cyrène et Platon (White, 2006), décrit le bien-être psychologique en termes de poursuite du plaisir et d'évitement de la souffrance, où l'accent porte sur les émotions positives et la satisfaction dans la vie (Cummins, 2013; Dagenais-Desmarais, 2010; Diener, 2009; Diener, Lucas, & Oishi, 2005; Diener et al., 1999; Kahneman, Diener, & Schwarz, 1999; Warr, 1990). Bien que des chercheurs proposent d'intégrer ces deux courants pour une compréhension élargie du bien-être psychologique (Keyes, Shmotkin, & Ryff, 2002; Kiziah, 2004; Lent, 2004), le corpus empirique sur le sujet demeure restreint (Dagenais-Desmarais, 2010; Keyes et al., 2002; Lent, 2004).

Devant le flou conceptuel relatif à la détresse et au bien-être psychologiques, Massé et ses collègues (1998a, 1998b; 1998c) ont mené une étude ethnosémantique pour proposer une conceptualisation de la santé psychologique fondée sur les épisodes de détresse et de bien-être psychologiques vécus par une population non clinique. Par l'intermédiaire de méthodes mixtes, ces chercheurs ont identifié une structure conceptuelle pour chacun des deux construits à partir des manifestations identifiées par 195 Québécois. Les résultats de leur investigation mettent en lumière quatre dimensions de la détresse psychologique : (1) l'autodévalorisation, (2) l'irritabilité/agressivité, (3) l'anxiété/dépression, et (4) le désengagement social. Les auteurs ont également proposé six dimensions pour décrire le bien-

être psychologique : (1) l'estime de soi, (2) l'équilibre, (3) l'engagement social, (4) la sociabilité, (5) le contrôle de soi et des évènements, et (6) le bonheur.

La démarche de Massé et de ses collaborateurs (1998a, 1998b; 1998c) pour étudier la détresse et le bien-être psychologiques présente différents avantages. Tout d'abord, ces chercheurs sont parmi les rares à avoir développé une conceptualisation s'inscrivant dans une perspective multidimensionnelle de la santé psychologique. Alors que la majorité des travaux porte soit sur la détresse psychologique (p. ex., Friedman-Krauss et al., 2014; Jourdain & Vézina, 2013; Zeller & Levin, 2013), soit le bien-être psychologique (p. ex., Bakker & Bal, 2010; Gagné & Bhave, 2011; Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010), Massé et ses collègues (1998a, 1998b; 1998c) ont cherché à capter une expérience plus complexe et holistique de la santé psychologique vécue par l'individu. Pour ce faire, ils se sont appuyés sur une démarche scientifique rigoureuse en combinant une approche inductive et une approche déductive. Plus précisément, ils ont fait émerger une théorie de la santé psychologique à partir du point de vue des individus qui vivent de la détresse et du bien-être psychologiques, théorie qu'ils ont ensuite mise à l'épreuve au moyen d'hypothèses. Comparativement à d'autres conceptions basées sur des a priori théoriques imprécis (p. ex., Cotton & Hart, 2003; Danna & Griffin, 1999), Massé et ses collaborateurs (1998a, 1998b; 1998c) ont ainsi ancré leur compréhension de la détresse et du bien-être psychologiques dans la réalité de la population québécoise, ce qui confère une importante validité de contenu à leur conceptualisation. En matière d'analyses, ils ont eu recours aux méthodes mixtes et à deux échantillons aléatoires stratifiés représentatifs de la population. En triangulant les méthodes et les sources d'information, ils ont renforcé la validité de leurs conclusions (Mathison, 1988; Reis & Judd, 2000). En conséquence, Massé et ses collègues (1998a, 1998b; 1998c) ont proposé une compréhension plus approfondie et robuste du phénomène afin d'en refléter la complexité.

La conception de la détresse et du bien-être psychologiques formulée par Massé et al. (1998a; 1998b; 1998c) concerne la vie en général des individus. Or, le marché du travail se distingue des autres sphères de vie, en raison de sa singularité attribuable notamment à sa fonction d'assurer la subsistance des gens (Dagenais-Desmarais & Savoie, 2012; Hakanen &

Schaufeli, 2012; Ransome, 2007). À cet égard, des études ont mis de l'avant la supériorité prédictive des mesures contextualisées au monde du travail comparativement aux mesures génériques (p. ex., le pourcentage de variance expliquée de la performance en emploi augmente lorsque l'on mesure la personnalité au travail plutôt que la personnalité en général; Hunthausen, Truxillo, Bauer, & Hammer, 2003; Lievens, De Corte, & Schollaert, 2008). Dans la continuité des travaux de Johns (2006) qui souligne l'importance de contextualiser un phénomène pour mieux l'étudier, il apparaît donc impératif d'adapter la conceptualisation de la détresse et du bien-être psychologiques au monde du travail. À cette fin, Gilbert et ses collaborateurs (2011) ont testé la conceptualisation et la mesure de Massé et al. (1998a; 1998b; 1998c) auprès de 561 travailleurs québécois œuvrant dans des milieux variés. Selon les résultats de leur étude, la détresse psychologique au travail se compose de cognitions et d'affects liés à un rapport négatif à soi, autrui et au travail (Gilbert et al., 2011). Le rapport à soi s'exprime par des symptômes dépressifs et anxieux, où notamment l'estime de soi et le sentiment d'avoir du contrôle sur sa vie sont diminués. Le rapport aux autres renvoie à de l'irritabilité et de l'impatience ressenties envers autrui. Le rapport au travail correspond à une perte d'intérêt envers le travail et les projets à entreprendre. Le bien-être psychologique au travail regroupe des cognitions et des affects liés à un rapport positif à soi, autrui et au travail (Gilbert et al., 2011). Le rapport positif à soi se traduit par une perception de sérénité qui inclut se sentir en paix avec soi et en équilibre émotionnellement. Le rapport à autrui représente une perception d'harmonie sociale qui inclut se sentir apprécié dans son organisation et entretenir des relations cordiales au travail. Le rapport au travail réfère à de l'engagement qui se traduit par de l'appréciation de son travail et le désir de s'impliquer. Figurant parmi les seules conceptualisations de la détresse et du bien-être psychologiques contextualisées au milieu du travail, s'inscrivant dans une approche multidimensionnelle de la santé psychologique, et reposant sur une validation solide, les conceptions de la détresse et du bien-être psychologiques au travail proposées par Gilbert et ses collègues (2011) seront retenues dans le cadre de cette recherche doctorale.

Conceptualisation du dysfonctionnement des employés

Négligé dans les études portant sur la santé psychologique au travail, le dysfonctionnement des employés, caractérisé par la rupture de liens entre le travailleur et son environnement (Dimitrova, 1994), fait pourtant l'objet d'une multitude de recherches dans les autres sphères de la psychologie du travail et des organisations (p. ex., violences au travail, absentéisme; Berry, Lelchook, & Clark, 2012; Courcy, Savoie, & Brunet, 2004; O'Boyle, Forsyth, Banks, & McDaniel, 2012; Swider & Zimmerman, 2014). Dans la lignée des théories sur le stress, l'un des indicateurs comportementaux observables de l'individu sous tension et dont le fonctionnement est altéré demeurent sans contredit les réponses de type attaque ou fuite (en anglais : *fight-or-flight responses*; Carlisle, 2005; Mayes & Ganster, 1988; Rosen & Ganster, 2013). Introduit par Cannon (1929), ce type de réponses reçoit non seulement un fort soutien théorique, mais il a également fait l'objet de nombreuses vérifications empiriques (Carlisle, 2005; Mayes & Ganster, 1988; Rosen & Ganster, 2013). Selon les travaux de Cannon (1929) et ceux de Selye (1946, 1956), les réponses *fight-or-flight* seraient générées par le système nerveux sympathique en présence de menaces dans l'environnement de l'individu. La modalité de l'attaque consiste à combattre la source de stress, tandis que la modalité de la fuite consiste à l'éviter. Grâce aux travaux de Gray (1988, 2003), une troisième modalité fait désormais partie des réponses de stress reconnues, soit de figer (en anglais : *freeze)*, qui consiste à cesser toute action pour observer l'environnement. Suivant les recommandations de Johns (2006) en adaptant ces trois types de réponses au contexte du travail, Gilbert (2009) a fait mention des réponses comportementales de stress en milieu de travail. Spécifiquement, l'attaque se reflète dans des comportements d'agression dirigés envers autrui (Courcy, Savoie, & Brunet, 2004). La fuite se traduit par de l'évitement des collègues ou du travail en lui-même (Brien, Lapointe, Gilbert, Brunet, & Savoie, 2008). L'aliénation décrit l'employé qui se coupe psychologiquement de son milieu au moyen d'actions telles que de faire le strict minimum (Dimitrova, 1994). Brien et ses collaborateurs (2008) ont réalisé des analyses préliminaires appuyant la conceptualisation et la mesure de ce construit. Dans un effort d'en poursuivre la validation, des analyses factorielles exploratoires, confirmatoires, de cohérence interne, d'invariance

temporelle et de corrélation ont également été conduites (se référer à l'Annexe 1) et fournissent un appui empirique additionnel à la proposition de Gilbert (2009). Sur la base de cette conceptualisation à la fois enracinée dans la tradition des études sur le stress, adaptée au contexte du travail et soutenue empiriquement, la présente thèse retient les réponses comportementales de stress au travail pour étudier l'un des indicateurs du dysfonctionnement des employés comme composante de la santé psychologique au travail.

Conceptualisation du fonctionnement positif des employés

En plus de la détresse psychologique, du bien-être psychologique et des réponses comportementales de stress, la santé psychologique au travail serait caractérisée par le fonctionnement positif des employés (Gilbert, 2009). Or, comme l'introduction de cette thèse l'a mis en relief, le fonctionnement positif des employés n'a pas été exploré dans une perspective de santé psychologique au travail. Le premier article de la présente recherche doctorale, qui suit cette section, se penche sur l'investigation de cette perspective.

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

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Déclaration des auteurs autres que l'étudiante

À titre de coauteur de l'article identifié ci-dessus, je suis d'accord à ce que Marie Malo inclut cet article dans sa thèse qui a pour titre « La santé psychologique au travail : une modélisation ancrée dans la théorie de la conservation des ressources ».

Luc Brunet	Date

Abstract

Based on organizational socialization literature (e.g., Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007; Kammeyer-Mueller & Wanberg, 2003; Morton, 1994; Reio, 1998; Saks & Ashforth, 1997; Saks, Uggerslev, & Fassina, 2007) and Conservation of Resources theory, (Hobfoll, 1989, 2001), this article aims to develop and validate a conceptualization and a measurement of cognitive adjustment at work, as an indicator of psychological health at work. Two studies, including three samples (N_A = 296, N_B = 350, N_C = 139), have been conducted to test an operational proposition of cognitive adjustment at work. In Study 1, exploratory and confirmatory factor analyses, and reliability and temporal invariance analyses were performed to test the construct's structure. In Study 2, nomological network analysis was used to examine its validity. Results suggest a strong empirical support for the structure and validity of cognitive adjustment at work, defined as a second-order factor, which includes task adjustment, work group adjustment and organizational adjustment.

Keywords: cognitive adjustment at work, psychological health at work, conservation of resources theory, validity

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

After having been dominated by the dark side of occupational health (Bakker & Derks, 2010; Nelson & Simmons, 2003; Seligman, 2002), theoretical and empirical work started to shift from a one-dimensional perspective to a multidimensional conception of psychological health at work (e.g., Achille, 2003; Bakker & Derks, 2010; Barbier, Peters, & Hansez, 2010; Fineman, 2006; Keyes, 2003; Massé et al., 1998a; Nelson & Simmons, 2003). In line with the World Health Organization (World Health Organization, 1948) that 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 gained interest in researching both negative and positive indicators of psychological health at work (e.g., Boudrias et al., 2011; Boudrias et al., 2014; Gilbert, Dagenais-Desmarais, & Savoie, 2011; Hakanen, Bakker, & Schaufeli, 2006; Schaufeli, Bakker, & Van Rhenen, 2009). Psychological distress and psychological well-being at work are amongst the main indicators studied (Gilbert et al., 2011; Keyes, 2003; Massé et al., 1998a).

Building her reasoning on an exhaustive review of health definitions, Gilbert (2009) argued that research on psychological health should also focus on the individual's functioning in the work environment. However, scant studies in occupational health psychology have examined such a component of psychological health. Yet more than ever, workers' functioning is challenged, especially because they face many changes in their workplace (Chen, Thomas, & Wallace, 2005; DeArmond et al., 2006; Griffin, Neal, & Parker, 2007; Ilgen & Pulakos, 1999). The effervescence of technological progress, globalization, population decline, financial market instability, mergers and restructurings are complex factors that are changing the nature of work (Brown & Quick, 2013; Chand & Tung, 2014; Moshiri & Simpson, 2011; Rumbles & Rees, 2013). While jobs used to be stable and routine, they are now characterized by roles and demands that evolve in a dynamic environment requiring employees to learn new work methods and to function with colleagues who have different values, training, and cultures than their own (Chan, 2000; Griffin et al., 2007; Ilgen & Hollenbeck, 1991). Thus, to understand and

measure psychological health at work, it is essential to appreciate how an individual functions at work.

To tackle this issue, we draw on previous work on organizational socialization (e.g., Bauer et al., 2007; Kammeyer-Mueller & Wanberg, 2003; Morton, 1994; Reio, 1998; Saks & Ashforth, 1997; Saks et al., 2007) and Conservation of Resources theory (COR theory; Hobfoll, 1989, 2001) to propose a conceptualization and a measurement of a construct that captures individual functioning in the work environment. In this vein, two studies were conducted. 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.

The current paper makes a number of contributions to occupational health psychology literature. In contrast to prior work that focused on psychological distress or well-being (e.g., Friedman-Krauss, Raver, Morris, & Jones, 2014; Salanova, Schaufeli, Xanthopoulou, & Bakker, 2010; Zeller & Levin, 2013), we provide initial evidence regarding employee functioning in the workplace. By empirically testing a conceptual proposition, we explored a new approach of examining psychological health at work. Specifically, we developed a sound and useful instrument that will be of use to both scholars and practitioners, while addressing conceptual and methodological issues from previous instruments. In addition to these contributions, our research adds new insights to the nomological network of psychological health at work by testing the relations between important variables examined in past studies (i.e., proactive personality, psychological well-being at work and task performance; e.g., Bakker, Tims, & Derks, 2012; Brien, Hass, & Savoie, 2012; Devonish, 2013; Liao, 2015; Parker & Sprigg, 1999) with our proposed construct.

Theoretical framework

The worker's functioning in the workplace has been the subject of various theoretical fields (e.g., set-point theory, Diener, Lucas, & Scollon, 2006; dynamic equilibrium theory, Headey & Wearing, 1989; adaptation level theory, Helson, 1964; appraisal theory, Lazarus & Folkman, 1984; opponent-process theory, Solomon & Corbit, 1973; Solomon & Corbit, 1974).

Many labels are used to name the phenomenon (Chung-Yan, 2006; Luhmann, Hofmann, Eid, & Lucas, 2012). In particular, adaptation and adjustment are often employed interchangeably (e.g., Bravo, Peiro, Rodriguez, & Whitely, 2003; Chung-Yan, 2006; Reio & Sutton, 2006; Yeatts, Folts, & Knapp, 2000), creating confusion around this phenomenon. However, some have made the effort of distinguishing both constructs (e.g., Kammeyer-Mueller & Wanberg, 2003; Matsumoto, Hirayama, & LeRoux, 2006). In this regard, adaptation refers to the process by which people change their cognitions and behaviors to better meet the environmental demands (Brayman, 1999; Chan, 2000; Matsumoto et al., 2006). Adjustment, instead, is considered as a result of an adaptation process (Bauer et al., 2007; Kammeyer-Mueller & Wanberg, 2003; Matsumoto et al., 2006). This way of distinguishing both constructs allows us to separate the variables that belong to the adaptation process from those that result from the process. The present article distinguishes both terms in order to reduce existing conceptual confusion.

Several organizational socialization scholars focused on the positive indicators of adjustment at work (e.g., Bauer et al., 2007; Kammeyer-Mueller & Wanberg, 2003; Wanberg & Kammeyer-Mueller, 2000). Some have made a distinction between distal and proximal positive indicators (Bauer et al., 2007; Cooper-Thomas & Anderson, 2006; Kammeyer-Mueller & Wanberg, 2003; Saks & Ashforth, 1997; Saks et al., 2007). The distal positive indicators refer to organizational outcomes such as job satisfaction, organizational commitment, and performance (Bauer et al., 2007; Cooper-Thomas & Anderson, 2006; Kammeyer-Mueller & Wanberg, 2003; Saks & Ashforth, 1997; Saks et al., 2007). Many consider these results as secondary measures of adjustment because more proximal indicators of adjustment would influence them (Ashford & Taylor, 1989; Kammeyer-Mueller & Wanberg, 2003; Saks & Ashforth, 1997; Saks et al., 2007; Wanous, 1992).

The proximal positive indicators have to do with how to act and how to match the work environment (Kammeyer-Mueller & Wanberg, 2003). They are grouped into different dimensions and multiple terminologies exist to describe them (e.g., Bauer & Green, 1998; Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994; Kammeyer-Mueller & Wanberg, 2003;

Taormina, 2004). An examination of organizational socialization literature (Haueter, Macan, & Winter, 2003; Morton, 1994; Reio, 1998; Reio & Callahan, 2004; Reio & Sutton, 2006) allowed us to extract three proximal indicators of adjustment; namely, task adjustment, work group adjustment and organizational adjustment. Task adjustment refers to the knowledge and the skills required to dealing with the different aspects of the job (Morton, 1994; Reio, 1998; 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 in the team (Morton, 1994; Reio, 1998; Reio & Callahan, 2004). Finally, organizational adjustment corresponds to an employee's understanding of the formal and informal rules, the power relationships, as well as the norms and values that define the climate and the organizational culture (Morton, 1994; Reio, 1998; 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 in turn, constitutes adjustment at a cognitive level.

Conceptualizing adjustment at work in this manner presents many advantages. First, cognitive adjustment at work (hereinafter referred to as cognitive adjustment) reflects a positive description of the elements that characterize the adjusted employee. This conceptualization appears appropriate given that we aim to propose an indicator of psychological health at work that captures individual functioning. Second, cognitive adjustment, as presented above, describes some components of the three recognized levels of adjustment; specifically, the task, the group, and the organization (Haueter et al., 2003; Morton, 1994; Reio & Callahan, 2004; Saks & Ashforth, 1997). While both holistic and parsimonious, this conceptualization stands out from others that discarded any of these three levels (e.g., Morrison, 1993; Taormina, 2004). Furthermore, cognitive adjustment would be an antecedent of distal measures of workplace adjustment (e.g., performance), and therefore, considered as a more direct representation of the construct (Ashford & Taylor, 1989; Kammeyer-Mueller & Wanberg, 2003; Saks & Ashforth, 1997; Saks et al., 2007; Wanous, 1992). This reasoning is consistent with cross-sectional studies in organizational socialization (e.g., Bauer et al., 2007; Kammeyer-Mueller & Wanberg, 2003; Reio & Callahan, 2004; Saks et al.,

2007). Thus, based on those arguments, the present study relies on cognitive adjustment to operationalize one of the indicators of psychological health at work.

The measure of cognitive adjustment

Despite the significant documentation on adjustment at work, different problems affect the quality of the measurement of cognitive adjustment indicators. These problems concern the content, items construction, and the validation of these scales. Table 1 offers a summary of the different tools listed.

Insert Table 1 about here

Content of the instruments

In terms of content of the measures, we find a relative confusion between cognitive adjustment and certain 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; Reio & Callahan, 2004), task performance corresponds to behaviours such as those defined in a job description (Borman & Motowidlo, 1992). In this perspective, items such as "it seems to take me longer than planned to complete my job assignments", and "I rarely make mistakes when conducting my job assignments" translate into behaviours 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 mixes-up antecedents and adjustment indicators (i.e., Taormina, 2004). The following items: "This organization has provided excellent job training for me", and "Other workers have helped me on the job in various ways", are examples of strategies that were 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). In particular, they do not include the component of knowledge regarding whom to turn to in a team, in their definition of work group adjustment. Yet, interpersonal interactions would be an essential component to adjustment for theorists

of organizational socialization (e.g., Feldman, 1981; Fisher, 1986; Reichers, 1987). Consequently, the tools that don't take these elements into account would be excluding an important facet to their measurement of adjustment. In light of these observations, the measurement of adjustment would gain from being revisited based on solid conceptual grounds.

Items construction

Amongst consulted instruments, flaws were found regarding how items were constructed. More precisely, statements include inferences made between constructs (i.e., Taormina, 2004). In the following example: "The training in this company has enabled me to do my job very well", part of it refers to an antecedent (i.e., the training in this company) that leads to (i.e., has enabled me) a consequence (i.e., to do my job very well). This way of measuring adjustment poses a problem since it includes both antecedents and indicators in the same statement (Hogan, 2014), which makes it difficult to statistically verify the effect of a variable over another one, thereby making the instrument unusable.

Validation of instruments

Instruments that were consulted presented some weaknesses relative to validation procedures. On the one hand, the majority of the scales were only validated based on reliability and exploratory factor analyses (i.e., Chao et al., 1994; Morrison, 1993; Morton, 1994; Reio, 1998). One of the scales (i.e., Morton, 1994) also contains problems in terms of representativeness of many items, including items wherein the communalities are inferior to the standard of .30 (Tabachnick & Fidell, 2007). These results call for caution in terms of the inferences made based on these tools. On the other hand, only two of the instruments (i.e., Haueter et al., 2003; Taormina, 2004) that were tested with confirmatory factor analyses were published. The three dimensions of the first instrument were tested separately through three statistical models. This type of analysis does not allow for the measurement of adjustment as a unified construct as it is suggested by some authors and theoretical grounds (Hobfoll, 1989, 2001; Reio, 1998; Reio & Callahan, 2004; Reio & Sutton, 2006), which forces researchers and

practitioners to use sub-groups of the tool independently from one another. Moreover, adjustment indices of the second instrument do not meet the standards generally admitted (Hu & Bentler, 1995; Hu & Bentler, 1999; Kline, 2011; Marsh & Hocevar, 1985).

Based on those conceptual and methodological considerations, Study 1 was conducted to test a sound conceptualization and a measurement of cognitive adjustment by examining the following hypotheses:

Hypothesis 1. Exploratory factor analyses will group the items of cognitive adjustment measure into three factors, namely task adjustment, work group adjustment, and organizational adjustment.

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

Hypothesis 3. The measurement of cognitive adjustment will emerge as internally consistent (Hypothesis 3a; alpha over .70; Kaplan & Saccuzzo, 1993), just as task adjustment (Hypothesis 3b), work group adjustment (Hypothesis 3c), and organizational adjustment subscales (Hypothesis 3d).

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

Conservation of Resources theory and cognitive adjustment

In order to conceptualize cognitive adjustment as a component of psychological health at work, it is imperative to anchor it in a solid theoretical foundation. Conservation of Resources theory (COR theory; Hobfoll, 1989, 2001) is one of the leading theories of psychological health at work. Indeed, both heuristic and parsimonious, COR theory allows the study of psychological health with its positive and negative components by detailing its underlying mechanisms (Gorgievski & Hobfoll, 2008; Hobfoll, 1989, 2001). Moreover, it can be applied in every organizational context (Halbesleben, 2006; Hobfoll, 2002; Lee & Ashforth, 1996). Finally, it has received strong empirical support (e.g., Halbesleben, 2006; Hobfoll, 2002;

Lee & Ashforth, 1996; Westman, Hobfoll, Chen, Davidson, & Laski, 2004; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009).

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) underpins, therefore, a motivational process activated by the loss and gain, real or anticipated, of resources. Resources reflect what is personally valued, and involves psychological characteristics (e.g., self-efficacy, ability to organise tasks), objects (e.g., housing, clothing), energy (e.g., time, knowledge) and conditions (e.g., job security, social support; Hobfoll, 1998; Hobfoll, 2001). Individuals with fewer resources are more vulnerable to resources loss, 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 resources loss, more motivated and better equipped to make resources gain possible and to have enough energy for their work (Gorgievski & Hobfoll, 2008; Hobfoll, 1989, 2001; Meyer, Becker, & Vandenberghe, 2004).

In line with COR theory, cognitive adjustment 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 have invested their resources, notably in 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; Miller & Jablin, 1991; Morrison, 1993; Saks et al., 2007). In this respect, cognitive adjustment 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, cognitive adjustment 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.

Proactive personality

Organizational socialization literature and COR theory have suggested that individual predispositions are important in explaining employee outcomes such as adjustment (e.g., Hobfoll, 1989, 2001; Kammeyer-Mueller & Wanberg, 2003; Saks & Ashforth, 1997). Proactive personality corresponds to a dispositional tendency to behave with confidence, to actively work to control 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 from resource threat and enable 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 an occupational health psychology perspective, proactive personality has been found to have positive effects on positive indicators of psychological health (e.g., work engagement, Bakker, Tims, & Derks, 2012; job/life satisfaction, Cunningham & De La Rosa, 2008; Greguras, Diefendorff, 2010). In the socialization literature, evidence showed that positive relation exists between proactive personality and adjustment, in contexts as diversified as manufacturing, food distribution, healthcare and education (Chan & Schmitt, 2000; Kammeyer-Mueller & Wanberg, 2003; Thomas, Whitman, & Viswesvaran, 2010). In light with those theoretical explanations and results, the following hypothesis is proposed:

> *Hypothesis 5.* Proactive personality will be significantly and positively related to cognitive adjustment.

Psychological well-being at work

Psychological well-being at work represents one of the main indicators of psychological health at work (Gilbert et al., 2011; Keyes, 2003; Massé et al., 1998a). Psychological well-being at work refers to a psychological state characterized by valuable resources identified by Hobfoll (1998, 2001). Indeed, as it reflects positive cognitions and affects related to a positive rapport with the self, others and the job (Gilbert et al., 2011), psychological well-being at work includes

many valuable resources (i.e., positive feelings about oneself, feeling valuable to others, having good relationships, feeling successful, accomplishing goals and being motivated to get things done; Hobfoll, 1998, 2001). Therefore, those resources make individuals less vulnerable to the loss of resources and positioning them in a motivational state, which allows them to gather more resources (Gorgievski & Hobfoll, 2008; Hobfoll, 1989, 2001). The greater the psychological well-being, the more the reservoir of resources would increase, thereby reducing an individual's fear associated to 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 significantly and positively related to cognitive adjustment.

Task performance

Psychological health at work is related to different outcomes, of which is performance (Brien et al., 2012; Wright & Hobfoll, 2004). Motowidlo and his colleagues (1997) stressed that tasks executed by individuals are a job performance cornerstone. Task performance refers to individual behaviours 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, 1993). 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, employees are more likely to perform better. In support for this claim, meta-analyses showed that adjustment was positively associated with performance (Bauer et al., 2007; Saks et al., 2007). Thus, the following hypothesis is proposed:

> *Hypothesis 7.* Cognitive adjustment will be significantly and positively related to task performance.

Study 1: Instrument development and psychometric examination

Study 1 aims to generate and select instrument items to confirm that cognitive adjustment is a second-order factor subsuming task adjustment, work group adjustment and organizational adjustment, and to analyse psychometric qualities of the instrument.

Method

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. After obtaining the agreement of the school boards and school principals, researchers explained to teachers the general purpose of the study (i.e., investigating the quality of teachers' work life) as well as the time required to complete the questionnaire (i.e., 45 minutes). Participants were also reassured that all of their responses would be kept confidential and anonymous. Participation in the research was voluntary and all respondents signed a consent form before completing the questionnaire and their demographic information.

Sample A was composed of 296 teachers from elementary schools (28%) and from high schools (72%). Age was measured in ranges (e.g., 21-30, 31-40). The majority of participants were between the ages of 31 and 50 (59%, with 23% under 30 and 18% over 50), and 200 were women (68%). Respondents had a mean teaching tenure of 12.45 years (*SD* = 8.65) and the majority of them (64%) were full-time permanent teachers.

For Sample B, 350 teachers (69% women) were recruited from elementary schools (45%), high schools (48%) and vocational training schools (7%). Respondents had a mean age between 31 and 50 (60%, with 21% under 30 and 19% over 50). Participants had an average of 13.92 years of experience as teachers (*SD* = 9.47), and held a full-time position (72%).

Sample C consisted in 139 teachers from elementary schools (33%) and from high schools (67%). They completed the cognitive adjustment instrument on two separate occasions (at Time 1, 396 respondents took part in the study; the response rate at Time 2 was

35%). One year separated both participations to the study. Their mean age was between 31 and 50 (78%, with 13% under 30 and 9% over 50), and 99 teachers were women (71%). Participants had been employed as teachers for an average of 12.33 years (*SD* = 6.90) and 85% of them taught full-time.

Instrument development

The development of a cognitive adjustment scale was first 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 in French. On the basis of their theoretical pertinence and their representativeness, thirteen items (i.e., items 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 17, 19) were then written 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 to 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, Crocker & Algina, 1986; Hogan, 2014), this items pool was reviewed by a panel from the departments of psychology and education of *Université de Montréal*, and by Ph.D. students for face validity and to verify the accuracy, pertinence, clarity, spelling, biases sensitivity, technical adequacy, and readability of items.

Analysis of the instrument

Four forms of statistical analyses were conducted: (a) exploratory factor analyses of the data on 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 on Sample B, (c), reliability analyses (internal consistency) of the data on Samples A, B and C, and (d) an invariance analysis of the instrument on Sample C. Table 2 summarizes the types of analysis conducted on the different samples.

Insert Table 2 about here

Results

Data Screening

The data of three samples were examined to verify whether they met the assumptions for multivariate analysis. Since there was less than five percent of missing values, those values were replaced by the mean (Tabachnick & Fidell, 2007). This screening revealed that all items were normally distributed, with kurtosis and skewness values within the +3 and -3 range (Tabachnick & Fidell, 2007). Similarly, there was no evidence of singularity or multicollinearity.

Exploratory factor analyses

The participants in Sample A completed the 19-item instrument, and the data were analyzed with exploratory factor analyses procedure. 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. To make a decision about the withdrawal of items, we verified that the communalities for each of the items were greater than .30 and that items had a loading greater than .30 on a single factor (Tabachnick & Fidell, 2007).

Exploratory factor analyses 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 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 3 shows the factor loadings, communalities, factor correlations, as well as the percentage of the variance for Promax rotation.

Insert Table 3 about here

Confirmatory factor analyses

The factor structure composed of 17 items remained after the analysis of the Sample A data was cross-validated with the Sample B data using the AMOS 19 software (Arbuckle, 2010) for confirmatory factor analysis (CFA).

Three competing a priori models were analyzed. The first model (M_1) was a single-factor model that tested the possibility that 17 items were the result of a general cognitive adjustment factor. The second model (M_2) was the hypothesized three-factor model composed of task adjustment, work group adjustment and organizational adjustment factors and their corresponding items. The third model (M_3) was composed of the same factors and items as the second model, but included a second-order factor consisting of cognitive adjustment, in accordance with organizational socialization literature (Reio, 1998; Reio & Callahan, 2004; Reio & Sutton, 2006), COR theory (Hobfoll, 1989, 2001) and exploratory factor analysis findings. No cross-loadings were postulated.

Models fit was gauged using the following fit indices: chi-square (χ^2), the ratio of the χ^2 divided by its degrees of freedom (χ^2/df), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Standardized Root Mean Square Residual (SRMR), and the Root Mean Square Error of Approximation (RMSEA), including the associated 90% Confidence Interval (CI). Marsh and Hocevar (1985) recommended χ^2/df ratios of 2:1 to 5:1 as indicators of acceptable model fit. CFI and TLI values greater than .90 indicate a good fit of the model to the data (Hu & Bentler, 1995), whereas values of .95 or greater indicate an excellent fit (Hu & Bentler, 1999). Values lower than .08 for the SRMR are recommended as a standard to judge the adequacy of a model (Hu & Bentler, 1999). RMSEA values smaller than .08 indicate a good fit of the model to the data, and values lower than .05 indicate a very close fit (Hu & Bentler, 1999), with a maximum lower bound of the 90% CI of .05, and a maximum upper bound of 90% CI of .10 (Kline, 2011).

Table 4 synthesizes the CFA results. A comparison of indices suggests that the second-order three-factor model (M_3), χ^2 (116) = 555.96, $p < .001$, χ^2/df = 4.79, CFI = .77, TLI =.73, SRMR = .08; RMSEA = .10, 90% CI =.10, .13, provides a superior fit to the data compared to the first-order three-factor model (M_2), $\Delta\chi^2(3) = 348.55$, $p < .001$, and the single-factor model (M_1).

However, fit indices do not exceed the commonly accepted standards. These results led us to make changes to the model.

Insert Table 4 about here

An examination of the model modification indices suggests that the withdrawal of three out of the seven items of work group adjustment (i.e., items 7, 8, 17) and two out of the six items of organizational adjustment (i.e., items 9, 18), which have higher residual errors or complex relations 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, the removal of those items was privileged. A new version of the 12-item scale was examined.

Table 4 groups the CFA results based on the subsequent analyses. The three-factor structure with a second-order factor yielded a good fit to the data (M_6), χ^2 (51) = 119.25, $p < .001$, $\chi^2/df = 2.34$, CFI = .94, TLI =.92, SRMR = .05; RMSEA = .06, 90% CI =.05, .08. 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). Therefore, these results provide evidence supporting the use of a global score of cognitive adjustment in other studies. Hypothesis 2 is thus supported. Standardized estimates for the parameters of the final model M_6 are presented in Figure 1.

Insert Figure 1 about here

Internal consistency

The Cronbach's alpha values for the Samples A, B and C data were between .80 and .84 for cognitive adjustment, 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 Tables 5, 6 and 7.

Insert Table 5 about here
Insert Table 6 about here

Insert Table 7 about here

Invariance analysis

The temporal invariance of the cognitive adjustment measurement model was assessed through CFA for the Sample C data. To verify the tenability of equality restrictions on loadings, intercepts, and residual variances, we tested the following CFA models consequently as per recommended by Vandenberg and Lance (2000):

1. Configural invariance: equal factor loading patterns across occasions;

2. Metric invariance: equal factor loadings across occasions;

3. Scalar invariance: equal item intercepts across occasions;

4. Uniqueness invariance: equal residual variances across occasions.

A rejection of any of these invariance models indicates a response shift. Besides, a special attention was given on the repeated measurements by including residual covariances between the same items over time, following the recommendations by Oort (2005) and Vandenberg and Lance (2000). Similarly, factor covariances between time points were included in the model. Results are presented in Table 4.

The initial model corresponded to M_6, that is, three-factor structure with a second-order factor made up of the four corresponding items for each subscale. No cross loadings were hypothesized. First, M_6 was fitted to Time 1 and Time 2 data sets simultaneously to test for configural invariance (M_7). Configural invariance could be obtained, judging by all fit indices, $\chi^2(230) = 337.33$, $p < .001$, $\chi^2/df = 1.47$, CFI = .91, TLI =.90, SRMR = .07; RMSEA = .06, 90% CI =.05, .07. All parameters in this model proved meaningful: all variances and factor loadings had positive values, and all factor loadings were significantly different from zero ($p < .05$). The second and third steps are the verification of the metric invariance (pattern coefficients). The pattern coefficients have been constrained to be equal across the two samples and the model (M_8) still fit the data well with no significant deterioration in model fit, $\Delta\chi^2(242) = 18.99$, *ns*, ΔCFI = .005. A statistically significant deterioration in fit would imply a ΔCFI larger than .01 (Cheung & Rensvold, 2002). Third, constraining item intercepts of the

partial metric invariant model to be equal across occasions (M_9) resulted in no significant deterioration in model fit, $\Delta\chi^2(254) = 26.33$, *ns*, ΔCFI = .001. Fourth, item uniqueness was constrained to be equal across occasions (M_{10}). Again, this resulted in no significant deterioration in model fit, $\Delta\chi^2(266) = 43.78$, *ns*, ΔCFI = .006. Therefore, Hypothesis 4 is confirmed.

Study 2: Nomological network analysis

According to Schwad (1980), construct validation of an instrument is built from testing theoretical relations between the construct of interest and other constructs. In this vein, the main purpose of Study 2 was to examine the relation between cognitive adjustment and a set of correlates. These correlates included proactive personality, psychological well-being at work and task performance.

Method

Participants and procedure

A second set of data was collected from Sample B participants described in Study 1. The procedure was the same as in Study 1.

Measures

All measures were administered in French.

Cognitive adjustment. The instrument used was the cognitive adjustment scale, which was preliminarily validated in Study 1.

Proactive personality. Proactive personality was measured with five items (e.g., “When an important situation for me occurs, I tend to be ahead of it”) inspired by Bateman and Crant’s questionnaire (1993). 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.

Psychological well-being at work. An adaptation of Massé et al. (1998b) instrument to the work setting (Gilbert et al., 2011) was used to assess psychological well-being at work, which is a 23-item scale. Sample item 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.

Task performance. A 21-item scale validated by Brien and colleagues (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 task performance global score was .84.

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 significantly and positively related to cognitive adjustment ($\beta = .28$, $p < .001$). Similarly, psychological well-being at work was significantly and positively related to cognitive adjustment ($\beta = .43$, $p < .001$). Also as expected, cognitive adjustment was significantly and positively related to task performance ($\beta = .39$, $p < .001$). Hence, Hypotheses 5, 6 and 7 are supported.

Discussion

Building on work on organizational socialization (e.g., Bauer et al., 2007; Kammeyer-Mueller & Wanberg, 2003; Morton, 1994; Reio, 1998; Saks & Ashforth, 1997; Saks et al., 2007) and COR theory (Hobfoll, 1989, 2001), the results of the current paper support our proposed conceptualization and measurement of cognitive adjustment as one component of psychological health at work. The theoretical and practical implications of these findings are discussed below.

Theoretical implications

Occupational health psychology literature has mainly focused on distress and well-being to study psychological health at work (e.g., Friedman-Krauss et al., 2014; Salanova et al., 2010; Zeller & Levin, 2013). Responding to previous calls to consider employee functioning in the workplace (Gilbert, 2009), our research is the first, to the best of our knowledge, to explore cognitive adjustment as an indicator of psychological health at work. Palliating the conceptual and methodological shortcomings of past research, Study 1 offered a structural test of a cognitive adjustment model. Empirically, the results of the statistical analyses suggest that scores on the instrument and the proposed three-factor structure are valid. The confirmatory factor analyses provided evidence for the factorial validity of the instrument scores and shows that the higher order construct consisting of cognitive adjustment is the best model with respect to the values of fit indices, compared with the other measurement models. The final model is consistent with organizational socialization literature (e.g., Bauer et al., 2007; Kammeyer-Mueller & Wanberg, 2003; Morton, 1994; Reio, 1998; Saks & Ashforth, 1997; Saks et al., 2007) and COR theory (Hobfoll, 1989, 2001). The reliability and temporal invariance analyses provided evidence for the internal consistency and stability of the instrument's scores and structure.

Study 2 revealed that cognitive adjustment is related to other relevant constructs based on organizational socialization literature (e.g., Bauer et al., 2007; Kammeyer-Mueller & Wanberg, 2003; Morton, 1994; Reio, 1998; Saks & Ashforth, 1997; Saks et al., 2007) and COR theory (Hobfoll, 1989, 2001). First, proactive personality was found to be positively associated with cognitive adjustment. In line with COR theory (Hobfoll, 1989, 2001), proactive people have valuable resources including confidence to protect themselves from resource loss, which might enable them to invest resources (e.g., in actions like information seeking) in order to become cognitively adjusted. Consistent with this view, research reports proactive personality to be positively related to adjustment (Chan & Schmitt, 2000; Kammeyer-Mueller & Wanberg, 2003; Thomas et al., 2010).

Second, psychological well-being at work was related to cognitive adjustment. Moreover, the association between psychological well-being at work and cognitive adjustment was stronger than for proactive personality. As psychological well-being reflects a state including several valuable resources (Gilbert et al., 2011; Hobfoll, 1998, 2001), it could enhance people's resources reservoir more than proactive personality would do. According to COR theory (Hobfoll, 1989, 2001), those with greater resources are more inclined to gain new ones, and hence, are more likely to become cognitively adjusted. Given the novelty and complexity of this proposition, we encourage future research to replicate our findings and to compare them with the effects of other valuable resources (e.g., optimism, resilience; Hobfoll, 2002).

Finally, Study 2 showed the positive effect of cognitive adjustment on task performance. This finding is consistent with viewing cognitive adjustment as representing important resources (Hobfoll, 1989, 2001). Indeed, cognitive adjustment would motivate one to devote energy to work that should foster performance. This result replicates previous evidence that showed that proximal indicators of adjustment are antecedents of performance (Bauer et al., 2007; Saks et al., 2007).

Therefore, based on the results of exploratory and confirmatory factor analyses, reliability analysis, temporal invariance analysis, and examination of a partial nomological network of psychological health at work, there is a strong support for the construct validity of cognitive adjustment and its measurement.

Practical implications

By having specified one of the indicators of psychological health at work, this research provides a useful tool for both researchers and practitioners. Gaining a scale of cognitive adjustment, researchers will be able to study psychological health at work in a larger perspective. Similarly, practitioners will benefit from a more encompassing diagnostic tool to identify the manifestations of psychological health at work.

In terms of interventions, the findings of Study 2 imply that organizations could foster cognitive adjustment by supporting the strengthening of their employees' resources reservoir,

such as through the promotion of worker proactivity and well-being. Support through coaching, mentoring, as well as management practices that encourage autonomy would allow employees to develop their proactivity (Parker & Sprigg, 1999; Thompson, 2005). To foster workers' psychological well-being, some strategies have demonstrated their efficacy, such as conscious focus on blessings (Emmons & McCullough, 2003; Lyubomirsky, Dickerhoof, Boehm, & Sheldon, 2011), optimism expression (Lyubomirsky et al., 2011), and cultivating positive feelings, behaviours and cognitions (Sin & Lyubomirsky, 2009).

Limitations and directions for future research

The current research contains limitations that ought to be considered to nuance the interpretation of the results. On the methodological front, exam of the nomological network was realized based on a cross-sectional research design. It is therefore not possible to determine the direction of the associative links as well as their causal nature. In this perspective, experimental or longitudinal designs should be considered in future endeavours. Moreover, 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. If 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, cognitive adjustment was conceptualized based on three dimensions by measuring perceptions in terms of the task, the work group, and the organization. While this conceptualization of adjustment seems as the most holistic, parsimonious and adequate, the scientific literature also considers other ones (e.g., Chao et al., 1994; Kammeyer-Mueller & Wanberg, 2003) and it would be relevant to confront the different theories with validated instruments. Similarly, in the perspective of widening our understanding of cognitive adjustment, antecedents and additional consequences could be explored. Seeking information and exchanges with colleagues, as mentioned earlier, are examples of potentially important determinants of adjustment (Bauer et al., 2007; Gruman et

al., 2006; Miller & Jablin, 1991; Morrison, 1993; Saks et al., 2007). In terms of outputs, cognitive adjustment would be a proximal indicator of adjustment and would influence distal indicators such as job satisfaction and organizational commitment (Bauer et al., 2007; Cooper-Thomas & Anderson, 2006; Kammeyer-Mueller & Wanberg, 2003; Saks & Ashforth, 1997; Saks et al., 2007). It would be useful to verify the relations between those variables and cognitive adjustment with the tool that was validated in the context of this study. Finally, the present study intended to define and develop an instrument that would capture workers' functioning in their organization. While cognitive adjustment is conceptualized in this perspective, other indicators of adjustment should likely be defined (e.g., negative indicators of adjustment). Future studies would gain from focusing on this, and include them in an integrated model of psychological health at work that groups indicators such as well-being, distress and cognitive adjustment.

Conclusion

Overall, the current paper presented a conceptualization and a measurement of cognitive adjustment as an indicator of psychological health at work by mitigating some major conceptual and methodological problems of most studies on the topic. On the one hand, operationalization of cognitive adjustment is based on solid theoretical framework. On the other hand, a complete validation of the instrument was realized. This research opens up exciting new avenues for occupational health psychology research, especially concerning the relations between cognitive adjustment and other variables of psychological health at work.

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Table 1

Summary of the positive proximal indicators of adjustment at work instruments

INSTRUMENT	DOMAIN	SAMPLE	VALIDATION[1]	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_{T1-3} = 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 doesn't 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.

Note. [1]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.

Table 2

Description of the samples based on the analyses realized

Sample	A	B	C
Sample size	N = 296	N = 350	N = 139
Analyses	Exploratory factor analyses Reliability analyses	Confirmatory factor analyses Reliability analyses	Reliability analyses Invariance analysis

Table 3

Factor loadings, communalities (h^2), factor correlations, and percent of variance for Promax rotation

	Item[1]	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 behaviour 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

(Table 3 continued)

Item[1]	Factor loading			h^2
	1	2	3	
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	

Note. [1]Only the French version of the instrument was validated in this paper. Original French items are italicized.

Table 4

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_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_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)

Note. ***p < .001.

Figure 1. Standardized estimates for the final measurement model M_6

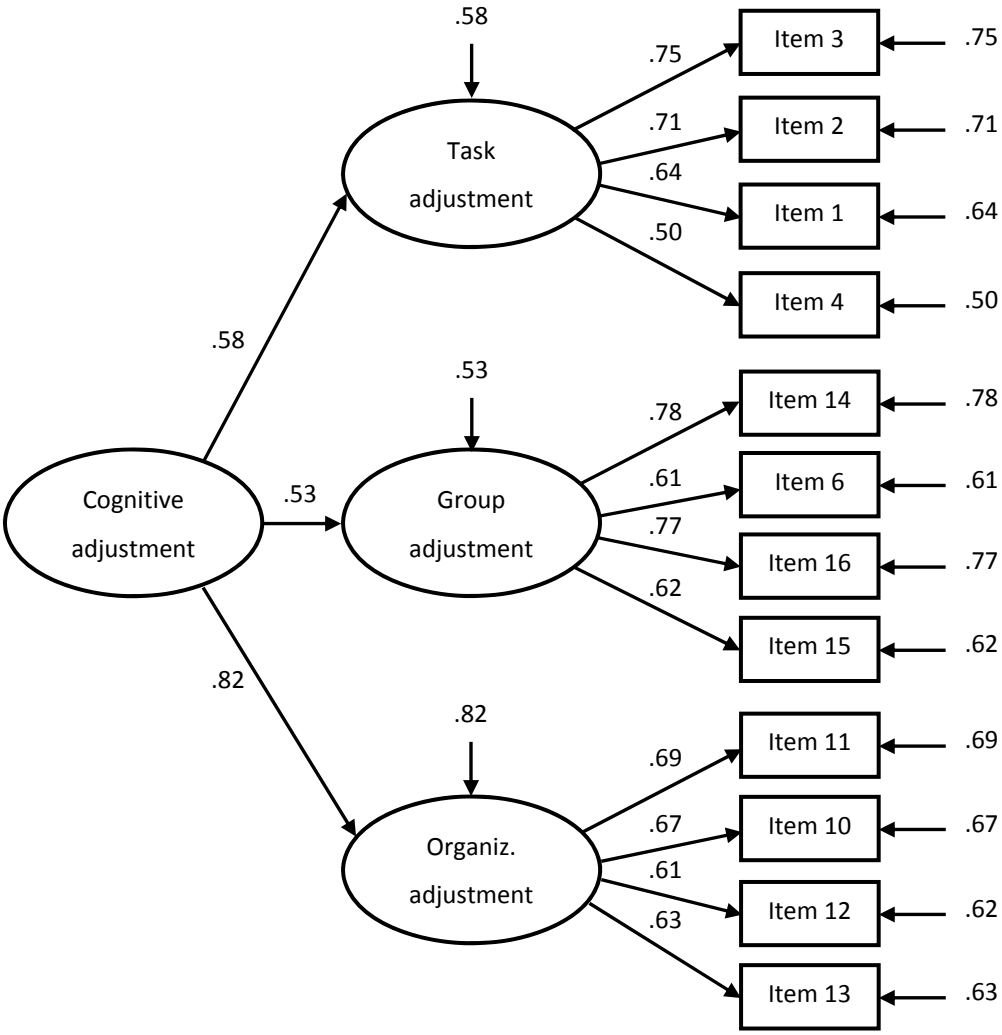

Table 5

Sample A: Descriptive statistics and correlations among variables

Variable	*M*	*SD*	1	2	3	4
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)

Note. N = 296. Reliability coefficients are reported in parentheses on the diagonal; ***p* < .01.

Table 6

Sample B: Descriptive statistics and correlations among variables

Variable	*M*	*SD*	1	2	3	4	5	6	7
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)

Note. $N = 350$. Reliability coefficients are reported in parentheses on the diagonal; $^{**}p < .01$.

Table 7

Sample C: Descriptive statistics and correlations among variables

Variable	*M*	*SD*	1	2	3	4
1. Cognitive adjustment	4.67	.58	(.81)			
Time 1 **(Time 2)**	**(4.70)**	**(.55)**	**(.81)**			
2. Task adjustment	5.15	.61	.61**	(.79)		
Time 1 **(Time 2)**	**(5.16)**	**(.61)**	**(.56**)**	**(.80)**		
3. Group adjustment	4.82	.85	.75**	.24**	(.83)	
Time 1 **(Time 2)**	**(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. N = 139. Time 2 descriptive statistics and correlations among variables are reported in bold characters in parentheses. Reliability coefficients are reported in parentheses on the diagonal; *p <.05; **p < .01.

Psychological health at work through the lens of conservation of resources theory

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Déclaration des auteurs autres que l'étudiante

À titre de coauteur de l'article identifié ci-dessus, je suis d'accord à ce que Marie Malo inclut cet article dans sa thèse qui a pour titre « La santé psychologique au travail : une modélisation ancrée dans la théorie de la conservation des ressources ».

Jean-Sébastien Boudrias	Date
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Abstract

The purpose of this research was to deepen the understanding of psychological health at work by building on Conservation of Resources theory (Hobfoll, 1989, 2001). Extending previous research, we conceptualized psychological health at work as a process including four indicators, namely psychological well-being at work, psychological distress at work, cognitive adjustment at work and behavioural stress responses at work. Beyond the effect of job demands, three studies were conducted to investigate the mediating role of psychological well-being and distress at work on the relations of personal resources (i.e., optimism and resilience) and organizational resource (i.e., work climate) with respect to cognitive adjustment and behavioural stress responses at work. Using cross-sectional and time-lagged data from three samples in Canada and in France (N = 330; N = 389; N = 128), results from path analyses lent empirical support to the proposed mediation model. Implications for research on psychological health at work and recommendations for practice are discussed.

Keywords: psychological health at work, personal resources, work climate, job demands, Conservation of Resources theory

Psychological health at work through the lens of conservation of resources theory

The World Health Organization's (World Health Organization, 1948) definition of health is one of the most widely cited definitions: "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (p. 2). Following this line of thought, studies should include both positive and negative facets of health in their conceptualization and measurement of the construct (Achille, 2003; Bakker & Derks, 2010; Barbier, Peters, & Hansez, 2010; Fineman, 2006; Keyes, 2003; Massé et al., 1998b; Nelson & Simmons, 2003). Based on occupational health psychology literature, two main indicators of psychological health at work have been studied, specifically psychological well-being at work (hereinafter referred to as well-being) and psychological distress at work (hereinafter referred to as distress; Gilbert, Dagenais-Desmarais, & Savoie, 2011; Keyes, 2003; Massé et al., 1998b). Well-being reflects an affective, cognitive and subjective positive experience regarding work (Gilbert et al., 2011). Distress corresponds to an affective, cognitive and subjective negative experience relating to work (Gilbert et al., 2011).

In spite of this, based on an extensive literature review of health definitions, Gilbert (2009) argued that research on psychological health at work should include the individual's functioning in the workplace. Notably, an individual's functioning is considered as one of the criteria to establish a clinical psychology diagnosis (e.g., DSM-IV; American Psychiatric Association, 2000). In an organizational context, employee functioning in a work environment differs from other spheres of life because of the singularity of the workplace (e.g., rules, norms, ensuring subsistence; Dagenais-Desmarais & Savoie, 2012; Hakanen & Schaufeli, 2012; Ransome, 2007). Therefore, it is important to conceptualize psychological health at work by including not only workers' subjective experiences associated with well-being and distress, but also by integrating elements of overall functioning of the person, in order to allow for a more holistic understanding of this complex phenomenon.

In this respect, two indicators of occupational functioning have been proposed, namely cognitive adjustment at work (hereinafter referred to as cognitive adjustment; Malo & Brunet, in preparation) and behavioural stress responses at work (hereinafter referred to as behavioural stress responses; Gilbert, 2009). Cognitive adjustment represents a state in which people have the requisite knowledge and skills regarding the different organizational realities with respect to the task, work group and organization, and which enables them to function in the working environment (Malo & Brunet, in preparation). Behavioural stress responses are observable reactions, including fight, flight and freeze, activated in response to threats in the workplace (Gilbert, 2009).

Although a fair amount of work focuses on well-being (e.g., Dagenais-Desmarais & Savoie, 2012; Danna & Griffin, 1999; Diener & Scollon, 2014; Harter, Schmidt, & Keyes, 2003; Massé et al., 1998c) and distress (e.g., Crandall & Perrewe, 1995; Dollard & Bakker, 2010; Marchand, Drapeau, & Beaulieu-Prévost, 2012; Massé et al., 1998a), little empirical attention has been devoted to jointly studying both positive and negative indicators of psychological health at work (Bakker & Demerouti, 2007; Boudrias et al., 2011; Boudrias et al., 2014; Gilbert et al., 2011). Furthermore, to the best of our knowledge no research has simultaneously explored well-being, distress, and positive and negative indicators of occupational functioning, such as cognitive adjustment and behavioural stress responses. One possibility may be that the vast majority of theories have adopted a one-dimensional perspective of psychological health at work (Bruchon-Schweitzer, 2002). For instance, a large body of research has drawn inspiration from stress theories (e.g., Person-Environment Fit theory, Edwards, Caplan, & Van Harrison, 1998; Job Demand-Control theory, Karasek, 1979; General Adaptation Syndrome, Selye, 1946; 1956), which have largely emphasized the negative facet of psychological health at work. In contrast, positive psychology theorists have mainly focused their efforts on the positive side of psychological health at work (Fredrickson, 2001; Luthans, Youssef, & Avolio, 2006). Some scholars have, however, proposed theoretical frameworks integrating both positive and negative indicators of psychological health at work (e.g., Organisational Health Framework, Hart & Cooper, 2001) with a plethora of antecedents (e.g., psychological dispositions, socio-demographic characteristics, situational factors), but they have provided

limited explanations on the mechanisms underlying their model components. Thus, we know little about how antecedents exert their effects on psychological health at work.

Following the above discussion, the current paper attempts to broaden the understanding of psychological health at work by modeling it as a process that includes a subprocess explaining the relations between positive indicators (i.e., well-being and cognitive adjustment), and a subprocess describing the relations between negative indicators (i.e., distress and behavioural stress responses). Drawing from Conservation of Resources theory (COR theory; Hobfoll, 1989, 2001), we argue that the motivation to protect and gain resources may explain the links between personal resources (i.e., optimism and resilience) and organizational resources (i.e., supportive work climate), well-being, distress, cognitive adjustment and behavioural stress responses. Accordingly, we put forward three propositions. First, optimism, resilience and a supportive work climate, which have been found to exert a strong influence on well-being and distress (Alarcon, Bowling, & Khazon, 2013; Bakker, Demerouti, De Boer, & Schaufeli, 2003; Gallagher, Lopez, & Pressman, 2013; He, Cao, Feng, Guan, & Peng, 2013; Parker et al., 2003), would trigger resource gain and resource loss processes. Second, well-being and distress should reflect two different psychological and motivational states that would respectively increase resource gain and resource loss processes. Third and finally, cognitive adjustment and behavioural stress responses should respectively represent outcomes of resource gain and resource loss processes. Therefore, the present research aims to investigate, independently from the influence of workplace stressors such as job demands, the impacts of (a) optimism, resilience and a supportive work climate on cognitive adjustment, as mediated by well-being, and of (b) optimism, resilience and a supportive work climate on behavioural stress responses, as mediated by distress.

To test these propositions, three studies were conducted. Using a cross-sectional design with francophone teachers from Canada, Study 1 intends to answer the call to examine both the positive and negative aspects of psychological health at work (Achille, 2003; Bakker & Derks, 2010; Barbier et al., 2010; Fineman, 2006; Keyes, 2003; Massé et al., 1998b; Nelson & Simmons, 2003), including positive and negative indicators of individual functioning.

Specifically, Study 1 attempts to extend prior work by modeling psychological health at work as a process that takes into account four indicators, and by exploring, under the lens of COR theory (Hobfoll, 1989, 2001), the mechanisms that underlie these indicators. Given the novelty of this conceptualization, we aimed to assess the generalizability of our findings to a different teachers' sample. To this end, Study 2 replicated Study 1 by examining the invariance of the model with teachers from France. Finally, since previous research on psychological health at work has been limited by the extensive use of cross-sectional designs (Hakanen, Peeters, & Perhoniemi, 2011; Hall, Dollard, Tuckey, Winefield, & Thompson, 2010; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009), Study 3 relies on a time-lagged design to test the directionality of the relations presented above. With a different sample of francophone teachers from Canada, this last study also sets out to extend the generalizability of our findings. In the following sections, we outline the theoretical grounds of our proposed model (see Figures 1 and 2), along with our hypotheses.

Insert Figure 1 about here

Insert Figure 2 about here

Theoretical framework

COR theory and indicators of psychological health at work

The key assumption in COR theory is that "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). Resources can be anything that is personally valued, and may include psychological characteristics (e.g., self-esteem, self-efficacy), objects (e.g., housing, clothing), energy (e.g., time, knowledge) and conditions (e.g., job security, social support; Hobfoll, 1998; Hobfoll, 2001). According to Hobfoll (1998, 2001), resources have a cultural value. He identified 74 valuable resources in many Western countries, such as personal health.

Resource loss and resource gain processes are cornerstones of COR theory (Hobfoll, 1989, 2001). On the one hand, the resource loss process implies that people seek to protect themselves against potential or actual resource losses. In order to do so, they might use, in line with the second principle of COR theory (Hobfoll, 1989, 2001), strategies that require an investment of additional resources. First, they can try to replace the lost resource. For instance, the loss of control triggered by environmental demands may instigate attempts to re-establish control by various means, as in denigrating the environment or by actions contrary to the demands. Differently, resource loss can motivate people to substitute the loss by another resource from a different area. For example, an employee who is experiencing a resource loss as a result of a conflict with his spouse might over-invest work-related resources. Those with fewer resources are less able to invest resources and are therefore more likely to experience increased resource loss and to adopt a defensive posture for purposes of protection and preservation.

On the other hand, the resource gain process implies that people are motivated to maintain and develop their current resources and to acquire new ones. According to the second principle of COR theory (Hobfoll, 1989, 2001), they must invest resources to gain additional ones, which means they need to have the personal and environmental ability to do so. For instance, an employee who wants to have a promotion must rely on his or her resources in terms of time and energy to achieve the set goal. Individuals with a greater pool of resources are less vulnerable to resource loss and are better equipped to achieve resource gains. To summarize, a motivational mechanism underlies the resource loss and resource gain processes, which should guide emotions, cognitions, attitudes and actions.

Well-being refers to a psychological state characterized by valuable resources identified by Hobfoll (1998, 2001). Indeed, well-being includes cognitions and affects related to a positive rapport with the self, others and the job (Gilbert et al., 2011). The positive rapport with the self represents the feeling of being at peace with oneself and emotionally balanced at work. As positive feelings about oneself, this component of well-being incarnates a valuable resource identified by Hobfoll (1998, 2001). The rapport with others reflects the perception of being

appreciated in one's organization and maintaining cordial relationships at work, which corresponds to Hobfoll's (1998, 2001) following resources: feeling valuable to others and having good relationships. The rapport with the job captures the desire to be implicated in the job and includes resources such as the motivation to get things done and feelings of being successful and accomplishing goals (Hobfoll, 1998, 2001). Thus, well-being includes several valuable resources, making individuals less vulnerable to lose resources and positioning them in a motivational state allowing them to obtain even more resources (Gorgievski & Hobfoll, 2008; Hobfoll, 1989, 2001). As employees experience more well-being, their resource reservoir increases, reducing the fear of losing resources and enabling them to invest additional resources to conserve and to acquire new ones (Gorgievski & Hobfoll, 2008; Hobfoll, 1989, 2001).

Contrary to well-being, distress at work is composed of cognitions and affects that are linked to a negative rapport with the self, others and the job (Gilbert et al., 2011). The rapport with the self is expressed through depressive and anxious symptoms, wherein key resources such as one's self-esteem and feeling of having control over one's life are weakened (Hobfoll, 1998, 2001; Byrne et al., 2014; Hobfoll & Freedy, 1993). The rapport with others refers to the irritability and impatience one feels towards others, which would impair one's mental resources (Fredrickson, 2001; Hallberg, Johansson, & Schaufeli, 2007). The rapport with the job corresponds to a loss of interest in work and projects, which represents a loss of resources that Hobfoll (1998, 2001) calls motivation to get things done. Taken together, distress reflects a resource drain. The more workers experience distress, the more their perception of losing resources should increase, and the more they should become motivated to protect their resources (Hobfoll, 1989, 2001).

Hence, according to COR theory (Hobfoll, 1989, 2001), well-being and distress would be two motivational states that are distinct and linked at the same time. On the one hand, these two states differ relating to resource gain and loss processes. While well-being corresponds to the perception of having resources that motivates people to acquire new ones, distress reflects the perception of resource drain that motivates employees to protect their

resources. On the other hand, well-being and distress are also related. From a COR theory perspective (Hobfoll, 1989, 2001), experiencing well-being, and the perception of having valuable resources, may reduce distress by diminishing the resource drain process. Inversely, resource drain associated with distress may consume the resources related to one's well-being. This argument is consistent with many studies that demonstrated, through confirmatory factor analyses, that well-being and distress are two interrelated distinct states (Karademas, 2007; Massé et al., 1998b; Veit & Ware, 1983).

Given the presumed motivational differences underlying well-being and distress, they should be differentially associated with antecedents and outcomes that symbolize possible gains or losses for oneself. Our reasoning is in line with scholars who argued that well-being and distress have distinct sets of determinants and consequences (Bakker & Derks, 2010; Cotton & Hart, 2003; Tetrick, 2002). Therefore, well-being and distress should distinctively relate to the other two indicators of psychological health at work.

Despite advances in research regarding the relations linking well-being and distress (e.g., Karademas, 2007; Massé et al., 1998b; Veit & Ware, 1983), few insights have been offered on how cognitive adjustment and behavioural stress responses are related to the two other indicators of psychological health at work. COR theory appears to be an avenue worth exploring to link them (Hobfoll, 1989, 2001), even though no other research has, to the best of our knowledge, done so before. Cognitive adjustment reflects a cognitive state allowing one to function in a work environment and encompasses knowledge and skills relative to (a) the components of the job, (b) relationships and the mode of functioning within a group, and (c) formal and informal rules, power relationships, norms and values defining the organizational culture and the climate (Malo & Brunet, in preparation).

In terms of COR theory, cognitive adjustment represents important resources as it includes knowledge and skills (Hobfoll, 1998, 2001) regarding the workplace. To acquire knowledge and skills, workers must invest resources to obtain the necessary information to be cognitively adjusted, notably in time and energy. For example, studies have shown that information seeking and exchanges with colleagues reinforce employee adjustment (Bauer,

Bodner, Erdogan, Truxillo, & Tucker, 2007; Gruman, Saks, & Zweig, 2006; Miller & Jablin, 1991; Morrison, 1993; Saks, Uggerslev, & Fassina, 2007). In this perspective, cognitive adjustment reflects the result of the investments made by an employee to develop his or her resources within their organization. Therefore, cognitive adjustment represents an outcome of the resource gain process, according to COR theory (Hobfoll, 1989, 2001). Based on our argument that well-being is a resourceful psychological state that motivates the individual to build and gain resources, we argue that it should drive workers to invest resources in order to become cognitively adjusted. The above reasoning leads to the following hypotheses:

> *Hypothesis 1a.* Well-being will be significantly and positively related to cognitive adjustment.

Given the large use of cross-sectional investigation of psychological health at work, it is important to understand the role of well-being on cognitive adjustment over time. The subsequent hypotheses regarding the other variables of interest will follow the same logic. Thus, we hypothesize that:

> *Hypothesis 1b.* When measured over time, Time 1 well-being will be significantly and positively related to Time 2 cognitive adjustment, through the effect of Time 1 cognitive adjustment.

If cognitive adjustment reflects an outcome of the resource gain process, behavioural stress responses can be understood as an outcome of the resource loss process. As proposed by Penney, Hunter and Perry (2011), who have applied COR theory to the prediction of counterproductive work behaviours, behavioural stress responses may indicate a deliberate resource investment to address resource loss. Behavioural stress responses involve three reactions to perceived threats in the workplace: fight, flight and freeze (2009, in Brien, Lapointe, Gilbert, Brunet, & Savoie, 2008; Gilbert, 2009). Because fight includes aggression towards others (Courcy, Savoie, & Brunet, 2004), it could be conceptualized as an investment in resources to replace lost resources. As such, fight represents a way to take control over one's job stressors (Allen & Greenberger, 1980; Baum, Singer, & Singer, 2013; Fox, Spector, & Miles, 2001; Greenberger & Strasser, 1986; Storms & Spector, 1987), such as job demands.

Understood through the lens of COR theory, reprising control constitutes a resource loss strategy identified by Hobfoll (1989, 2001). Flight, whereby sources of stress are avoided, and freeze wherein there is disengagement to preserve resources, represent two methods of defensive position to conserve resources, another strategy identified by Hobfoll (1989, 2001). Overall, behavioural stress responses represent an indicator that the employee is trying to protect and to conserve his or her resources. In light of COR theory (Hobfoll, 1989, 2001), behavioural stress responses should intensify as resource loss increases. Since distress represents a resource drain, we propose that higher levels of distress would make people more likely to protect their resources through behavioural stress responses. Thus, the following hypotheses are proposed:

> *Hypothesis 2a.* Distress will be significantly and positively related to behavioural stress responses.
>
> *Hypothesis 2b.* When measured over time, Time 1 distress will be significantly and positively related to Time 2 behavioural stress responses, through the effect of Time 1 behavioural stress responses.

Personal resources and indicators of psychological health at work

Optimism and resilience constitute two well-documented key personal resources (e.g., Hobfoll, 1998, 2001, 2002). Optimism reflects the tendency to expect positive outcomes in one's lifetime (Scheier & Carver, 1985; Scheier, Carver, & Bridges, 1994). The expectation and belief that things will go well are associated with positive emotions (e.g., joy and enthusiasm; Carver & Scheier, 2014; Fredrickson, 2000; Scheier & Carver, 1985; Tugade, Fredrickson, & Feldman Barrett, 2004) and secure feelings (Mikulincer, Horesh, Eilati, & Kotler, 1999; Mikulincer & Shaver, 2005; Shaver & Mikulincer, 2006), which turn off threats and help to address the environment as a challenge, to explore, to seize opportunities and to grow (Gilbert, 1992; Gilbert et al., 2008). Resilience reflects the ability to bounce back from difficulties and obstacles (Luthans, Vogelgesang, & Lester, 2006; Tugade et al., 2004) and is characterized by the belief to be able to manage the environment (Maddi, 2004). Similar to optimism, this

positive belief is associated with emotional security (Masten, Cutuli, Herbers, & Reed, 2009; Mikulincer & Florian, 1998), which again mitigates threats and enables one to address the environment as a challenge, to explore, to seize opportunities and to grow (Gilbert, 1992; Gilbert et al., 2008).

From the point of view of COR theory (Hobfoll, 1989, 2001), optimism and resilience, each one in their own way, build employees' personal capacity by making them less vulnerable to the loss of resources, which should translate into greater well-being and less distress. This idea echoes both cross-sectional and longitudinal studies that found optimism and resiliency, separately, to be positively related to well-being (e.g., Alarcon et al., 2013; Gallagher et al., 2013; Gilbert et al., 2011; He et al., 2013; Lu, Wang, Liu, & Zhang, 2014) and negatively related to distress (e.g., Gilbert et al., 2011; Injeyan et al., 2011; Kinman & Grant, 2011; Laschinger, Wong, Regan, Young-Ritchie, & Bushell, 2013; Rajandram et al., 2011). In addition, and related to the principles of COR theory (Hobfoll, 1989, 2001), those who profit from greater resource capital, including personal resources and well-being, should be in a better position to invest resources with the intent of obtaining new ones. In contrast, workers who benefit from fewer resources (i.e., less personal resources and more distress) would be motivated to protect their limited resources. In light of these considerations, we propose that being optimistic and resilient should indirectly lead to becoming cognitively adjusted through well-being, which is a presumed motivational state allowing people to gain resources. Inversely, less optimistic and resilient employees are more likely to have behavioural stress responses, because they should be more vulnerable to resource loss and to distress. As such, distress is a presumed motivational state associated with the desire to protect resources. Therefore, optimism and resilience appear to initiate resource gain and resource loss processes. To summarize, we hypothesize the following:

> *Hypothesis 3a.* Well-being will mediate a significant and positive relation between optimism and cognitive adjustment.

Hypothesis 3b. When measured over time, Time 1 well-being will mediate a significant and positive relation between Time 1 optimism and Time 2 cognitive adjustment, through the effect of Time 1 cognitive adjustment.

Hypothesis 4a. Well-being will mediate a significant and positive relation between resilience and cognitive adjustment.

Hypothesis 4b. When measured over time, Time 1 well-being will mediate a significant and positive relation between Time 1 resiliency and Time 2 cognitive adjustment, controlling for Time 1 cognitive adjustment.

Hypothesis 5a. Distress will mediate a significant and negative relation between optimism and behavioural stress responses.

Hypothesis 5b. When measured over time, Time 1 distress will mediate a significant and negative relation between Time 1 optimism and Time 2 behavioural stress responses, through the effect of Time 1 behavioural stress responses.

Hypothesis 6a. Distress will mediate a significant and negative relation between resilience and behavioural stress responses.

Hypothesis 6b. When measured over time, Time 1 distress will mediate a significant and negative relation between Time 1 resilience and Time 2 behavioural stress responses, through the effect of Time 1 behavioural stress responses.

Work climate and indicators of psychological health at work

Beyond personal resources that exercise an influence on indicators of psychological health, work climate is recognized as a major determinant of workers' well-being and distress (Cotton & Hart, 2003; Danna & Griffin, 1999; Parker et al., 2003). According to Roy (1989, 1994), work climate describes the employees' perception of the relationship between the organization and its people and how they evaluate the way they are treated. Work climate includes the way individuals' feelings are considered, how they are respected in their need for

autonomy and how they view the possibility of growing personally and professionally within the organization.

Linking this concept with COR theory (Hobfoll, 1998, 2001), a supportive work climate consists in three valuable resources for workers, namely understanding from the employer, autonomy and job advancement. Given that the perception of a supportive work climate implies available resources in the environment, individuals should be less vulnerable to resource loss as their perception of work climate changes for the better. This would translate into higher levels of well-being and decreased levels of distress (Hobfoll, 1998, 2001). The previous reasoning is consistent with both cross-sectional and longitudinal studies that found work climate to be positively related to well-being (e.g., Gurt, Schwennen, & Elke, 2011; Martin, Jones, & Callan, 2005; Parker et al., 2003; Shuck & Reio, 2014) and negatively related to distress (e.g., Avey, Luthans, Smith, & Palmer, 2010; Burns & Machin, 2012; Collie, Shapka, & Perry, 2012; Dollard & Bakker, 2010; Parker et al., 2003). In relation to the principles of COR theory (Hobfoll, 1998, 2001), a supportive work climate would indirectly increase cognitive adjustment through well-being, because those with greater resources are in a position to invest resources. Inversely, a non-supportive work climate should make people more vulnerable to resource loss and distress, which would entice them to protect their resources through behavioural stress responses (Hobfoll, 1998, 2001). As for personal resources, work climate appears to trigger resource gain and resource loss processes. In view of the preceding argument, our hypotheses are as follows:

Hypothesis 7a. Well-being will mediate a significant and positive relation between work climate and cognitive adjustment.

Hypothesis 7b. When measured over time, Time 1 well-being will mediate a significant and positive relation between Time 1 work climate and Time 2 cognitive adjustment, through the effect of Time 1 cognitive adjustment.

Hypothesis 8a. Distress will mediate a significant and negative relation between work climate and behavioural stress responses.

Hypothesis 8b. When measured over time, Time 1 distress will mediate a significant and negative relation between Time 1 work climate and Time 2 behavioural stress responses, through the effect of Time 1 behavioural stress responses.

Job demands as resource threats

In the perspective of verifying the contribution of optimism, resilience, and work climate independently of resource threats, we considered the effect of job demands that are recognized as potential work-related stressors (Bakker & Demerouti, 2007; Meijman & Mulder, 1998; Nahrgang, Morgeson, & Hofmann, 2011). Job demands represent aspects of work that require a sustained mental or a physical effort and that are associated with an expenditure of psychophysical energy (Bakker et al., 2003; Schaufeli & Bakker, 2004). Whether they are quantitative (e.g., workload), qualitative (e.g., task complexity) or emotional (e.g., requirement of suppressing or feeling an emotion), job demands, in the terms of COR theory (Hobfoll, 1989, 2001), threaten resources notably by reducing workers' level of energy (Bakker et al., 2003; Hakanen, Schaufeli, & Ahola, 2008; Schaufeli & Bakker, 2004). Studies have shown that this type of stressor is associated with lower levels of well-being (Bakker, van Veldhoven, & Xanthopoulou, 2010; Crawford, LePine, & Rich, 2010; Häusser, Mojzisch, Niesel, & Schulz-Hardt, 2010; Simbula, 2010; Sonnentag, Mojza, Demerouti, & Bakker, 2012) and greater levels of distress (Alarcon, 2011; Bakker, Boyd, et al., 2010; Crawford et al., 2010; Häusser et al., 2010; Simbula, 2010). While no study has tested this, it is probable that job demands have an effect on cognitive adjustment and behavioural stress responses, given that these are indicators of psychological health at work that are potentially sensitive to resource gains or losses, as mentioned earlier. Thus, on the basis of COR theory (Hobfoll, 1989, 2001), we posit that optimism, resilience, and work climate will influence the four indicators of psychological health at work beyond the impact of job demands. Indeed, we propose that optimism, resilience, and work climate have the potential of triggering the resource gain and resource loss processes, independently of stressors. Consequently, job demands will be treated as a control variable.

Study 1

Study 1 examined, independently from job demands effects, (a) the mediating role of well-being on the relations between work climate, optimism, resilience, and cognitive adjustment, as well as (b) the mediating role of distress on the relations between the same personal and organizational resources and behavioural stress responses.

Method

Participants and Procedure

With the collaboration of school boards and school principals, francophone teachers from 25 schools in Quebec, a Canadian province, were invited to participate in a study on the quality of work life. A meeting with the researchers in charge of the study was held to explain the purpose of the research and to ensure participants that responses would be kept confidential and anonymous. A total of 330 participants provided valuable responses. Teachers were recruited from elementary schools (45%), high schools (48%) and vocational training schools (7%). Age was measured in ranges (e.g., 21-30, 31-40). The majority of participants were between the ages of 31 and 50 (59%, with 22% under 30 and 19% over 50), and 231 were women (70%). Respondents had a mean teaching tenure of 14.03 years (*SD* = 9.57) and the majority of them (74%) held full-time permanent teacher status.

Measures

Measures were administered in French and had previously been validated (Boudrias et al., 2011; Boudrias et al., 2014; Gilbert et al., 2011).

Well-being and distress. An adaptation of Massé et al.'s (1998) instrument to reflect the work setting (Gilbert et al., 2011) was used to assess well-being and distress. The measurement of well-being involves a 23-item scale and sample items included "I feel healthy and in good shape" and "My morale is good". Distress is a 21-item measurement and includes items such as "I feel depressed or down in the dumps'" and "I feel disinterested in my work". All items

used a 5-point scale ranging from 1 (almost never) to 5 (almost always). The alpha coefficients in the present study were satisfactory ($\alpha_{\text{Well-being}} = .92$ and $\alpha_{\text{Distress}} = .95$).

Cognitive adjustment. We assessed the work-related cognitive adjustment with a 12-item scale validated by Malo and Brunet (in preparation). Sample items included "I know all of the requirements entailed in my task", "I know whom I can speak to when I feel overwhelmed by my work" and "I know how decisions in my school are taken". Items were scored on a 6-point scale ranging from 1 (completely disagree) to 6 (completely agree). This scale displayed a satisfactory internal consistency coefficient in this study ($\alpha = .80$).

Behavioural stress responses. Brien, Lapointe, Gilbert, Brunet and Savoie's (2008) 9-item scale was used to measure behavioural stress responses (e.g., "In the past month at work, I denigrated others", "When things go wrong at work, I leave as soon as possible", and "I perform my work mechanically"). Responses were measured on a 5-point scale ranging from 1 (almost never) to 5 (almost always).The reliability coefficient for this scale was satisfactory ($\alpha = .75$).

Optimism. We measured optimism with a 6-item scale validated by Trottier, Mageau, Trudel and Halliwell (2008), a French version of the Scheier, Carver and Bridges' (1994) Life Orientation Test – Revised (e.g., "Overall, I expect more good things to happen to me than bad"). Participants provided their ratings using a 6-point scale ranging from 1 (completely disagree) to 6 (completely agree). Internal consistency in this study was satisfactory ($\alpha = .76$).

Resilience. Nine items from Brien, Brunet, Boudrias, Savoie and Desrumaux's (2008) questionnaire were used to assess resilience. Participants were asked how they react "When they face a great difficulty (stress, adversity)" using a 5-point scale ranging from 1 (almost never) to 5 (almost always). Sample item included "Feel able to influence the course of events". The Cronbach's alpha in this study was satisfactory ($\alpha = .88$) for the entire set of items.

Work climate. Work climate was measured using a 9-item scale from Roy's questionnaire (Roy, 1989; e.g., "You are free to use your skills as you see fit", "Your contribution is recognized in the organization" and "You are given the opportunity to develop yourself"). A 6-point scale

ranging from 1 (strongly disagree) to 6 (strongly agree) was used for these items. In the present data set, the Cronbach's alpha was satisfactory (α = .90).

Job demands. A 9-item scale from Lapointe, Boudrias, Brien and Savoie's (2009) questionnaire was used to measure job demands. Items covered various work characteristics, such as workload, emotional demands, physical demands, task complexity, task diversity, challenges to be met, responsibilities to be assumed, pressure to perform, and demands from management. Respondents provided their ratings using a 5-point rating scale ranging from 1 (very insufficient) to 5 (too much). This scale showed good reliability in the present study (α = .84).

Demographic control variables. We measured sex, age, tenure and experience to control for their potential effect in our analyses as prior research had found these factors to correlate with indicators of psychological health at work (Avey et al., 2010; Ceja & Navarro, 2011; Song, Foo, Uy, & Sun, 2011; Sonnentag & Ilies, 2011; Warr, 1999; Wilks & Neto, 2013).

Results and discussion

Preliminary analyses

Data screening was first performed. Results confirm the assumptions of normality and show no evidence of singularity or multicollinearity. Second, following Becker's (2005) recommendations, multivariate regressions and ANOVAs were executed to examine whether demographic control variables (i.e., sex, age, tenure, and experience) should be controlled for in our substantive analyses. Of interest, experience was related to cognitive adjustment (β = .21, $p < .05$), while sex and tenure were related to behavioural stress responses (β = .11, $p < .05$; β = -.18, $p < .01$, respectively). No other significant associations were found between demographic control variables and mediating and dependent variables. Hence, we dropped them for the subsequent analyses.

Path analysis model tests

We conducted path analyses in Amos 19 (Arbuckle, 2010), using a Maximum Likelihood estimation, to test the fit of our hypothesized model (see Figure 1) as well as that of alternative models (see Table 1). As each measure has been previously validated and past research supports the use of the variables' global score, we employed path analyses rather than structural equation modeling (such as in the next two studies) to reduce the number of participants per parameter to be estimated (Marsh, Hau, & Balla, 1997 in Thibodeau, Dussault, Frenette, & Royer, 2012), thereby increasing the stability of our findings.

Insert Table 1 about here

Models fit was evaluated using the following indices: chi-square (χ^2), the ratio of the χ^2 divided by its degrees of freedom (χ^2/df), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Standardized Root Mean Square Residual (SRMR), and the Root Mean Square Error of Approximation (RMSEA), including the associated 90% Confidence Interval (CI). Marsh and Hocevar (1985) recommended χ^2/df ratios of 2:1 to 5:1 as indicators of an acceptable model fit. CFI and TLI values greater than .90 would indicate a good fit of the model to the data (Hu & Bentler, 1995), while values of .95 or greater would indicate an excellent fit (Hu & Bentler, 1999). Values lower than .08 for the SRMR are the recommended standard to judge the adequacy of a model (Hu & Bentler, 1999). RMSEA values smaller than .08 would indicate a good fit of the model to the data, and values lower than .05 would indicate a very close fit (Hu & Bentler, 1999), with a maximum lower bound of the 90% CI of .05, and a maximum upper bound of 90% CI of .10 (Kline, 2011). To compare the models, we used the chi-square difference test ($\Delta\chi^2$); a significant $\Delta\chi^2$ indicates a better fit between competing models (Kline, 2011).

Overall, our hypothesized model provided a good fit to the data, $\chi^2(9) = 23.49$, $p < .01$, χ^2/df = 2.61, CFI = .99, TLI = .96, SRMR = .03, RMSEA = .07 and 90% CI = .04, .10. However, associations between both cognitive adjustment and behavioural stress responses with job demands were not statistically significant ($\beta = .08$, *ns*; $\beta = -.05$, *ns,* respectively). Hence, the corresponding paths were dropped in a second model (M_2) which demonstrated a similar fit

to M_1, $\chi^2(11) = 26.61$, $p < .01$, $\chi^2/df = 2.42$, CFI = .98, TLI = .96, SRMR = .03, RMSEA = .06 and 90% CI = .03, .10. Based on our preliminary analyses, we then examined the relations between experience and cognitive adjustment, and between sex, tenure and behavioural stress responses by adding the corresponding paths in M_2. This model (M_3) yielded a similar fit to M_2, $\chi^2(34) = 71.98$, $p < .001$, $\chi^2/df = 2.12$, CFI = .96, TLI = .94, SRMR = .05, RMSEA = .06 and 90% CI = .04, .08, and indicated that experience was related to cognitive adjustment ($\beta = .01$, $p < .001$), that tenure was significantly related to behavioural stress responses ($\beta = -.06$, $p < .05$), but that sex was unrelated to behavioural stress responses ($\beta = .08$, *ns*). We then tested a fourth model (M_4) in which we had withdrawn the variable of sex from M_3. This more parsimonious model showed a similar fit with the three previous ones, $\chi^2(25) = 52.26$, $p < .001$, $\chi^2/df = 2.09$, CFI = .97, TLI = .95, SRMR = .05, RMSEA = .06 and 90% CI = .04, .08, and was used as the baseline for further comparisons.

Furthermore, in order to challenge the mediated path model, we compared M_4 to an alternative partially mediated path model (M_5) with direct paths from optimism, resilience and work climate to cognitive adjustment, and to behavioural stress responses in addition to the paths depicted in Figure 1 (James, Mulaik, & Brett, 2006). The results of a chi-square difference test demonstrated that the partially mediated model did not improve model fit, $\Delta\chi^2(6) = 14.54$, *ns*. The more parsimonious option, M_4, is thus retained and preferred over this alternative model (James et al., 2006). Additionally, to determine whether well-being could be related to behavioural stress responses and whether distress could be related to work cognitive adjustment, we tested another model (M_6) including the corresponding paths. This model did not show a significantly better fit than M_4, $\Delta\chi^2(2) = .24$, *ns*, and the added paths were not significant ($\beta = .02$, *ns*; $\beta = -.02$, *ns*, respectively). Overall, these tests suggested that M_4 represented the optimal model in the present study. M_4 is thus retained as the final model.

Descriptive statistics and correlations

Table 2 shows means, standard deviations and correlations among the variables, and standardized beta coefficients associated with the final model are reported in Figure 3.

Insert Table 2 about here

Insert Figure 3 about here

Hypotheses testing

The decomposition of effects in M_4 is reported in Table 3. In support of Hypothesis 1a, well-being was significantly and positively associated with cognitive adjustment (β = .41, $p < .001$), controlling for job demands. Similarly, distress was related to behavioural stress responses (β = .67, $p < .001$) independently from job demand effects, yielding support for Hypothesis 2a.

With 100% of the 1000 bootstrap samples converged (MacKinnon, Lockwood, & Williams, 2004; Shrout & Bolger, 2002), analyses indicated that the effect of optimism on work cognitive adjustment through well-being (.12, 95% CI = .08, .18) was significant, as well as for resilience (.16, 95% CI = .11, .22) and work climate (.05, 95% CI = .01, .09), when controlling for job demands. Hypotheses 3a, 4a and 7a are thus confirmed. Additionally, the indirect effects of work climate (−.17, 95% CI = −.24, −.09), optimism (−.13, 95% CI = −.20, −.05), and resilience (−.17, 95% CI = −.25, −.10) on behavioural stress responses through distress were significant, when controlling for job demands. Therefore, Hypotheses 5a, 6a and 8a are supported.

Insert Table 3 about here

These findings suggest that, beyond the effect of job demands: (a) optimism, resilience and work climate contribute to cognitive adjustment via their relations with well-being, and (b) they contribute to behavioural stress responses through distress. Specifically, optimism, resilience and work climate are positively related to well-being, which, in turn, is positively related cognitive adjustment, and are negatively related to distress, which is positively related to behavioural stress responses. Hence, optimism, resilience and a supportive work climate appear to act as resources that initiate resource gain and resource loss processes, which would respectively be influenced by well-being and distress.

Study 2

The purpose of Study 2 was to replicate Study 1. Specifically, we aimed to test the invariance of the final model (M_4) in a sample of teachers from a different French-speaking country, namely France.

Replications of Study 1 are necessary for several reasons. First, replication studies are rarely reported in occupational health psychology, although the research community recognizes the importance of such work in the production of scientific knowledge (e.g., Asendorpf et al., 2013; Cook, Campbell, & Day, 1979; Koole & Lakens, 2012). Second, scant research has examined both positive and negative indicators of psychological health at work (Boudrias et al., 2011; Boudrias et al., 2014; Gilbert et al., 2011). Third, no research, to our knowledge, has examined the relations between resources and the four psychological health indicators that we proposed. Hence, to assess the validity and the generalization of our findings, there is a need to replicate Study 1 for different samples and situations (Asendorpf et al., 2013; Koole & Lakens, 2012).

Method

Participants and Procedure

To conduct the second study, data collected from francophone Canadian teachers in Study 1 were compared with data collected from a sample of French teachers. In France, participants were recruited by research assistants after first having obtained the support of their school administration. Respondents were invited, on an individual and voluntary basis, to participate in a study on the quality of life at work. They signed a consent form stating that responses would be kept confidential. Participants had two weeks to complete questionnaires on their own personal time and to return them to the research assistants. In total, 389 teachers took part in this study; these individuals taught at the elementary (33%), high school (33%), or college/university (29%) level, or on multiple levels (5%). The average age was between 31 and

50 (60%, with 18% under 30 and 22% over 50), the average teaching tenure was 16.77 years (*SD* = 11.34), 65% were full-time permanent teachers, and 239 were women (61%).

Measures

Measures were administered in French, had been previously validated and had been shown to be invariant across samples from France and Canada (Boudrias et al., 2011; Boudrias et al., 2014). The same scales of well-being (α = .90), distress (α = .95), cognitive adjustment (α = .80), behavioural stress responses (α = .75), optimism (α = .80), resilience (α = .88), work climate (α = .90), and job demands (α = .81) were used as in Study 1.

Results and discussion

Preliminary analyses

Data screening was performed. Results confirm the assumptions of normality and show no evidence of singularity or multicollinearity.

Invariance tests

Multiple-group path analysis was employed to examine whether the findings based on Study 1 were replicable and invariant across the French and Canadian samples. More specifically, we conducted both within- and between-group analyses by means of AMOS 19 (Arbuckle, 2010). Table 1 presents the results of these analyses. Furthermore, for the French teachers' sample, descriptive statistics, correlations, and standardized beta coefficients are reported in Table 4.

Insert Table 4 about here

We first examined the model fit adequacy for France and Canada separately, to determine whether a good fit was observable in each sample. Results revealed that the model fit well for both samples (see Table 1). According to Byrne (1994), we then verified whether the magnitude of each hypothesized relation was invariant across national French cultures by comparing two nested models: (1) a baseline model M_7 wherein no constraints were specified

(i.e., all of the parameter estimates were freely estimated within samples) and (2) a second model M_8 where all paths (i.e., hypothesized relations) were constrained to be invariant between the two samples. The non-significant between-group chi-square difference test ($\Delta\chi^2[12]= 17.86$, *ns*) shown in Table 1 pointed to no evidence of significant differences in the parameter estimates for both samples for the 8 hypothesized relations (Kline, 2011). Given these results, the model appears to generalize across teachers in Canada and in France, thus yielding support for the findings from Study 1.

Study 3

Studies 1 and 2 showed that optimism, resilience and work climate are differently related to well-being and distress, which respectively influence cognitive adjustment and behavioural stress responses, beyond job demand effects. However, those two studies were cross-sectional, which makes it difficult to accurately interpret the proposed direction of the relation. Study 3 aimed at attempting to address this limitation with the use of a time-lagged design.

Method

Participants and Procedure

Following the same procedures as in Study 1, francophone Canadian teachers were recruited after having obtained support from their school boards and school principals. Respondents were invited to participate in a two-part study on the quality of work life. A total of 396 teachers completed the Time 1 Study. Of these, 128 participants responded and provided usable responses at Time 2 (an overall 32% response rate). At Time 1, we measured optimism, resilience, work climate, well-being, distress, cognitive adjustment, behavioural stress responses and demographic variables (sex, age, tenure, experience), while at Time 2 we assessed cognitive adjustment and behavioural stress responses once again.

In the final sample, 33% of the respondents were recruited from elementary schools and 67% came from high schools. Seventy-one percent of this group were women (99

respondents). The mean age was between 31 and 50 (77%, with 12% under 30 and 11% over 50); participants had been employed as teachers for an average of 13.55 years (*SD* = 6.93) and 87% of them taught full-time. To verify that the data attrition across time was random in this study, we tested whether the probability of remaining in the sample at Time 2 could be predicted by Time 1 variables (Goodman & Blum, 1996). We created a dummy-coded variable as the criterion for Time 2, which categorized respondents as stayers or leavers. Time 1 variables and controls (i.e., optimism, resilience, work climate, well-being, distress, cognitive adjustment, behavioural stress responses, job demands, sex, age, tenure and experience) were predictors that were entered in the logistic regression. The result for the overall equation was non-significant (χ^2 [12] = 19.56, *ns*), but tenure and experience exerted a significant effect (B = −.69, $p < .01$; B = −.07, $p < .01$, respectively). This suggests that respondent attrition was not completely random and that it should be considered in regards to the generalizability of the results.

Measures

As in the two previous studies, the same scales of well-being (α_{T1} = .93), distress (α_{T1} = .94), cognitive adjustment (α_{T1} = .81 and α_{T2} = .81), behavioural stress responses (α_{T1} = .71 and α_{T2} = .71), optimism (α_{T1} = .80), resilience (α_{T1} = .90), work climate (α_{T1} = .88), and job demands (α_{T1} = .85) were used.

Results and discussion

Preliminary analyses

Data screening confirmed the normal distribution and the absence of multicolinearity and singularity.

Path analysis model tests

Fit indices for model tests are presented in Table 1. An adapted model (M_9) from the two previous studies, in which controls for Time 1 cognitive adjustment and Time 1 behavioural stress responses were added to M_4, demonstrated a good fit to the data, $\chi^2(43) = 46.71$, *ns*,

χ^2/df = 1.09, CFI = .99, TLI = .99, SRMR = .07, RMSEA = .03 and 90% CI = .00, .07. Nonetheless, a finer exploration of estimates showed that the association between experience and behavioural stress responses was not statistically significant (β = -.00, *ns*). A more parsimonious model (M_{10}) that dropped this path resulted in a similar fit, $\chi^2(36) = 40.24$, $p < .01$, χ^2/df = 1.12, CFI = .99, TLI = .99, SRMR = .07, RMSEA = .03 and 90% CI = .03, .07.

As in Study 1, to test the mediated path model, we compared M_{10} against an alternative partially mediated path model (M_{11}) in which additional paths between antecedents and dependent variables were estimated (James et al., 2006). As can be seen from Table 1, adding direct paths did not improve model fit, $\Delta\chi^2(6) = 6.83$, *ns*, and the more parsimonious M_{10} was preferred over this alternate model (James et al., 2006). Finally, to determine whether well-being could be related to behavioural stress responses and whether distress could be related to cognitive adjustment, we tested another model (M_{12}) including the corresponding paths. None of those paths were significant (β = −.03, *ns*; β = −.02, *ns,* respectively), as M_{12} did not improve model fit, $\Delta\chi^2(2) = .23$, *ns*. Therefore, M_{10} is the one that best represents our data.

Descriptive statistics and correlations

Descriptive statistics and correlations among variables are presented in Table 5, and standardized beta coefficients associated with the final model M_{10} are reported in Figure 4.

Insert Table 5 about here

Insert Figure 4 about here

Hypotheses testing

As in Study 1, we tested our hypotheses of the mediation effects for psychological well-being and psychological distress using bootstrapping analyses (MacKinnon et al., 2004; Shrout & Bolger, 2002) with 1000 bootstrapped samples (Cheung & Lau, 2008). Table 6 presents the decomposition of effects in M_9. With 100% of the bootstrap samples converged, analyses indicated that Time 1 psychological well-being was indirectly and positively associated with Time 2 cognitive adjustment (.29, 95% CI = .18, .41), through the effect of Time 1 cognitive

adjustment. This lends support to Hypothesis 1b. Similarly, psychological distress was indirectly and positively related to behavioural stress responses (.41, 95% CI = .30, .53), through the effect of Time 1 behavioural stress responses. Hypothesis 2b is thus confirmed. Consistent with Hypotheses 3b, 4b and 7b, via the effect of Time 1 cognitive adjustment and beyond the effect of Time 1 job demands, Time 1 optimism was positively related to Time 2 cognitive adjustment through Time 1 well-being (.07, 95% CI = .03, .13), as well as for Time 1 resilience (.14, 95% CI = .09, .22) and Time 1 work climate (.05, 95% CI = .01, .11). Furthermore, the negative indirect effects of Time 1 optimism (−.11, 95% CI = −.19, −.03), Time 1 resilience (−.11, 95% CI = −.19, −.05), and Time 1 work climate (−.11, 95% CI = −.19, −.03) on Time 2 behavioural stress responses through distress were significant, via the effects of Time 1 behavioural stress responses, while controlling for Time 1 job demands. Therefore, Hypotheses 5b, 6b and 8b are supported.

Insert Table 6 about here

These findings add further evidence that well-being and distress refer to distinct psychological states which are differently related to personal and organizational resources and have distinct implications on resources management.

General discussion

Drawing on COR theory and based on three studies, this research found that the impacts of optimism, resilience and work climate on cognitive adjustment and behavioural stress responses were mediated respectively by well-being and distress, over and above job demands. In the following sections, we elaborate on the implications of our key findings and suggest tips for future research.

Theoretical implications

All three studies lead to a number of theoretical implications. First, the present research is the first, to the best of our knowledge, to examine the impact of well-being on cognitive adjustment. The results showed strong support for the association of these variables,

as the more employees experience well-being, the higher their level of cognitive adjustment. This finding supports our rationale that cognitive adjustment may result from a resource gain process influenced by well-being. Consistent with COR theory (Hobfoll, 1989, 2001), well-being represents a combination of important resources, which would motivate employees to invest resources to obtain new ones, while cognitive adjustment can be seen as an outcome of a gain process; a process which would foster personal growth through acquiring the requisite knowledge for being cognitively adjusted at work. More research is needed, however, to provide further support for this conclusion and to examine the impact of enrichment and exploration actions, like seeking information (Bauer et al., 2007; Gruman et al., 2006; Miller & Jablin, 1991; Morrison, 1993; Saks et al., 2007), as a mechanism that enhances the relation between well-being and cognitive adjustment.

Second, the results revealed a robust relation between distress and behavioural stress responses. In line with COR theory (Hobfoll, 1989, 2001), people high on distress may experience resource drain, which would motivate them to protect and preserve their resources through behavioural stress responses. This perspective echoes recent work that showed that behavioural responses, such as counterproductive work behaviour, may intentionally be motivated to address perceived stressors and resource losses (Krischer, Penney, & Hunter, 2010; Penney et al., 2011). If behavioural stress responses have a function to protect employees against resource losses, one could expect this type of behavior to diminish distress over time. However, as noted by Hobfoll (1989, 2001), when people experience resource drain, like distress, they might use strategies that consume even more resources, which could lead to further distress. In this vein, future research should try to clarify the role of behavioural stress responses on distress and broaden our understanding of the short- and long-term consequences of those relations.

Third, optimism, resilience and work climate were found to be positively associated with well-being, and negatively related to distress. Those results replicate past findings that showed that optimism, resilience and work climate are antecedents of psychological health indicators (e.g., Alarcon, Bowling, & Khazon, 2013; Gallagher, Lopez, & Pressman, 2013; Gilbert

et al., 2011; He, Cao, Feng, Guan, & Peng, 2013). However, we extend those findings in two ways. On the one hand, the present research is one of the few studies to examine the impact of different resources on both positive and negative indicators of psychological health at work (Boudrias et al., 2011; Boudrias et al., 2014; Gilbert et al., 2011). As resources were differentially related to well-being and distress, the present results are consistent with COR theory (Hobfoll, 1989, 2001). Indeed, people with greater resources may be more capable of resource gain, which would lead to well-being, and those with fewer resources may be more vulnerable to resource loss, which would contribute to distress (Hobfoll, 1989, 2001).

On the other hand, we examined the differential effects of optimism, resilience and work climate on well-being and distress, whilst scant studies have considered them simultaneously (Boudrias et al., 2014). The roles of personal and organizational resources on well-being and distress appear to differ from each other. Compared to work climate, personal resources are revealed to be superior determinants of well-being. One possible explanation for those findings is that personal resources are internal, closer to an employee's self and falling under a person's control as opposed to work climate, which is more distal and depends on external factors, such as other people's influence (Ouweneel, Blanc, & Schaufeli, 2012). As a result, personal resources are more intrinsically regulated than work climate. Those findings are in line with scholars who suggest that employee well-being is best predicted by personal resources (e.g., optimism, self-efficacy; Kalimo, Pahkin, & Mutanen, 2002; Karatepe & Olugbade, 2009; Ouweneel et al., 2012). Differently, optimism, resilience and work climate seem to contribute nearly equally to distress. From a COR theory perspective (Hobfoll, 1989, 2001), these resources all appear to be valuable, as they enhance people's strength reservoir as well as protect them from further losses and, accordingly, from distress. Consistent with past research, our results support the notion that distress does indeed derive from both personal and organizational resources (Bakker, Schaufeli, Leiter, & Taris, 2008; Hakanen & Lindbohm, 2008; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). To further investigate this issue, researchers should examine the distinctions between the impacts of those personal and organizational resources on psychological health indicators and dig deeper into the mechanisms involved, such as the proximity of resources.

Finally, this research marks an advance from prior studies by assessing a complete sequence for personal and organizational resources to four psychological health indicators, beyond the effect of job demands. Consistent with COR theory (Hobfoll, 1989, 2001), the results of our three studies strongly suggest that optimism, resilience and work climate have indirect effects on cognitive adjustment and behavioural stress responses, respectively through well-being and distress. Specifically, employees who perceive that good things will happen in their workplace, who believe that they are able to face obstacles and who evaluate that they are well treated by their organization, would perceive that they have valuable resources. This perception may trigger secure feelings (Mikulincer, Horesh, Eilati, & Kotler, 1999; Mikulincer & Shaver, 2005; Shaver & Mikulincer, 2006) that mitigate threats such as job demands, thus enabling people to appraise their environment as representing a host of challenges as well as opportunities to explore and to grow (Gilbert, 1992; Gilbert et al., 2008). Given that resourceful employees tend to be less vulnerable to resource loss (Hobfoll, 1989, 2001), they might experience more well-being and less distress. Building on their resources and strength reservoir, they would be motivated to gain more resources (Hobfoll, 1989, 2001), which should foster cognitive adjustment and minimize behavioural stress responses. Conversely, low optimism, low resilience and a less supportive work climate may reduce people's resource reservoir, exposing them to resource loss, which in turn is associated with greater distress and lower well-being (Hobfoll, 1989, 2001). Consequently, they would be motivated to protect themselves through behavioural stress responses and this would affect the probability of being cognitively adjusted at work. Obviously, those complex resource gain and resource loss processes need to be further assessed in future research. Among other things, it would be worth examining the role of secure feelings (Mikulincer, Horesh, Eilati, & Kotler, 1999; Mikulincer & Shaver, 2005; Shaver & Mikulincer, 2006) as mediators of the relations between personal and organizational resources and well-being and distress, as suggested above.

Practical implications

From a practical standpoint, various strategies can be garnered from our results and COR theory (Hobfoll, 1989, 2001). On the one hand, organizations could promote preventive interventions. Prior efforts should be made to prevent resource loss (Gorgievski & Hobfoll, 2008). Accordingly, job demands should be addressed with respect to people's available resources. In this regard, managers would benefit from assessing and facilitating a balanced workload based on employees' strengths rather than overloading them and exerting excessive pressure to perform (Bartholomew, Ntoumanis, Cuevas, & Lonsdale, 2014; Kokkinos, 2007).

Second, organizations that wish to enhance psychological health at work in employees could help them build their resource reservoirs. To this end, coaching, training and psychotherapy programmes have been found to be effective in enhancing optimism and resilience (Carver, Scheier, & Segerstrom, 2010; McGonagle, Beatty, & Joffe, 2014; Seligman, 2011; Sherlock-Storey, Moss, & Timson, 2013). For example, studies have found that interventions on active problem-focused coping foster optimism (e.g., Seligman, Schulman, & Tryon, 2007), while coaching based on challenge management appears to develop resilience (McGonagle et al., 2014).

Aside from those developmental interventions, personnel selection could be considered as another prevention strategy. Indeed, organizations might recruit resourceful individuals when the job context specifically requires this (Gatewood, Feild, & Barrick, 2010). In addition to focusing on personal resources, close attention should be paid to foster a supportive work climate. Showing recognition for employees' accomplishments, supporting their autonomy by offering them the freedom of choice and providing them with opportunities for professional development are examples of managerial practices that can influence perceptions of a supportive work climate (McMurray & Scott, 2013).

On the other hand, when threats and losses cannot be prevented, Gorgievski and Hobfoll (2008) suggest capitalizing on employee strengths and positive interventions. For instance, those authors propose compensating for resource losses, such as ambiguous objectives, by recognizing this situation and thus validating an employee's perception.

Recognition by supervisors and peers is an important resource, which helps emphasize gains rather than losses. Interventions to manage overload might provide other suitable examples to reduce losses and foster resources. Among other things and based on our results, managers could consult people when developing a problem-solving plan, highlight their strengths, distribute workload equitably, and provide further job resources to support the growing demand. As a result, managers contribute to optimism and resilience development through an active problem-solving approach and a focus on people's work capacity. Moreover, they strengthen a positive perception of the work climate by supporting employee autonomy.

Limitations

Despite obtaining interesting results, the present research has certain limitations, which should be taken into consideration in any attempt to generalize the findings. First, all three studies are based on self-reports, Studies 1 and 2 relied on a cross-sectional design, and although Study 3 used a time-lagged design, independent and mediating variables were measured simultaneously and changes in Time 1 and Time 2 cognitive adjustment and behavioural stress responses were not estimated. Therefore, the common-method variance may artificially inflate the relations between the variables and, even though results of the various alternative models tested provide support for the adequacy of the direction of the model, firm conclusions on the directions of the effects cannot be drawn. Given that the variables we examined are subjective in nature (Gilbert et al., 2011; Maddi, 2004; Massé et al., 1998b; Roy, 1989, 1994; Scheier & Carver, 1985), except for behavioural stress responses that could be more easily observed by a third party than the other variables, we argue that they are best evaluated from the employee's perspective. Rather than attempting multisource ratings, studies relying on full longitudinal designs over several points in time, where latent growth modeling can better assess the nature of the relations over time (Ployhart & Vandenberg, 2010), are warranted. Moreover, as behavioural stress responses were self-reported, future research should examine whether findings can be replicated with other assessments of this variable, such as with multiple informants and objective measures.

Second, although we focused on the effects of personal and organizational resources on four indicators of psychological health at work, those relations could be dynamic. In line with recent empirical evidence (e.g., Xanthopoulou et al., 2009; Xanthopoulou, Bakker, & Ilies, 2012) and COR theory (Hobfoll, 1989, 2001), resources and psychological health (including well-being, work engagement and burnout) may act in cycles. While the present research marks progress from prior research by concurrently exploring four indicators of psychological health at work as a process, future studies should examine hypotheses of reciprocity, which were not the main interest here.

A third limitation is in regards to the generalizability of the results. Indeed, participants were teachers, predominantly women, and reported relatively low levels of distress and behavioural stress responses, and relatively high levels of well-being and cognitive adjustment. Therefore, we cannot claim that our findings can be generalized to occupations outside the educational field and to workers who have a different profile of psychological health at work. Moreover, Study 3 used a small sample size and respondent attrition was not completely random. However, similar patterns were found in our three independent samples and in two countries, which suggests that the model is worth exploring in different work contexts.

Finally, future research should expand upon this model to account for an even broader array of personal resources (e.g., psychological capital; Avey et al., 2010) and organizational resources (e.g., supervisory coaching; Bakker & Demerouti, 2007), indicators of psychological health at work (e.g., cognitive maladjustment at work, behavioural adjustment at work) and conditions (e.g., personality traits; Bakker, Boyd, et al., 2010) that improve or exacerbate the proposed relations.

Conclusion

To summarize, the current paper contributes to the literature on occupational health by extending the one-dimensional way of testing psychological health at work through a process model that includes both positive and negative indicators. Using COR theory (Hobfoll, 1989, 2001), our three studies shed light on the mechanisms through which personal and

organizational resources exert their influence on psychological health at work. We hope these findings will stimulate further research on these neglected yet important indicators of psychological health at work and their underlying mechanisms.

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Figure 1. Hypothesized model (cross-sectional design)

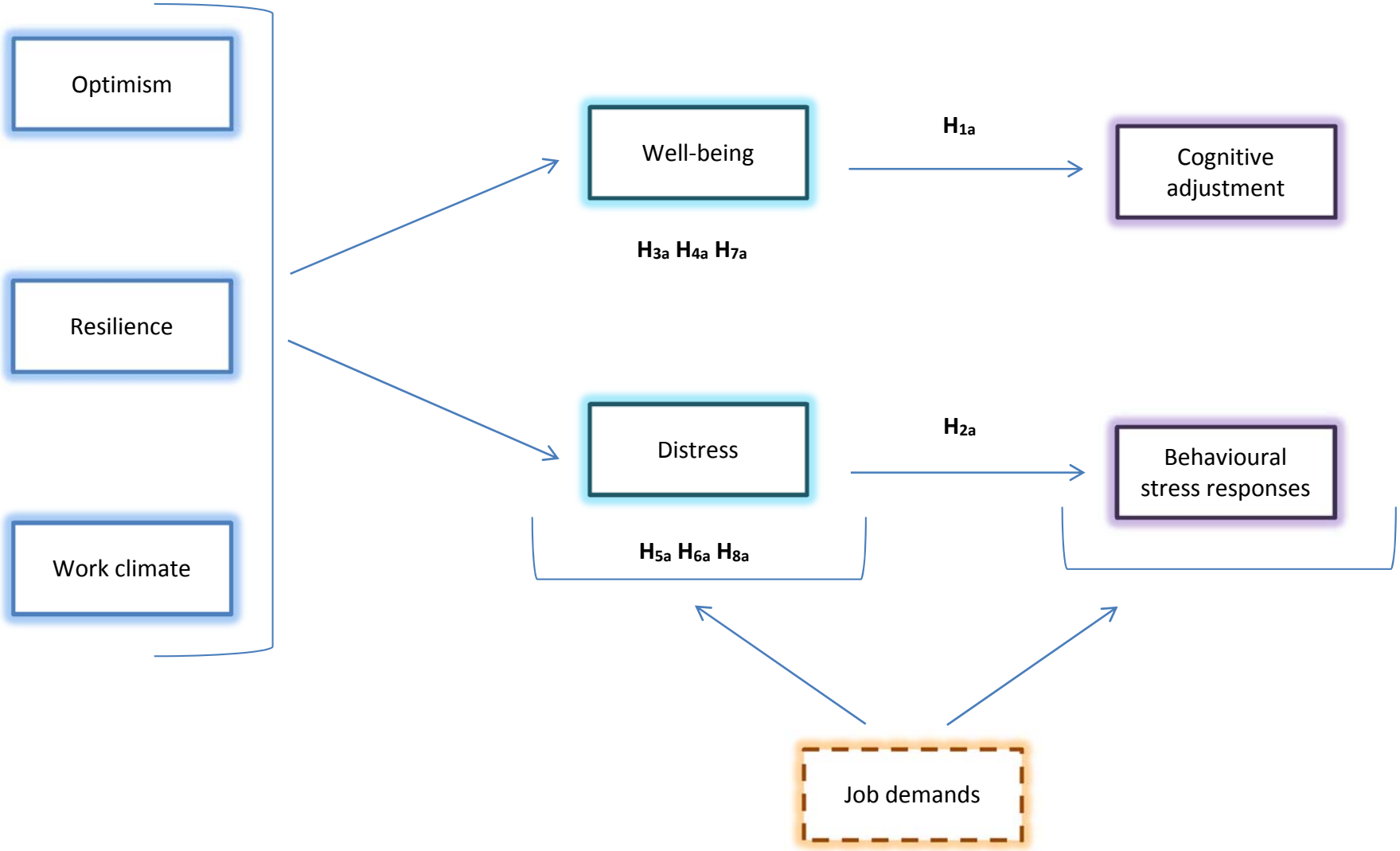

Figure 2. Hypothesized model (time-lagged design)

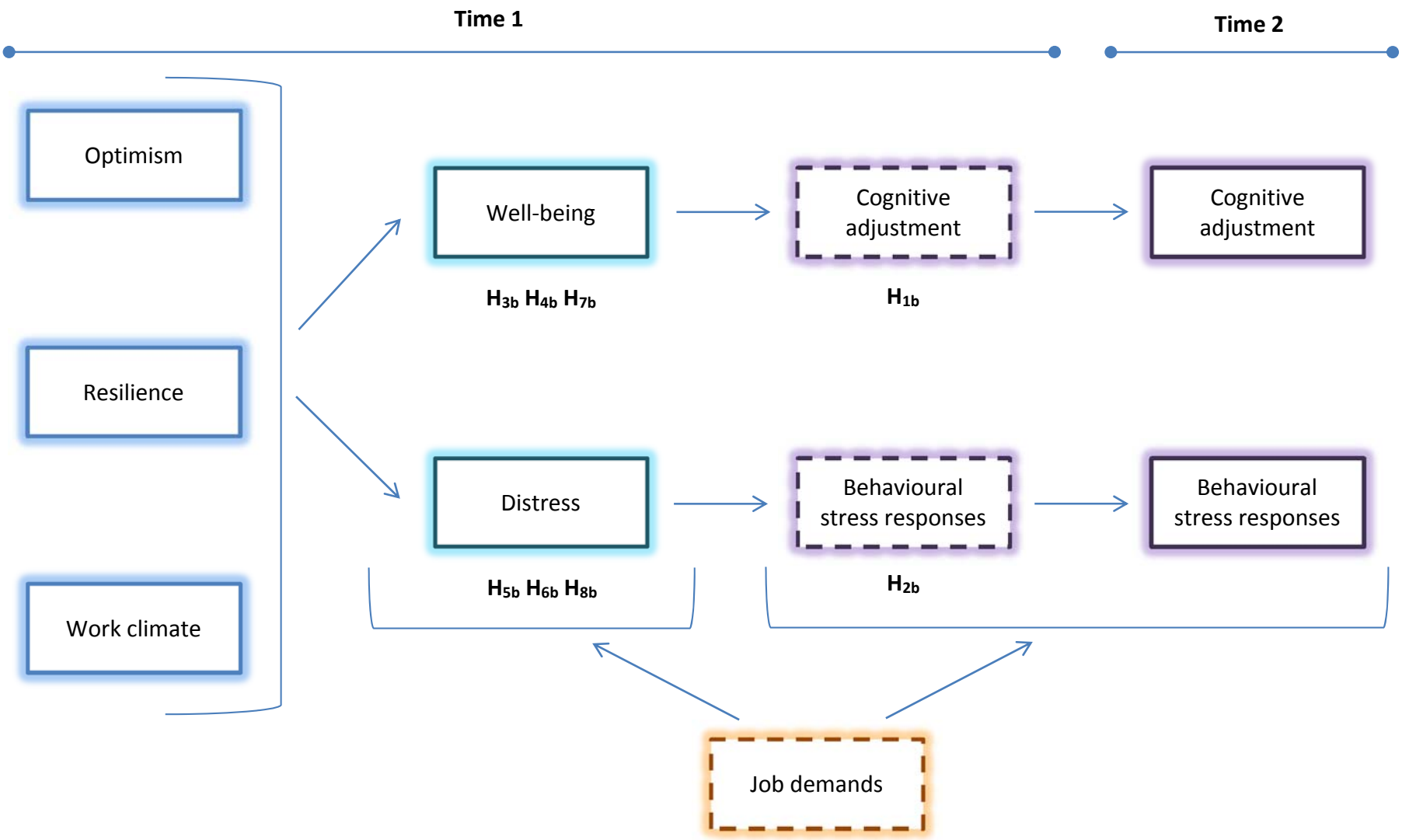

Table 1

Path analysis model tests: Fit statistics

Model	χ^2	*df*	χ^2/df	$\Delta\chi^2$	CFI	TLI	SRMR	RMSEA and 90% CI
Study 1								
M_1 – Hypothesized model	23.49**	9	2.61		.99	.96	.03	.07 (.04, .10)
M_2 – Dropping non-significant paths	26.61**	11	2.42		.98	.96	.03	.06 (.03, .10)
M_3 – Adding control variables	71.98***	34	2.12		.96	.94	.05	.06 (.04, .08)
M_4 – Dropping non-significant control variables (baseline model for comparison with M_5 and M_6)	52.26***	25	2.09		.97	.95	.05	.06 (.04, .08)
M_5 – Alternative partially mediated path model	37.73**	19	1.99	14.54	.98	.96	.05	.06 (.03, .08)
M_6 – Adding direct links (well-being → behavioural stress responses; distress → cognitive adjustment)	52.02***	23	2.26	.24	.97	.95	.05	.06 (.04, .08)
Study 2								
M_4 – French teachers sample	50.79**	25	2.03		.97	.95	.04	.05 (.03, .07)
M_7 – Unconstrained between-group model	103.06***	50	2.06		.97	.95	.04	.04 (.03, .05)
M_8 – Constrained between-group model	120.92***	62	1.95	17.86	.97	.96	.04	.04 (.03, .05)

(Table 1 continued)

Model	χ^2	*df*	χ^2/df	$\Delta\chi^2$	CFI	TLI	SRMR	RMSEA and 90% CI
Study 3								
M_9 – Adapted model 4 with controls (Time 1 cognitive adjustment and Time 1 behavioural stress responses)	46.71	43	1.09		.99	.99	.07	.03 (.00, 07)
M_{10} – Dropping non-significant paths (baseline model for comparison with M_{11} and M_{12})	40.24	36	1.12		.99	.99	.07	.03 (.00, .07)
M_{11} – Alternative partially mediated path model	33.04	30	1.11	6.83	.99	.99	.06	.03 (.00, 08)
M_{12} – Adding direct links (well-being → behavioural stress responses; distress → cognitive adjustment)	40.00	34	1.18	.23	.99	.98	.07	.04 (.00, 08)

Note. $^{**}p < .01$; $^{***}p < .001$.

Table 2

Study 1: Descriptive statistics and correlations among study variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1. Sex	1.30	.46	–											
2. Age	3.50	1.06	.13*	–										
3. Tenure	1.38	.73	−.07	−.34**	–									
4. Experience	14.03	9.57	.08	.80**	−.48**	–								
5. Job demands	3.52	.47	−.10	.10	−.13*	.15**	(.84)							
6. Optimism	4.74	.69	−.04	−.06	.07	−.06	−.19**	(.76)						
7. Resilience	3.65	.58	.03	.02	.07	.02	−.26**	.49**	(.88)					
8. Work climate	4.40	.81	−.11*	−.14*	.11*	−.15**	−.47**	.32**	.28**	(.90)				
9. Well-Being	3.98	.49	.03	−.02	.02	.02	−.33**	.55**	.59**	.38**	(.92)			
10. Distress	1.71	.59	.06	.05	−.08	.01	.37**	−.46**	−.43**	−.46**	−.67**	(.95)		
11. Cognitive adjustment	4.69	.56	.06	.09	−.16**	.17**	−.08	.24**	.29**	.23**	.42**	−.29**	(.80)	
12. Behavioural stress responses	1.67	.46	.13*	.05	−.16**	.03	.21**	−.28**	−.35**	−.39**	−.44**	.68**	−.18**	(.75)

Note. N = 330. For Sex, 1 = woman, 2 = man; for Age, 1 = less than 21, 2 = 21-30, 3 = 31-40, 4 = 41-50, 5 = 51-60, 6 = 61 and above; for Tenure, 1 = permanent/full time, 2 = contract/full-time, 3 = contract/part-time, 4 = contract/hourly rate, 5 = contract/lesson. Reliability coefficients are reported in parentheses on the diagonal; $^{*}p < .05$; $^{**}p < .01$.

Figure 3. Standardized path coefficients associated with the final model M_4 (N = 330). For the sake of clarity, demographic control variables, covariances and disturbance terms are not presented. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

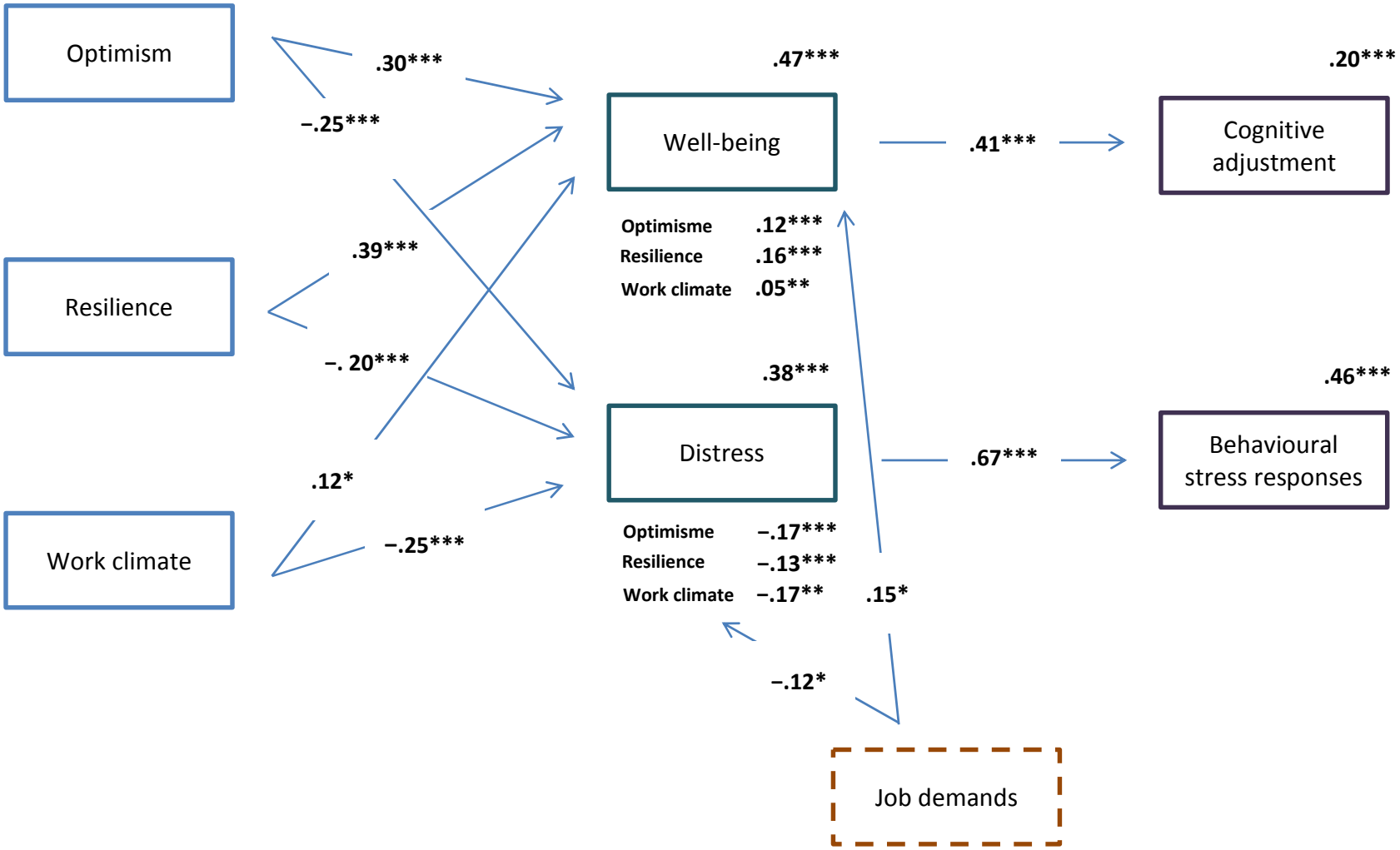

Table 3

Study 1: Standardized direct and indirect effects for the final model M_4

	Mediator		Dependent variable			
	Well-being	Distress	Cognitive adjustment		Behavioural stress responses	
Predictor	Direct	Direct	Direct	Indirect	Direct	Indirect
Independent variable						
Optimism	.30***	−.25***		.12*** (.08, .18)		−.17** (−.24, −.09)
Resilience	.39***	−.20***		.16*** (.11, .22)		−.13** (−.20, −.05)
Work climate	.12*	−.25***		.05** (.01, .09)		−.17** (−.25, −.10)
Mediator						
Well-being			.41***			
Distress					.67***	
Control variable						
Job demands	−.12*	.15**		−.05* (−.09, −.01)		.10** (.03, .17)
Tenure					−.10*	
Experience			.17***			

Note. Standardized coefficients for direct effects are reported from the path analyses results. Standardized coefficients for indirect effects and their associated 95% bias-corrected confidence intervals (in parenthesis) are reported from bootstrap analyses (MacKinnon, Lockwood, & Williams, 2004; Shrout & Bolger, 2002). *$p < .05$; **$p < .01$; ***$p < .001$.

Table 4

Study 2: Descriptive statistics and correlations among study variables for the French teachers' sample

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1. Sex	1.39	.49	–											
2. Age	3.53	1.05	.09	–										
3. Tenure	1.43	.73	−.17**	−.05	–									
4. Experience	16.77	11.34	.14**	.86**	−.09	–								
5. Job demands	3.46	.47	−.16**	.07	−.06	.03	(.81)							
6. Optimism	4.20	.90	.06	.01	.04	.03	−.23**	(.80)						
7. Resilience	3.50	.64	.09	.04	.03	.05	−.14**	.50**	(.88)					
8. Work climate	4.25	.93	.02	.04	.07	.06	−.25**	.26**	.20**	(.90)				
9. Well-Being	3.81	.51	.08	−.04	.02	.01	−.35**	.60**	.58**	.39**	(.90)			
10. Distress	1.69	.64	−.06	.10	−.06	.07	.35**	−.52**	−.37**	−.38**	−.68**	(.95)		
11. Cognitive adjustment	4.59	.62	.03	.17**	−.01	.14**	−.05	.16**	.26**	.30**	.31**	−.21**	(.80)	
12. Behavioural stress responses	1.64	.50	.08	.04	−.06	.02	.12*	−.25**	−.25**	−.29**	−.35**	.50**	−.16**	(.75)

Note. N = 389. For Sex, 1 = woman, 2 = man; for Age, 1 = less than 21, 2 = 21-30, 3 = 31-40, 4 = 41-50, 5 = 51-60, 6 = 61 and above; for Tenure, 1 = permanent/full time, 2 = contract/full-time, 3 = contract/part-time, 4 = contract/hourly rate, 5 = contract/lesson. Reliability coefficients are reported in parentheses on the diagonal; $^{*}p < .05$; $^{**}p < .01$.

Table 5

Study 3: Descriptive statistics and correlations among study variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Sex	1.30	.46	–													
2. Age	3.33	.81	−.03	–												
3. Tenure	1.20	.51	.08	−.14	–											
4. Experience	12.04	6.74	−.09	.77**	−.26**	–										
5. Job demands	3.53	.52	−.22*	.29**	−.03	.38**	(.85)									
6. Optimism (T_1)	4.74	.74	.01	.01	−.05	.04	−.05	(.80)								
7. Resilience (T_1)	3.61	.61	.12	−.08	.00	−.17	−.16	.51**	(.90)							
8. Work climate (T_1)	4.44	.80	−.06	−.03	−.07	−.06	−.22*	.24**	.34**	(.88)						
9. Well-Being (T_1)	3.97	.52	.08	−.09	−.10	−.13	−.30**	.53**	.67**	.42**	(.93)					
10. Distress (T_1)	1.73	.58	.07	.09	.03	.12	.34**	−.46**	−.52**	−.47**	−.71**	(.94)				
11. Cognitive adjustment (T_1)	4.68	.59	.02	.08	−.20*	.10	−.18*	.27**	.38**	.36**	.46**	−.35**	(.81)			
12. Behavioural stress responses (T_1)	1.70	.46	.20*	.10	−.11	.09	.12	−.34**	−.42**	−.36**	−.52**	.72**	−.21*	(.71)		
13. Cognitive adjustment (T_2)	4.70	.56	.04	−.05	−.20*	.13	−.08	.23**	.22*	.28**	.33**	−.26**	.62**	−.30**	(.81)	
14. Behavioural stress responses (T_2)	1.61	.42	.08	.10	−.16	.02	.02	−.19*	−.17	−.29**	−.26**	.40**	−.19*	.59**	−.30**	(.71)

Note. N = 128. For Sex, 1 = woman, 2 = man; for Age, 1 = less than 21, 2 = 21-30, 3 = 31-40, 4 = 41-50, 5 = 51-60, 6 = 61 and above; for Tenure, 1 = permanent/full time, 2 = contract/full-time, 3 = contract/part-time, 4 = contract/hourly rate, 5 = contract/lesson. Reliability coefficients are reported in parentheses on the diagonal; $^{*}p < .05$; $^{**}p < .01$.

Figure 4. Standardized path coefficients associated with the final model M_{10} (N = 128). For the sake of clarity, demographic control variables, covariances and disturbance terms are not presented. $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

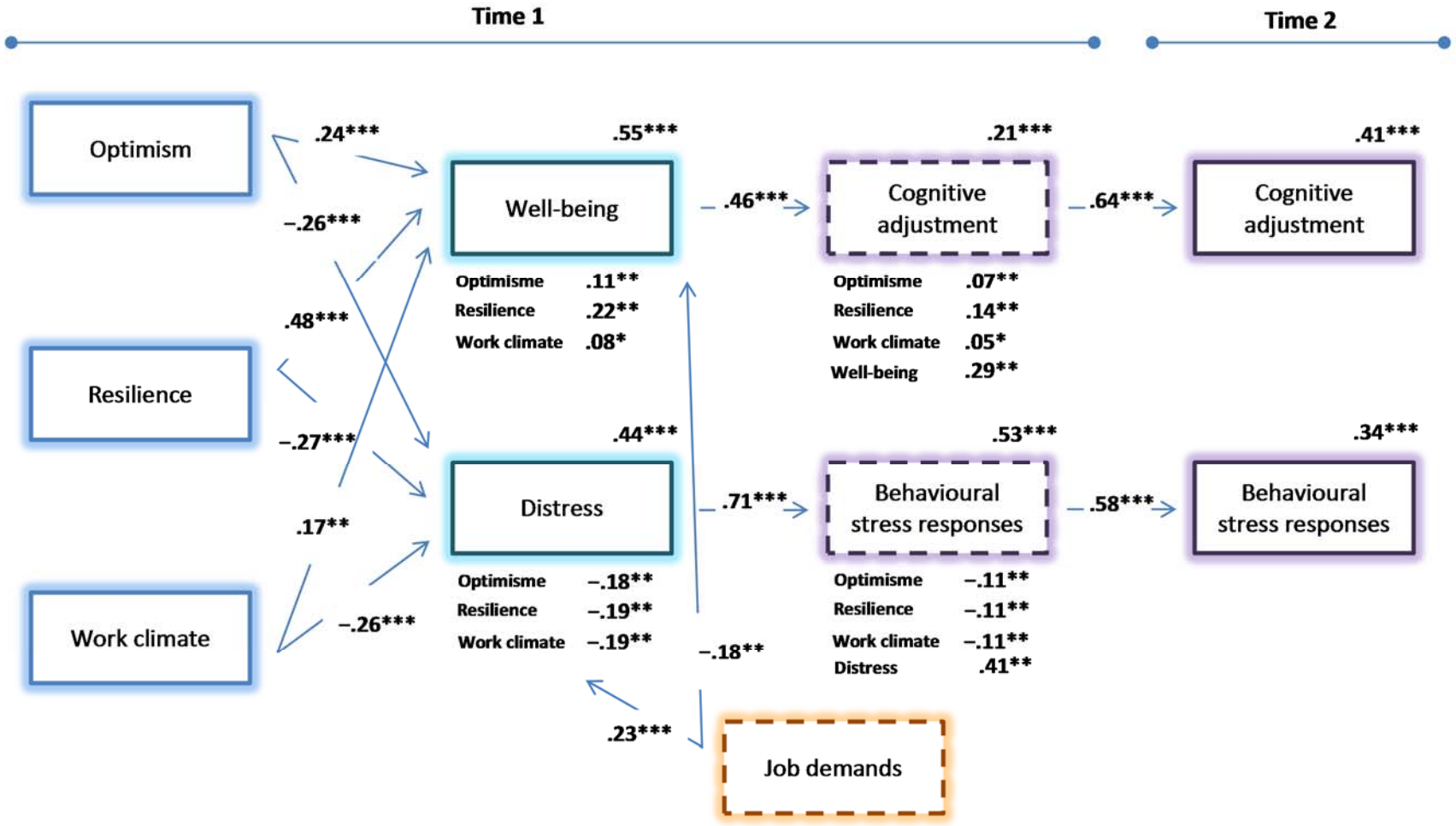

Table 6

Study 3: Standardized direct and indirect effects for the final model M_{10}

	Mediator (Time 1)						Dependent variable (Time 2)			
	Well-being	Distress	Cognitive adjustment		Behavioural stress responses		Cognitive adjustment		Behavioural stress responses	
Predictor	Direct	Direct	Direct	Indirect	Direct	Indirect	Direct	Indirect	Direct	Indirect
Independent variable										
Optimism	.24***	−.26**		.11** (.04, .19)		−.18** (−.30, −.06)		.07** (.03, .13)		−.11** (−.19, −.03)
Resilience	.48***	−.27***		.22** (.14, .32)		−.19** (−.32, −.08)		.14** (.09, .22)		−.11** (−.19, −.05)
Work climate	.17**	−.26***		.08* (.02, .16)		−.19** (−.30, −.05)		.05* (.01, .11)		−.11** (−.19, −.03)
Mediator (Time 1)										
Well-being			.46***					.29** (.18, .41)		
Distress					.71***					.41** (.30, .53)
Cognitive adjustment							.64***			
Behavioural stress responses									.58***	
Control variable (Time 1)										
Job demands	−.18**	.23***		−.08** (-.15, -.04)		.17** (.07, .26)		−.05** (−.10, −.02)		.10** (.05, .16)
Tenure					−.15*					−.09** (−.15, −.03)

Note. Standardized coefficients for direct effects are reported from the path analyses results. Standardized coefficients for indirect effects and their associated 95% bias-corrected confidence intervals (in parenthesis) are reported from bootstrap analyses (MacKinnon et al., 2004; Shrout & Bolger, 2002). $^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

Conclusion

La présente thèse visait à répondre à la question suivante : comment modéliser la santé psychologique au travail? Pour ce faire, trois objectifs de recherche ont été fixés, soit (1) développer et valider un indicateur de santé psychologique en matière de fonctionnement de l'employé dans son environnement de travail, (2) élaborer une nouvelle modélisation de la santé psychologique au travail qui s'appuie sur des fondements théoriques solides, et (3) en faire la vérification empirique auprès de trois échantillons indépendants. Deux articles ont respectivement répondu au premier (1) et aux derniers objectifs (2 et 3).

La conclusion présente un résumé des résultats qui se rapportent aux objectifs de recherche, met en exergue les principales contributions à l'avancement des connaissances et les retombées pratiques de cet exercice doctoral, fait état des limites et propose des pistes de recommandation pour les recherches futures sur la santé psychologique au travail.

Sommaire des résultats en regard des objectifs de la recherche doctorale

Développer et valider un indicateur de santé psychologique en matière de fonctionnement de l'employé dans son environnement de travail

À partir des travaux portant sur la socialisation organisationnelle (p. ex., Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007; Kammeyer-Mueller & Wanberg, 2003; Morton, 1994; Reio, 1998; Saks & Ashforth, 1997; Saks, Uggerslev, & Fassina, 2007) et de la théorie de la conservation des ressources (Hobfoll, 1989, 2001), le premier article de la thèse, intitulé "Cognitive adjustment as an indicator of psychological health at work: Development and validation of a measurement", a mis de l'avant l'ajustement cognitif au travail comme indicateur additionnel de la santé psychologique pour refléter le fonctionnement de l'employé dans son organisation. Conception la plus proximale du fonctionnement individuel comparativement à d'autres construits (p. ex., absentéisme, performance; Bauer & Green,

1998; Bauer, Morrison, & Callister, 1998; Kammeyer-Mueller & Wanberg, 2003; Saks & Ashforth, 1997), l'ajustement cognitif au travail inclut, dans la lignée de la théorie de la conservation des ressources (Hobfoll, 1989, 1998, 2001), d'importantes ressources, telles que des connaissances et des habiletés en regard de la tâche, du groupe de travail et de l'organisation. Puisque l'individu doit investir des ressources pour acquérir des connaissances et des habiletés (p. ex., en cherchant de l'information; Bauer et al., 2007; Gruman, Saks, & Zweig, 2006; Miller & Jablin, 1991; Morrison, 1993; Saks et al., 2007), l'ajustement cognitif au travail constitue, dans la perspective de la théorie de la conservation des ressources (Hobfoll, 1989, 1998, 2001), un résultat du processus de gain de ressources selon lequel le travailleur serait motivé à maintenir et à développer ses ressources. En conséquence, un employé en bonne santé psychologique aurait des connaissances et des habiletés relatives à sa tâche, son groupe de travail et son organisation.

Sur la base de cette conceptualisation, le premier article de la thèse a permis de développer un instrument de l'ajustement cognitif au travail et de valider la proposition opérationnelle du construit. Pour ce faire, deux études, menées auprès de trois échantillons, ont été réalisées. À l'aide d'analyses factorielles exploratoires et confirmatoires, et d'analyses de cohérence interne et d'invariance temporelle, la première étude a confirmé la structure de l'ajustement cognitif au travail, tel qu'opérationnalisé comme un facteur de second ordre composé de l'ajustement à la tâche, au groupe de travail et à l'organisation.

La deuxième étude a fourni un appui à la validité de l'ajustement cognitif en testant un réseau nomologique partiel de la santé psychologique au travail. Plus précisément, les résultats montrent que l'ajustement cognitif au travail est positivement lié à la personnalité proactive, au bien-être psychologique au travail et à la performance de tâche, des variables qui ont déjà été examinées dans les études sur la santé psychologique au travail (p. ex., Bakker, Tims, & Derks, 2012; Brien, Hass, & Savoie, 2012; Devonish, 2013; Liao, 2015; Parker & Sprigg, 1999). Faisant écho à la théorie de la conservation des ressources (Hobfoll, 1989, 2001), les résultats soutiennent l'idée selon laquelle la personnalité proactive et le bien-être psychologique au travail permettraient d'augmenter le réservoir de ressources de l'employé,

le protégeant des pertes potentielles. Le travailleur serait ainsi dans de meilleures dispositions pour investir des ressources afin d'obtenir les connaissances et les habiletés requises pour devenir ajusté cognitivement au travail. Similairement, un employé ajusté cognitivement bénéficierait d'importantes ressources qui le motiveraient à investir de l'énergie dans le travail, ce qui serait associé à une meilleure performance de tâche.

Bien que l'article 1 ait permis de valider ce nouvel indicateur, il importait de l'intégrer à une modélisation de la santé psychologique au travail pour élargir la compréhension du phénomène. L'article 2 a pris en compte cet impératif.

Élaborer et valider une modélisation de la santé psychologique au travail

Le second article, ayant pour titre "Psychological health at work through the lens of conservation of resources theory", a proposé et testé une modélisation de la santé psychologique au travail. S'appuyant sur la théorie de la conservation des ressources (Hobfoll, 1989, 2001), une conception processuelle de la santé psychologique au travail, incluant quatre indicateurs (c.-à-d., bien-être psychologique au travail, détresse psychologique au travail, ajustement cognitif au travail et réponses comportementales de stress au travail), a été avancée. Pour mettre à l'épreuve cette modélisation, trois études ont été conduites. Des analyses acheminatoires appliquant une procédure de rééchantillonnage (MacKinnon, Lockwood, & Williams, 2004; Shrout & Bolger, 2002) et une analyse d'invariance transculturelle montrent que, indépendamment de l'influence des demandes en emploi, (a) le bien-être psychologique au travail exerce un effet médiateur sur la relation unissant l'optimisme, la résilience, le climat de travail, et l'ajustement cognitif au travail, tandis que (b) la détresse psychologique au travail joue un rôle médiateur sur la relation unissant l'optimisme, la résilience, le climat de travail, et les réponses comportementales de stress au travail.

À la lumière des résultats, deux mécanismes distincts se dégagent pour expliquer la santé psychologique au travail. Le premier mécanisme réfère à un processus de gain de ressources selon lequel le travailleur qui perçoit avoir des ressources personnelles et

organisationnelles se sentirait moins vulnérable à en perdre. Ce faisant, il serait plus enclin à ressentir du bien-être psychologique au travail, ce qui agirait comme une force motivationnelle l'incitant à investir des ressources pour en obtenir davantage, augmentant la probabilité de devenir ajusté cognitivement. Le second mécanisme renvoie au processus de perte de ressources selon lequel l'employé qui perçoit avoir peu de ressources se sentirait plus vulnérable à en perdre. Cette vulnérabilité serait associée à une plus grande détresse psychologique au travail, ce qui drainerait les ressources de l'individu et le motiverait à se protéger, augmentant la probabilité de déclencher des réponses comportementales de stress au travail.

Au moyen d'une opérationnalisation validée du fonctionnement de l'employé et de la vérification empirique d'une conceptualisation processuelle de la santé psychologique au travail, les deux articles ont ainsi fourni des pistes de réponse à la question centrale de la thèse : comment modéliser la santé psychologique au travail?

Principales contributions de la recherche doctorale

La thèse réalise plusieurs contributions à l'avancement des connaissances en matière de santé psychologique au travail, tant sur le plan conceptuel que pratique. En ce qui concerne les apports conceptuels, la recherche doctorale s'inscrit dans le courant des travaux qui privilégient une conception multidimensionnelle de la santé psychologique au travail (p. ex., Achille, 2003; Bakker & Derks, 2010; Barbier, Peters, & Hansez, 2010; Massé et al., 1998b). Examinant à la fois des manifestations positives et négatives de santé psychologique, la thèse a ajouté au corpus de connaissances en réduisant l'écart entre la documentation portant uniquement sur la mauvaise santé psychologique au travail et celle qui intègre la bonne santé psychologique au travail.

Dans un deuxième temps, cet exercice doctoral compte dans les premiers efforts empiriques à considérer une importante composante de la santé psychologique au travail, à savoir le fonctionnement de l'employé dans l'organisation. À partir de fondements théoriques ancrés dans les travaux de la socialisation organisationnelle (p. ex., Bauer et al., 2007;

Kammeyer-Mueller & Wanberg, 2003; Morton, 1994; Reio, 1998; Saks & Ashforth, 1997; Saks et al., 2007) et de la théorie de la conservation des ressources (Hobfoll, 1989, 2001), l'ajustement cognitif au travail a été proposé comme un indicateur du fonctionnement individuel dans une perspective de santé psychologique au travail. En palliant certaines lacunes méthodologiques et conceptuelles des recherches antérieures, deux études, réalisées auprès de trois échantillons, ont fait la démonstration rigoureuse de la validité du construit et de sa mesure. Proposant un indicateur validé et propre au contexte organisationnel, la thèse marque ainsi une avancée importante dans l'explication du phénomène complexe qu'est la santé psychologique au travail.

En plus d'étudier des composantes du fonctionnement de l'employé, la thèse fournit une contribution originale relativement à la conceptualisation de la santé psychologique au travail. À notre connaissance, il s'agit des premiers travaux à concevoir le phénomène comme un processus plutôt qu'un construit global composé uniquement d'expériences subjectives. S'inspirant de la théorie de la conservation des ressources (Hobfoll, 1989, 2001), la recherche doctorale propose une modélisation de la santé psychologique au travail qui inclut des expériences subjectives (c.-à-d., bien-être et détresse psychologiques au travail) menant à un certain niveau de fonctionnement, fonctionnement pouvant être décrit en termes d'ajustement cognitif et de réponses comportementales de stress au travail. Plus précisément, deux mécanismes ont été explicités : un mécanisme de gain de ressources expliquant les relations unissant les indicateurs positifs de santé psychologique au travail (c.-à-d., bien-être psychologique et ajustement cognitif au travail), et un mécanisme de perte de ressources régissant les liens entre les indicateurs négatifs de santé psychologique au travail (c.-à-d., détresse psychologique et réponses comportementales de stress au travail). Ce faisant, la thèse apporte un éclairage utile et novateur sur les mécanismes associés à la bonne et mauvaise santé psychologique au travail, mécanismes qui étaient jusqu'alors peu documentés. Non seulement cette proposition repose sur des assises conceptuelles éprouvées (Halbesleben, 2006; Hobfoll, 1989, 1998, 2001; Lee & Ashforth, 1996), mais elle a également fait l'objet d'une vérification empirique rigoureuse. En effet, trois études ont été effectuées dans le but de tester la robustesse des conclusions. En répliquant la démarche auprès de

différents échantillons, la thèse s'inscrit dans les rares études en psychologique de la santé organisationnelle qui mettent en œuvre les recommandations inhérentes à l'examen de la validité des résultats et de la production des connaissances scientifiques (Asendorpf et al., 2013; Cook, Campbell, & Day, 1979; Koole & Lakens, 2012).

Au-delà des apports conceptuels significatifs, la thèse réalise plusieurs contributions pour la pratique de la psychologie du travail et des organisations. D'une part, une mesure du niveau d'ajustement cognitif au travail a été développée et validée. Comme le souligne l'article 1, les organisations et les firmes de consultation bénéficient désormais d'un outil pour apprécier l'une des importantes composantes de la santé psychologique au travail. En évaluant le niveau de connaissances et d'habiletés de l'individu relativement à sa tâche, son groupe de travail et son organisation, l'instrument renseigne sur les besoins de développement du travailleur et permet de cibler des interventions cohérentes (p. ex., formation, mentorat).

D'autre part, la recherche doctorale souligne l'importance des ressources personnelles et organisationnelles dans l'explication de la santé psychologique au travail. À cet égard, différentes interventions, décrites en détail dans l'article 2, ont été proposées en matière de prévention et d'intervention. En ce qui a trait à la prévention, les résultats de cette thèse montrent que les organisations auraient avantage à évaluer le niveau d'optimisme et de résilience de leurs employés, leur offrir un plan de développement approprié (p. ex., formation, coaching) et promouvoir des pratiques de gestion visant à créer une perception positive du climat de travail (p. ex., reconnaissance des accomplissements, soutien à l'autonomie en offrant une liberté de choix, opportunités de développement; McMurray & Scott, 2013). La sélection de candidats optimistes et résilients apparaît comme une stratégie potentielle à envisager dans l'optique de favoriser la santé psychologique au travail. Or, avant de l'intégrer aux bonnes pratiques de sélection, cette avenue devra recevoir un large soutien empirique afin de prouver que ce type de ressources répond aux caractéristiques essentielles de l'emploi (Commission des droits de la personne et des droits de la jeunesse, 2011; Gatewood, Feild, & Barrick, 2010). Concernant les interventions à privilégier lorsque les menaces et la perte de ressources ne peuvent être évitées, les gestionnaires gagneraient

notamment à mettre à profit les forces de leurs employés, adopter une approche de résolution de problèmes et compenser la perte en offrant du soutien.

Limites de la recherche doctorale

Bien que l'exercice doctoral donne lieu à des résultats prometteurs, il compte certaines limites à considérer afin d'en nuancer l'interprétation. D'une part, les cinq études, regroupées en deux articles, s'appuient sur des devis transversaux, des devis à mesures répétées intégrant deux temps de mesure et des données autorapportées. En conséquence, le type de devis ne permet pas d'inférer des liens de causalité entre les variables d'intérêt et les données ont pu être sensibles à un biais de variance commune. Des devis longitudinaux et des analyses de trajectoires latentes seraient à privilégier dans les prochaines études afin de pallier ces limites méthodologiques (Ployhart & Vandenberg, 2010). Si le bien-être et la détresse psychologiques au travail reflètent des expériences subjectives qu'il convient d'évaluer selon la perspective de l'individu (Massé et al., 1998a; Massé et al., 1998c), l'ajustement cognitif et les réponses comportementales de stress au travail peuvent également être mesurés par des sources d'information externes et des mesures objectives. Les recherches ultérieures devraient s'intéresser à répliquer les résultats en adoptant une approche multisources et multiméthodes. Cet effort de triangulation de l'information contribuerait à renforcer la validité des conclusions (Mathison, 1988; Reis & Judd, 2000).

D'autre part, le type d'échantillons sélectionnés limite la généralisation des résultats. Majoritairement des femmes, les participants provenaient exclusivement du milieu de l'éducation. Considérant que les résultats ont été confirmés par l'intermédiaire de plusieurs études et de deux cultures différentes, il apparaît particulièrement pertinent de répliquer la démarche entreprise dans le cadre de la thèse dans des contextes de travail différents pour accroître la portée des conclusions de la recherche doctorale.

Pistes de recherche future

Afin de favoriser l'amélioration continue de la compréhension de la santé psychologique au travail, une programmation de recherche, articulée autour de trois objectifs, semble tout indiquée. Le premier objectif consiste à poursuivre la validation de l'ajustement cognitif. Pour ce faire, l'examen de la validité en regard de conceptualisations concomitantes d'ajustement et de milieux de travail variés, de même que la traduction de l'instrument dans d'autres langues s'affichent parmi les prochaines étapes à suivre.

Le deuxième objectif vise à approfondir la compréhension du fonctionnement de l'employé en développant d'autres conceptualisations liées à la santé psychologique au travail. Alors que la thèse s'est attardée à l'ajustement cognitif au travail, les prochains travaux pourraient approfondir le dysfonctionnement cognitif au travail. Similairement, les réponses comportementales de stress ont été étudiées pour examiner le dysfonctionnement comportemental des employés. Il appert pertinent d'explorer le fonctionnement comportemental des travailleurs et de l'intégrer, tout comme le dysfonctionnement cognitif, à la conceptualisation de la santé psychologique au travail.

Le troisième objectif a pour objet de continuer les efforts de modélisation de la santé psychologique au travail en ajoutant des antécédents, médiateurs, modérateurs et résultantes potentiels. Les articles 1 et 2 ont fait mention de plusieurs variables à examiner, telles que la recherche d'informations, les échanges avec les collègues, le sentiment de sécurité, le capital psychologique et les pratiques de gestion. Les influences provenant de l'extérieur du milieu du travail (p. ex., soutien familial; Odle-Dusseau et al., 2013) pourraient également être explorées pour une compréhension encore plus élargie de la santé psychologique au travail.

Mot de la fin

Alors que la productivité obnubilait les organisations du 20^{e} siècle, la santé psychologique au travail gagne en intérêt depuis les dernières années. Les coûts et les gains potentiels qui s'y rattachent ne sont pas étrangers à cette popularité grandissante. La

communauté scientifique et les milieux de pratique s'efforcent de mieux comprendre le phénomène pour y arrimer des interventions porteuses. En intégrant des éléments du fonctionnement de l'individu à la conceptualisation de la santé psychologique au travail et en précisant certains mécanismes sous-jacents, la thèse s'inscrit dans cette volonté d'identifier des leviers à activer pour favoriser la santé psychologique au travail. Miser sur les ressources de l'individu et de son organisation s'affiche comme une avenue prometteuse à privilégier. Si la compréhension du construit ne cesse d'évoluer, beaucoup de travail reste néanmoins à accomplir pour en cerner toute la complexité. Souhaitons que chercheurs et praticiens soient au rendez-vous et que les efforts déployés actuellement en santé psychologique au travail ne soient pas seulement une mode passagère.

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Annexe 1

Validation de la mesure des réponses comportementales de stress au travail

Étude de validation

Cette étude a pour objet de fournir un appui additionnel à la validation de la mesure des réponses comportementales de stress au travail (Brien, Lapointe, Gilbert, Brunet, & Savoie, 2008). Dans un premier temps, la structure factorielle et les qualités psychométriques de l'instrument ont été vérifiés. À la lumière de la documentation scientifique (Brien, Lapointe, Gilbert, Brunet, & Savoie, 2008; Gilbert, 2009), il était attendu que :

Hypothèse 1. Des analyses factorielles exploratoires regroupent les items de la mesure des réponses comportementales de stress au travail en trois facteurs, à savoir l'attaque, la fuite et l'aliénation.

Hypothèse 2. Un facteur de second ordre de la mesure des réponses comportementales de stress au travail, composé de trois facteurs de premier ordre (soit l'attaque, la fuite et l'aliénation), s'ajuste aux données de façon satisfaisante.

Hypothèse 3. La mesure des réponses comportementales de stress au travail présente une cohérence interne satisfaisante (alpha au-dessus de ,70; Kaplan & Saccuzzo, 1993).

Hypothèse 4. La structure factorielle de la mesure des réponses comportementales de stress au travail présente une invariance temporelle.

Dans un second temps, la validité de construit des réponses comportementales de stress au travail a été examinée. Spécifiquement, les relations entre le construit et trois corrélats appuyés empiriquement, soit la justice distributive (Berry, Ones, & Sackett, 2007; Brien et al., 2008; Hershcovis et al., 2007), la justice procédurale (Berry et al., 2007; Brien et al., 2008; Hershcovis et al., 2007) et la détresse psychologique au travail (Hershcovis & Barling, 2010; Krischer, Penney, & Hunter, 2010), ont été testées. Les hypothèses suivantes ont été formulées :

Hypothèse 5. Les réponses comportementales de stress au travail sont négativement corrélées à la justice distributive.

Hypothèse 6. Les réponses comportementales de stress au travail sont négativement corrélées à la justice procédurale.

Hypothèse 7. Les réponses comportementales de stress au travail sont positivement corrélées à la détresse psychologique au travail.

Méthode

Participants et procédure

Les échantillons A (N_A = 296), B (N_B = 350), et C (N_C = 139), présentés dans le cadre du premier article, ont été utilisés pour faire les analyses afin de mettre à l'épreuve les différentes hypothèses de recherche.

Mesures

Réponses comportementales de stress au travail. La mesure des réponses comportementales de stress au travail est tirée des travaux de Brien et al. (2008).

Justice distributive. L'instrument utilisé pour mesurer la justice distributive se base sur les travaux de Moorman (1991) et de Price et Mueller (1986). L'outil se compose de 8 items (p. ex., « Dans votre école, les ressources/récompenses sont attribuées selon le mérite de chacun ») et se répond selon une échelle de réponse de type Likert en six points (1 = Tout à fait en désaccord, 6 = Tout à fait en accord). L'alpha de Cronbach, obtenu à partir de l'échantillon B, est de ,82.

Justice procédurale. À l'instar de la justice distributive, la mesure de la justice procédurale s'inspire des travaux de Moorman (1991) et de Price et Mueller (1986). Cet instrument compte 7 items (p. ex., « Ceux qui prennent les décisions ne se laissent pas influencer par leurs intérêts personnels »). L'échelle de réponse de type Likert est en six points (1 = Tout à fait en désaccord, 6 = Tout à fait en accord). L'alpha de Cronbach, obtenu à partir de l'échantillon B, est de ,95.

Détresse psychologique. La mesure de la détresse psychologique (Gilbert, Dagenais-Desmarais, & Savoie, 2011), utilisée dans le second article de thèse, a été employée (α = ,95).

Résultats

Analyses factorielles exploratoires

Des analyses factorielles exploratoires (rotation Promax), effectuée à partir de l'échantillon A, indique que trois valeurs propres (en anglais : *eigen value*) excèdent 1, appuyant la structure en trois facteurs de la mesure des réponses comportementales de stress au travail. Ce faisant, l'hypothèse 1 est confirmée. Un examen plus approfondi des valeurs de saturation des items a toutefois amené à 10 retirer items. En effet, deux items (c.-à-d., item 9, item 10) ne saturaient sur aucun facteur, trois items (c.-à-d., item 4, item 16, item 19) présentaient une saturation supérieure à 0,30 sur deux facteurs et cinq items (c.-à-d., item 5, item 6, item 7, item 8, item 13) satureraient sur un facteur qui ne correspondait pas aux attentes théoriques. Ainsi, la structure factorielle finale comprend 12 items. Le Tableau 1 fournit un résumé des coefficients standardisés de saturation pour la solution en trois facteurs de la mesure.

Insérer le Tableau 1 à peu près ici

Analyses factorielles confirmatoires

Réalisée à partir de l'échantillon B, des analyses factorielles confirmatoires montrent que la structure factorielle de l'instrument, consistant en un facteur de second ordre composé de trois facteurs de premier ordre, s'ajuste de façon excellente aux données, χ^2 (24) = 26,54, p < ,001, χ^2/df = 1,11, CFI = 1,00, TLI = 1,00, SRMR = ,03; RMSEA = ,02, 90% CI =,02, .05. Ce modèle présente un ajustement significativement supérieur à deux modèles plus parcimonieux, soit un modèle de premier ordre à trois facteurs indépendants, $\Delta\chi^2(3) = 150,14$, p < .001, et un modèle à facteur unique. Les résultats appuient l'utilisation du score global de la mesure des réponses comportementales de stress au travail, confirmant l'hypothèse 2. Le Tableau 2 regroupe les résultats de ces analyses.

Insérer le Tableau 2 à peu près ici

Analyses de cohérence interne

Les alphas de Cronbach pour les échantillons A, B et C rencontrent les standards généralement reconnus (respectivement α_A = ,71, α_B = ,75, $\alpha_{CT1\text{-}T2}$ = ,71; Kaplan & Saccuzzo, 1993). L'hypothèse 3 est confirmée.

Analyse d'invariance temporelle

Suivant les recommandations de Vandenberg et Lance (2000) et d'Oort (2005), une analyse d'invariance temporelle a été conduite à partir de l'échantillon C. Quelle que soit le type de contraintes d'égalités imposé (c.-à-d., pondérations factorielles, intercepts et variances d'erreur), les résultats indiquent que la structure factorielle de l'instrument est invariante dans le temps. L'hypothèse 4 est confirmée. Le Tableau 2 présente le détail de ces résultats.

Analyses de corrélation

Les analyses de corrélation montrent que les réponses comportementales de stress au travail sont négativement corrélées à la justice distributive (r = −0,15, p < 0,01), à la justice procédurale (r = −0,35, p < 0,01) et positivement liées à la détresse psychologique au travail (r = 0,68, p < 0,01). Les résultats vont dans le sens de la documentation scientifique (Berry et al., 2007; Brien et al., 2008; Hershcovis et al., 2007; Krischer et al., 2010) et appuient les hypothèses 5 à 7.

Discussion

Les analyses factorielles exploratoires et confirmatoires, de même que les analyses de cohérence interne, d'invariance temporelle et de corrélation, confirment les qualités psychométriques de l'instrumentation et fournissent un appui à la validité des réponses comportementales de stress au travail.

Tableau 1

Résumé des coefficients standardisés de saturation pour la solution en trois facteurs avec rotation Promax pour la mesure des réponses comportementales de stress au travail

	Item	Coefficients standardisés de saturation			h^2
		1	2	3	
1.	Blâmer autrui.			.85	.67
2.	Dénigrer autrui.			.87	.73
3.	Faire des commentaires désobligeants.			.60	.50
4.	Insulter autrui.	.38		.49	.47
5.	Je fuis mon travail dans la rêverie.	.53			.44
6.	Je fuis mon travail dans l'alcool.	.60			.40
7.	Je fuis mon travail dans la drogue.	.87			.59
8.	Je m'organise pour faire faire mon travail par les autres.	.75			.50
9.	Je prends des congés lorsque j'ai des problèmes au travail.	–	–	–	.34
10.	Je remets à plus tard les rencontres dans lesquelles on doit résoudre les problèmes qui m'impliquent.	–	–	–	.39
11.	Au travail, je dis que «tout va bien» même lorsque ce n'est pas le cas.		.74		.43
12.	Quand ça va mal au travail, je quitte le lieu de travail le plus vite possible.		.82		.56
13.	Je me déclare malade plus souvent qu'à mon tour.	.41			.34
14.	Je fais le strict minimum dans mon travail.	.77			.58
15.	J'effectue mon travail machinalement.	.67			.54
16.	Je demeure dans mon poste actuel même s'il ne me convient pas.	.37	.32		.37
17.	Je m'isole au travail.		.56		.50
18.	Au travail, j'attends que le temps passe.	.60			.55
19.	Au travail, je fais ce qu'il faut pour passer inaperçu.	.42	.45		.54
Corrélations interfacteurs					
Factor 1 – Aliénation		–			
Factor 2 – Fuite		.49**	–		
Factor 3 – Attaque		.33**	.18**	–	
Pourcentage de variance expliquée		32.38	9.99	7.85	

Note. $^{**}p < 0{,}01$.

Tableau 2

Indices d'ajustement des modèles relatifs à la mesure des réponses comportementales de stress au travail

Model	χ^2	df	χ^2/df	$\Delta\chi^2$	CFI	TLI	SRMR	RMSEA and 90% CI
M_1 – Modèle à un facteur unique	275.54***	27	10.21		.68	.57	.11	.16 (.14, .18)
M_2 – Modèle à trois facteurs indépendants	176.73***	27	6.55	150.14***	.80	.74	.17	.12 (.11, .14)
M_3 – Modèle à trois facteurs avec un facteur de premier ordre (modèle de base pour comparer avec M_2)	26.59	24	1.11		1.00	1.00	.03	.02 (.00, .05)
M_4 – Modèle de comparaison (sans contrainte)	171.06***	116	1.48		.93	.91	.08	.06 (.04, .08)
M_5 – Contraintes d'égalité imposées sur les pondérations factorielles	172.95**	122	1.42	1.89	.94	.92	.08	.06 (.04, .07)
M_6 – Contraintes d'égalité imposées sur les intercepts	182.68**	131	1.40	11.62	.94	.93	.08	.05 (.03, .07)
M_7 – Contraintes d'égalité imposées sur les variances d'erreur	199.19***	140	1.42	28.13	.93	.92	.08	.06 (.04, .07)

Note. N = 350; **p < .01; ***p < .001.

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Annexe 2

Mesures utilisées dans le cadre de la thèse

Mesure de l'ajustement cognitif au travail

Consigne : Encerclez le chiffre qui correspond le mieux à votre réalité.

Tout à fait en désaccord	Assez fortement en désaccord	Un peu en désaccord	Un peu en accord	Assez fortement en accord	Tout à fait en accord
1	2	3	4	5	6

À mon travail :

# Item 12	# Item 19	Item	Ancrage					
1.	1.	Je suis capable de répondre aux exigences de ma tâche.	1	2	3	4	5	6
2.	2.	Je sais comment être performant dans mon travail.	1	2	3	4	5	6
3.	3.	Je maîtrise les tâches requises à mon travail.	1	2	3	4	5	6
4.	4.	Je connais toutes les exigences que comporte ma tâche.	1	2	3	4	5	6
5.	6.	Je sais à qui m'adresser lorsque je me sens dépassé par mon travail.	1	2	3	4	5	6
6.	10.	Je sais comment les décisions se prennent dans mon école.	1	2	3	4	5	6
7.	11.	Je vois les jeux politiques qui se passent dans mon école.	1	2	3	4	5	6
8.	12.	Je suis capable de tirer parti des jeux politiques.	1	2	3	4	5	6
9.	13.	Je connais les règles informelles, les politiques et les procédures de l'école.	1	2	3	4	5	6
10.	14.	Je sais à qui m'adresser lorsque je ne trouve pas de réponses à mes questions.	1	2	3	4	5	6
11.	15.	Je sais quels sont les collègues qui sont disposés à m'aider.	1	2	3	4	5	6
12.	16.	Je sais qui aller voir lorsque je veux que les choses avancent.	1	2	3	4	5	6

Référence :

Malo, M., & Brunet, L. (en préparation). Cognitive adjustment as an indicator of psychological health at work: Development and validation of a measurement.

Mesure de la personnalité proactive

Consigne : Encerclez le chiffre qui correspond le mieux à votre réalité.

Presque jamais	Rarement	La moitié du temps	Fréquemment	Presque toujours
1	**2**	**3**	**4**	**5**

Lorsqu'une situation qui m'importe est à venir, j'ai tendance à :

	Item	Ancrage				
1.	L'identifier avant qu'elle ne survienne.	1	2	3	4	5
2.	Changer ce qui doit être changé.	1	2	3	4	5
3.	Prendre les devants.	1	2	3	4	5
4.	Agir sans être contraint de le faire.	1	2	3	4	5
5.	Ne pas laisser les difficultés m'empêcher d'agir.	1	2	3	4	5

Référence (mesure inspirée des travaux des auteurs ci-dessous) :

Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior, 14*(2), 103-118.

Mesure du bien-être psychologique au travail

Consigne : Encerclez le chiffre qui correspond le mieux à votre réalité.

Presque jamais	Rarement	La moitié du temps	Fréquemment	Presque toujours
1	**2**	**3**	**4**	**5**

Ces temps-ci, dans mon emploi :

	Item	Ancrage					
1.	Je me sens en confiance.	1	2	3	4	5	6
2.	Je suis satisfait de mes réalisations, je suis fier de moi.	1	2	3	4	5	6
3.	Je suis fonceur, j'entreprends plein de choses.	1	2	3	4	5	6
4.	Je me sens équilibré émotionnellement.	1	2	3	4	5	6
5.	Je me sens aimé et apprécié.	1	2	3	4	5	6
6.	J'ai des buts, des ambitions.	1	2	3	4	5	6
7.	J'ai le goût de pratiquer mes loisirs et activités préférés en dehors du travail.	1	2	3	4	5	6
8.	J'ai facilement un beau sourire.	1	2	3	4	5	6
9.	Je suis égal à moi-même, naturel, en toutes circonstances.	1	2	3	4	5	6
10.	Je suis à l'écoute de mes collègues de travail.	1	2	3	4	5	6
11.	Je suis curieux, je m'intéresse à toutes sortes de choses.	1	2	3	4	5	6
12.	Je trouve mon travail excitant et j'ai envie d'en profiter.	1	2	3	4	5	6
13.	J'ai un équilibre entre mes activités professionnelles, familiales et personnelles.	1	2	3	4	5	6
14.	Je suis plutôt calme et posé.	1	2	3	4	5	6
15.	Je trouve facilement des solutions à mes problèmes.	1	2	3	4	5	6

16.	Je suis en bon terme avec mes collègues de travail.	1	2	3	4	5	6
17.	Je travaille avec modération, en évitant de tomber dans les excès.	1	2	3	4	5	6
18.	J'ai l'impression de vraiment apprécier mon travail.	1	2	3	4	5	6
19.	J'ai beaucoup d'humour, je fais facilement rire mes collègues de travail.	1	2	3	4	5	6
20.	Je suis bien dans ma peau, en paix avec moi-même.	1	2	3	4	5	6
21.	Je me sens en santé, en pleine forme.	1	2	3	4	5	6
22.	Je sais affronter positivement les situations difficiles.	1	2	3	4	5	6
23.	J'ai un bon moral.	1	2	3	4	5	6

Référence :

Gilbert, M.-H., Dagenais-Desmarais, V., & Savoie, A. (2011). Validation d'une mesure de santé psychologique au travail. *Revue européenne de psychologie appliquée/European Review of Applied Psychology, 61*(4), 195-203.

Mesure de la performance de tâche

Consigne : Encerclez le chiffre qui correspond le mieux à votre réalité.

Pas du tout	Un peu	Modérément	Beaucoup	Énormément
1	2	3	4	5

Depuis septembre … [ou] Depuis janvier …

	Item	Ancrage				
1.	J'ai couvert les contenus (matières) prévus au programme.	1	2	3	4	5
2.	Mes élèves qui ont des difficultés ont appris et développé les compétences attendues.	1	2	3	4	5
3.	Mes élèves qui ont peu ou pas de difficultés ont appris et développé les compétences attendues.	1	2	3	4	5
4.	Mes élèves apprécient mon enseignement.	1	2	3	4	5
5.	Je me suis tenu(e) à jour par rapport aux changements et/ou innovations liées à ce que j'enseigne (pédagogie, matière enseignée, technologies – TIC, etc.).	1	2	3	4	5
6.	Mes élèves sont attentifs en classe.	1	2	3	4	5
7.	La motivation à apprendre de mes élèves est élevée.	1	2	3	4	5
8.	Le climat dans ma (mes) classe(s) est favorable à l'apprentissage et au développement des élèves.	1	2	3	4	5
9.	Des comportements perturbateurs (bavardage, manque de respect, etc.) ont eu lieu dans ma (mes) classe(s).	1	2	3	4	5
10.	La direction de l'école semble satisfaite de mon signalement et de ma gestion des retards et absences des élèves.	1	2	3	4	5
11.	Ma performance et mes comportements au travail ont fait l'objet de feed-back négatif (réprimande, sanction, etc.) de la part de la direction de l'école.	1	2	3	4	5
12.	Je suis assidu(e) au travail.	1	2	3	4	5
13.	Je participe activement aux diverses réunions d'enseignants ou avec la direction de l'école en relation avec mon travail.	1	2	3	4	5

14.	Je suis ponctuel(le) au travail.	1	2	3	4	5
15.	La direction de l'école semble satisfaite de ma gestion de l'évaluation des élèves (mode d'évaluation, notation, transmission des résultats).	1	2	3	4	5
16.	Ma performance et mes comportements au travail se sont mérités du feed-back positif (félicitation, marque d'appréciation, etc.) de la part de la direction de l'école.	1	2	3	4	5
17.	Lors des rencontres avec les parents/tuteurs des élèves, j'ai réussi à leur communiquer un portrait fidèle de leur enfant dans la classe.	1	2	3	4	5
18.	Les parents/tuteurs des élèves qui sont venus me consulter sont sortis satisfaits de cette rencontre.	1	2	3	4	5
19.	J'ai été vigilent afin de prévenir ou gérer rapidement des situations mettant en cause la sécurité ou l'intégrité physique d'élèves sous ma surveillance (bagarre, blessures, etc.).	1	2	3	4	5
20.	J'ai géré efficacement les situations délicates (tricherie, comportements perturbateurs, etc.) avec les parents/tuteurs des élèves.	1	2	3	4	5
21.	J'ai collaboré à l'organisation et à l'amélioration des services offerts aux élèves pour soutenir leur apprentissage.	1	2	3	4	5

Référence :

Brien, M., Lapointe, E., Boudrias, J.-S., & Brunet, L. (2011). Investigation de la relation entre la santé psychologique et la performance des enseignants. Dans P. Desrumaux, A.-M. Vonthron & S. Pohl (dir.), *Qualité de vie, risques et santé au travail*. Paris: L'Harmattan.

Mesure de l'optimisme

Consigne : Encerclez le chiffre qui correspond le mieux à votre réalité.

Tout à fait en désaccord	Assez fortement en désaccord	Un peu en désaccord	Un peu en accord	Assez fortement en accord	Tout à fait en accord
1	2	3	4	5	6

Dans ma vie, en général :

	Item	Ancrage					
1.	Dans les moments d'incertitude, je m'attends habituellement au mieux.	1	2	3	4	5	6
2.	S'il y a des chances que ça aille mal pour moi, ça ira mal.	1	2	3	4	5	6
3.	Je suis toujours optimiste face à mon avenir.	1	2	3	4	5	6
4.	Je ne m'attends presque jamais à ce que les choses aillent comme je le voudrais.	1	2	3	4	5	6
5.	Je m'attends rarement à ce que de bonnes choses m'arrivent.	1	2	3	4	5	6
6.	Dans l'ensemble, je m'attends à ce que plus de bonnes choses m'arrivent que de mauvaises.	1	2	3	4	5	6

Référence :

Trottier, C., Mageau, G., Trudel, P., & Halliwell, W. R. (2008). Validation de la version canadienne-française du Life Orientation Test-Revised. *Canadian Journal of Behavioural Science/Revue canadienne des sciences du comportement, 40*(4), 238.

Mesure de la résilience

Consigne : Encerclez le chiffre qui correspond le mieux à votre réalité.

Presque jamais	Rarement	La moitié du temps	Fréquemment	Presque toujours
1	**2**	**3**	**4**	**5**

Lorsque survient une grande difficulté (adversité, stress), j'ai tendance à :

	Item	Ancrage				
1.	Ne pas la laisser affecter toutes les sphères de ma vie.	1	2	3	4	5
2.	Me sentir capable d'influencer le cours des choses.	1	2	3	4	5
3.	Croire que je peux faire avancer les choses.	1	2	3	4	5
4.	Voir l'obstacle de façon positive.	1	2	3	4	5
5.	Voir le côté positif du problème.	1	2	3	4	5
6.	Voir les bénéfices que la résolution de cette difficulté peut m'apporter.	1	2	3	4	5
7.	Rebondir avec plus de compétences.	1	2	3	4	5
8.	Développer de nouvelles habiletés.	1	2	3	4	5
9.	Développer de nouvelles connaissances.	1	2	3	4	5

Référence :

Brien, M., Brunet, L., Boudrias, J.-S., Savoie, A., & Desrumaux, P. (2008). Santé psychologique au travail et résilience : élaboration d'un instrument de mesure. Dans N. Pettersen, J. S. Boudrias & A. Savoie (dir.), *Entre tradition et innovation, comment transformons-nous l'univers du travail?* Québec: Presses de l'Université du Québec.

Mesure du climat de travail

Consigne : Ces énoncés concernent la façon dont vous êtes traités et/ou gérés dans votre école. Encerclez le chiffre qui correspond le mieux à votre réalité.

Tout à fait en désaccord	Assez fortement en désaccord	Un peu en désaccord	Un peu en accord	Assez fortement en accord	Tout à fait en accord
1	**2**	**3**	**4**	**5**	**6**

En général :

	Item	Ancrage					
1.	Vous êtes libre d'utiliser vos compétences comme bon vous semble.	1	2	3	4	5	6
2.	Vous pouvez développer votre potentiel au travail.	1	2	3	4	5	6
3.	Votre travail actuel vous permet de développer vos talents.	1	2	3	4	5	6
4.	Votre contribution est reconnue.	1	2	3	4	5	6
5.	Vous êtes libre d'exécuter votre travail selon votre jugement.	1	2	3	4	5	6
6.	Vous vous sentez valorisé.	1	2	3	4	5	6
7.	Votre travail actuel est une source d'épanouissement.	1	2	3	4	5	6
8.	Des commentaires positifs sont utilisés pour vous inciter à travailler.	1	2	3	4	5	6
9.	Vous êtes libre d'agir à votre guise.	1	2	3	4	5	6

Référence :

Roy, F. (1989). Élaboration et validation d'un questionnaire sur le climat de travail. (Mémoire de maîtrise inédit), Université de Montréal, Montréal.

Mesure de la détresse psychologique au travail

Consigne : Encerclez le chiffre qui correspond le mieux à votre réalité.

Presque jamais	Rarement	La moitié du temps	Fréquemment	Presque toujours
1	**2**	**3**	**4**	**5**

Ces temps-ci, dans mon emploi :

	Item	Ancrage				
1.	Je suis agressif pour tout et pour rien.	1	2	3	4	5
2.	J'ai tendance à m'isoler, à me couper du monde.	1	2	3	4	5
3.	J'ai l'impression d'avoir raté ma carrière.	1	2	3	4	5
4.	J'éprouve de la difficulté à faire face à mes problèmes.	1	2	3	4	5
5.	Je suis facilement irritable, je réagis plutôt mal et/ou avec colère aux commentaires qu'on me fait.	1	2	3	4	5
6.	Je n'ai plus le goût de faire quoi que ce soit de plus.	1	2	3	4	5
7.	Je me sens dévalorisé, je me sens diminué.	1	2	3	4	5
8.	Je suis en conflit avec mes collègues de travail.	1	2	3	4	5
9.	J'ai envie de tout lâcher, de tout abandonner.	1	2	3	4	5
10.	Je me sens triste.	1	2	3	4	5
11.	J'ai l'impression que personne ne m'aime.	1	2	3	4	5
12.	Je suis arrogant et même " bête " avec mes collègues de travail.	1	2	3	4	5
13.	Je manque de confiance en moi.	1	2	3	4	5
14.	Je me sens préoccupé, anxieux.	1	2	3	4	5

15.	Je perds patience facilement.	1	2	3	4	5
16.	Je me sens déprimé, ou “ down ”.	1	2	3	4	5
17.	J’ai le sentiment d’être inutile.	1	2	3	4	5
18.	Je me sens désintéressé par mon travail.	1	2	3	4	5
19.	Je me sens mal dans ma peau.	1	2	3	4	5
20.	Je me sens stressé, sous pression.	1	2	3	4	5
21.	J’ai tendance à être moins réceptif aux idées (opinions) de mes collègues de travail.	1	2	3	4	5

Référence :

Gilbert, M.-H., Dagenais-Desmarais, V., & Savoie, A. (2011). Validation d’une mesure de santé psychologique au travail. *Revue européenne de psychologie appliquée/European Review of Applied Psychology, 61*(4), 195-203.

Mesure des réponses comportementales de stress au travail

Consigne : Encerclez le chiffre qui correspond le mieux à votre réalité.

Presque jamais	Rarement	La moitié du temps	Fréquemment	Presque toujours
1	**2**	**3**	**4**	**5**

Au cours du dernier mois au travail, il m'est arrivé de :

	Item	Ancrage				
1.	Blâmer autrui.	1	2	3	4	5
2.	Dénigrer autrui.	1	2	3	4	5
3.	Faire des commentaires désobligeants.	1	2	3	4	5
4.	Au travail, je dis que «tout va bien» même lorsque ce n'est pas le cas.	1	2	3	4	5
5.	Quand ça va mal au travail, je quitte le lieu de travail le plus vite possible.	1	2	3	4	5
6.	Je fais le strict minimum dans mon travail.	1	2	3	4	5
7.	J'effectue mon travail machinalement.	1	2	3	4	5
8.	Je m'isole au travail.	1	2	3	4	5
9.	Au travail, j'attends que le temps passe.	1	2	3	4	5

Référence (mesure inspirée des travaux des auteurs ci-dessous) :

Brien, M., Lapointe, D., Gilbert, M.-H., Brunet, L., & Savoie, A. (2008). Le climat comme prédicateur de l'ajustement au travail des enseignants et vérification de l'effet de médiation de la satisfaction des besoins fondamentaux. Dans N. Pettersen, J. S. Boudrias & A. Savoie (dir.), *Entre tradition et innovation, comment transformons-nous l'univers du travail? Actes du 15ième Congrès de l'AIPTLF tenu à Québec en août 2008*. Québec: Presse de l'Université du Québec.

Mesure des demandes en emploi

Consigne : Encerclez le chiffre qui correspond le mieux à votre réalité.

Très insuffisant(e)s	Insuffisant(e)s	Adéquat	Très insuffisant(e)s	Insuffisant(e)s
1	**2**	**3**	**4**	**5**

Dans le poste que vous occupez actuellement, comment évaluez- vous…

	Item	Ancrage				
1.	La charge de travail (quantité).	1	2	3	4	5
2.	La charge émotive.	1	2	3	4	5
3.	Les défis à relever.	1	2	3	4	5
4.	La diversité des tâches à accomplir.	1	2	3	4	5
5.	La complexité des tâches.	1	2	3	4	5
6.	Les responsabilités à assumer.	1	2	3	4	5
7.	L'effort physique.	1	2	3	4	5
8.	La pression à produire.	1	2	3	4	5
9.	Les demandes de la direction de l'école.	1	2	3	4	5
10.	La charge de travail (quantité).	1	2	3	4	5

Référence :

Lapointe, D., Boudrias, J.-S., Brien, M., & Savoie, A. (2009). Measurement of demands and resources: A study with Québec teachers. *Communication présenté Canadian Administrative Science Association Conference*, Niagara Falls, Ontario.