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# Promoting the quality of work life, innovation at work and job performance of hospital managers : proactivity at work a new resource?

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THÈSE PRÉSENTÉE  
POUR OBTENIR LE GRADE DE  
**DOCTEUR DE**  
**L'UNIVERSITÉ DE BORDEAUX**

ÉCOLE DOCTORALE : SOCIÉTÉS, POLITIQUE, SANTÉ PUBLIQUE (SP2)

SPÉCIALITÉ : Psychologie du Travail et des Organisations

Par Lucie PIERRE

**PROMOUVOIR LA QUALITÉ DE VIE AU TRAVAIL,  
L'INNOVATION ET LA PERFORMANCE AU TRAVAIL DES  
CADRES HOSPITALIERS:**

**La proactivité au travail, une nouvelle ressource ?**

Sous la direction du Professeur : Adalgisa BATTISTELLI

Soutenue le 20 décembre 2018

Membres du jury :

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Mr. STEINER, Dirk  
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Professeur Université Nice Sophia Antipolis  
Professeur Université de Bordeaux

Présidente  
Rapporteur  
Rapporteur  
Directrice

*To Elizabeth, Jean Prepty  
Emeline, Linda, Jimmy  
and Emmanuel*

**Titre : Promouvoir la qualité de vie au travail, l'innovation et la performance au travail des cadres hospitaliers: La proactivité au travail, une nouvelle ressource ?**

**Résumé :**

Cette thèse a pour but d'analyser la relation entre la proactivité au travail, la qualité de vie au travail (QVT), le comportement innovant et la performance au travail des cadres hospitaliers. En premier lieu, nous proposons une synthèse de la revue de la littérature sur le concept de la proactivité au travail. Par la suite, nous présentons les trois études empiriques réalisées.

Dans l'étude 1, nous analysons la relation entre les caractéristiques du travail et les processus cognitifs motivationnels dans l'activation du comportement proactif au travail. Puis, nous examinons la relation entre le comportement proactif et la performance au travail ainsi que le comportement d'innovation au travail. Les résultats de cette étude soulignent l'existence d'une double médiation entre les caractéristiques du travail et le comportement d'innovation au travail ainsi que la performance au travail via l'habilitation psychologique et la proactivité au travail. Dans l'étude 2, nous étudions le rôle des processus cognitifs motivationnels dans l'activation du comportement proactif au travail. Puis nous analysons les effets du comportement proactif sur des indicateurs de QVT et d'efficacité au travail après une période de six mois. Les résultats de cette étude indiquent qu'il n'y a pas de relation entre le comportement proactif au travail et la QVT ainsi que la performance au travail après six mois, mais les résultats mettent en évidence la présence d'une relation positive entre le comportement proactif au travail et le comportement d'innovation au travail après une période de six mois. Par ailleurs, les résultats montrent que le comportement proactif au travail joue un rôle médiateur dans la relation entre les processus cognitifs motivationnels (sentiment de capacité, émotions positives) et le comportement d'innovation. Dans l'étude 3, nous analysons la relation entre le comportement proactif au travail et la QVT. Les résultats obtenus montrent que le sentiment de capacité contribue à activer le comportement proactif au travail et que la proactivité à son tour a des effets positifs sur les indicateurs de QVT. Les résultats soulignent la médiation totale du comportement proactif dans la relation entre le sentiment de capacité et l'engagement affectif organisationnel. Dans une étude complémentaire, nous étudions les effets de la qualité des échanges avec le supérieur (leader-member exchange) en tant que modérateur dans la relation entre le comportement proactif au travail et l'engagement affectif à l'égard de l'organisation. Les résultats indiquent que l'interaction entre la proactivité au travail et la qualité des échanges avec le supérieur contribue à renforcer l'engagement affectif à l'égard de l'organisation.

Les résultats de ces études contribuent à clarifier le rôle des processus cognitifs motivationnels dans l'activation du comportement proactif au travail et permettent d'alimenter la réflexion sur la relation entre le comportement proactif au travail, la QVT, le comportement d'innovation et la performance au travail des cadres hospitaliers.

**Mots clés :** proactivité, établissements publics de santé, qualité de vie au travail, cadres hospitaliers, innovation au travail, performance au travail

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**Title: Promoting the quality of work life, innovation at work, and job performance of hospital managers: Is proactivity at work a new resource?**

**Abstract:**

This thesis aims to analyse the relationship between hospital middle managers' proactivity at work, quality of work life, innovative behaviour, and job performance. First, literature on the concept of proactivity is reviewed. Next, three empirical studies are conducted.

Study 1 analyses the role of job characteristics and the role of cognitive motivational states in the activation of proactive work behaviour. Then, the effects of proactive work behaviour on job performance and on innovative work behaviour are analysed. Results from this study highlight the existence of a double mediation between job characteristics and innovative behaviour as well as job performance through psychological empowerment and proactive work behaviour. Study 2 examines the role of cognitive motivational states in the activation of proactive work behaviour. Then, the effects of proactive work behaviour on indicators of quality of work life (QWL) and indicators of job effectiveness after a period of six months are analysed. The results of this study show no relationship between proactive work behaviour and QWL indicators and job performance after six months, but the findings reveal the existence of a positive relationship between proactive behaviour at work and innovative behaviour after a period of six months. Furthermore, the results also indicate the existence of an indirect effect between cognitive motivational states (i.e., feeling capable, positive emotions) and innovative work behaviour through proactive work behaviour. Study 3 investigates the relationship between proactive work behaviour and QWL. Results suggest that feeling capable contributes to activate proactive work behaviour, which in turn has positive effects on QWL indicators. The mediating role of proactive work behaviour in the relationship between feeling capable and affective organizational commitment is also highlighted. A final complementary study proposes and shows that high-quality leader-member exchange as moderator strengthens the relationship between proactive work behaviour and affective organizational commitment.

Results from these studies help to clarify the role of cognitive motivational processes in the activation of proactive work behaviour and contribute to reflection on the relationship between proactive work behaviour, QWL, innovative work behaviour, and job performance of hospital middle managers.

**Keywords:** proactivity, public health institutions, quality of work life, hospital middle managers, innovation at work, job performance

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## **Texte long en Français**

### **INTRODUCTION**

#### *Contexte générale de recherche*

Depuis plus de 10 ans, les établissements publics de santé font face à de profonds bouleversements tant au niveau des nouvelles normes et procédures, des modes de financement, des nouvelles méthodes de gestion des ressources humaines et financières, des infrastructures, des techniques médicales et des équipements afin de rester compétitifs et performants (réduction des effectifs, fusions, réorganisations des pôles/services, tarification à l'acte, chirurgie ambulatoire, etc.). Les mesures entreprises visent à réduire le déficit des hôpitaux, maîtriser les dépenses publiques de santé, moderniser l'offre de soins tout en améliorant les performances des établissements de santé, c'est-à-dire leur aptitude à prodiguer des soins de qualité aux patients.

Cependant, l'introduction de ces nouvelles réformes a profondément modifié le fonctionnement des hôpitaux et a bouleversé l'activité de tous les personnels hospitaliers notamment le travail des cadres hospitaliers (soignants, administratifs, socio-éducatifs, médico-techniques et techniques). Les cadres hospitaliers représentent l'une des plus précieuses ressources dont disposent les établissements publics de santé. Ils ont pour responsabilité d'organiser les soins de manière pertinente et efficiente. Ils font le lien entre la direction, les différents services et les équipes. Ils répondent aux attentes et aux exigences des patients et des familles, ils gèrent leur équipe et déclinent de manière opérationnelle les réformes et changements décidées par le gouvernement et leur direction. L'efficacité des hôpitaux et la qualité des soins dépendent pour beaucoup de la capacité des cadres à gérer leur équipe, à innover et à conduire les changements.

Dès lors, il importe donc de promouvoir leur qualité de vie au travail ainsi que leur efficacité au travail. Or, à ce jour la question de l'amélioration de la santé, des conditions de

travail, de la qualité de vie au travail ou de la performance au travail des cadres hospitaliers est très peu investiguée dans la littérature (Caplan, 1994; Raeissi et Tavakoli, 2002; Uğurluoğlu, Celik et Pisapia, 2010).

Dans ce travail de recherche, nous posons l'hypothèse que le comportement proactif au travail des cadres hospitaliers pourrait être une ressource individuelle capable d'améliorer leur qualité de vie au travail, leur performance ainsi que leur comportement innovant au travail.

*Améliorer la qualité de vie au travail, la performance et l'innovation au travail par la proactivité ?*

La littérature scientifique place la proactivité au travail comme étant une nouvelle ressource aussi bien pour les employés que pour les organisations (Crant, 2000; Fuller, Marler et Hester, 2012; Parker, 2000). Ce concept bénéficie d'une littérature abondante en raison des conséquences positives qui en découlent (Baer et Frese, 2003; Belschak et Den Hartog, 2010; Frese et Fay, 2001; Kirkman et Rosen, 1999; Wu et Parker, 2012). En effet, les travaux réalisés mettent en évidence l'existence de liens positifs entre la proactivité et l'engagement affectif à l'égard de l'organisation (Den Hartog et Belschak, 2007; Thomas, Whitman et Viswesravan, 2010), l'intention de rester dans l'organisation (Prabhu, 2013), la satisfaction au travail (Ashford et Black, 1996; Thomas, et al., 2010), la performance au travail (Ashford et Black, 1996; Thomas et al., 2010) et l'innovation (Kickul et Gundy, 2002). Certains chercheurs semblent également soutenir l'idée que les personnes proactives sont plus résistantes aux facteurs de stress liés au travail ou à l'environnement de travail que les personnes non-proactives (Bateman et Crant, 1993). Bateman et Crant (1993) l'expliquent par le fait que les personnes proactives mettent en place des stratégies et adoptent des comportements afin de s'adapter ou de réduire les effets des facteurs de stress sur leur santé.

Bien qu'ayant été faites de manières indépendantes, ces études révèlent l'existence de liens significatifs entre le comportement proactif au travail, la performance au travail, l'innovation et plusieurs indicateurs de qualité de vie au travail. Toutefois, il est à noter qu'à ce jour la relation entre la proactivité et la qualité de vie au travail n'a pas encore été explorée dans une seule et même étude. De plus, à notre connaissance, très peu d'études s'intéressent à la proactivité au travail des personnels encadrants (Warshawsky, Havens et Knafl, 2012).

En nous appuyant sur les recherches antérieures consacrées à la proactivité, l'objectif principal de cette thèse est d'étudier la relation entre le comportement proactif au travail, la qualité de vie au travail ainsi que la performance au travail et le comportement d'innovation au travail des cadres hospitaliers.

### *Structure de la thèse*

La thèse est structurée en quatre parties. La première partie de cette thèse a pour objectif de synthétiser l'ensemble des connaissances sur le concept de proactivité au travail. Dans la deuxième partie, nous présentons les objectifs de recherche, le cadre de la recherche ainsi que le modèle général de la proactivité proposé dans cette recherche. Dans la troisième partie de la thèse, nous présentons les trois études réalisées. Dans la première étude, nous analysons la structure générale de la proactivité (antécédents, processus cognitifs motivationnels, comportement proactif, conséquences). Dans la deuxième étude, nous étudions les effets à long terme du comportement proactif sur des indicateurs de qualité de vie au travail et des indicateurs d'efficacité au travail. Dans la troisième étude, nous étudions la relation entre le comportement proactif au travail et la qualité de vie au travail. Dans une étude complémentaire, nous proposons d'examiner le rôle de la qualité des échanges avec le supérieur comme modérateur dans la relation entre le comportement proactif au travail et l'engagement affectif organisationnel. Enfin, dans la dernière partie de la thèse, nous

discutons les apports de cette recherche, les implications pratiques et théoriques ainsi que les pistes de recherches futures.

## **Partie 1 : Cadre théorique**

Dans la première partie de la thèse, nous analysons la littérature sur le concept de proactivité afin de clarifier sa définition (Bindl et Parker, 2010; Crant, 2000; Frese, Kring, Soose et Zempel, 1996; Grant et Ashford, 2008; Griffin, Neal et Parker, 2007; Parker, Bindl et Strauss, 2010; Parker, Williams et Turner, 2006; Unsworth et Parker, 2003; Yin, Xing, Li et Guo, 2017). Nous nous intéressons aux quatre grandes théories développées autour de ce concept : la proactivité comme dépendant des dispositions individuelles (Bateman et Crant, 1993; Van Dyne et Le Pine, 1998), comme étant une association entre les dispositions individuelles et situationnelles (Farell et Strauss, 2013; Parker et Wang, 2015; Parker et al., 2006), comme étant un processus orienté vers un but (Bindl, Parker, Totterdell et Hagger-Johnson, 2012 ; Grant et Ashford, 2008) et comme étant un moyen de protéger ses ressources (Parker, Johnson, Collins et Nguyen, 2013; Strauss, Parker et O'Shea, 2016). Cette analyse de la littérature permet aussi d'identifier des modèles de référence de la proactivité (Bindl et Parker, 2010; Cangiano et Parker, 2016; Crant, 2000; Parker et al., 2006). Plusieurs de ces modèles servent de cadre de référence à cette thèse (Bindl et Parker, 2010; Cangiano et Parker, 2016; Parker et al., 2006). Puis, nous nous intéressons aux différentes manifestations du comportement proactif. En particulier, dans ce travail de recherche notre attention se porte sur le comportement proactif au travail (Parker et Collins, 2010) composé de la « *voice* » (Van Dyne et LePine, 1998), du « *taking charge* » (Morrison et Phelps, 1999; Parker et al., 2006) et de la « *problem prevention* » (Frese et Fay, 2001; Parker et al., 2006). Nous étudions les antécédents (distaux et proximaux) ainsi que les conséquences (performance, innovation, satisfaction, engagement affectif, absentéisme, etc.) associés à ce comportement. Puis, nous

nous questionnons sur la relation existante entre le concept de proactivité et le concept de qualité de vie au travail.

## **Partie 2 : Cadre de recherche**

Dans cette partie, nous présentons les objectifs de la recherche, les problèmes de la recherche, le contexte de la recherche ainsi que le modèle général de la proactivité élaboré pour analyser la proactivité au travail des cadres hospitaliers. Les hypothèses de recherche sont investiguées à travers trois études empiriques. Dans cette partie, nous présentons brièvement le détail de ces études.

## **Partie 3 : Etudes empiriques**

### **Chapitre 1 : Etude 1 : Relation entre les caractéristiques du travail, le comportement innovant et la performance au travail des cadres hospitaliers : l'habilitation psychologique et le comportement proactif au travail comme médiateurs séquentiels sont-ils vraiment importants ?**

Bindl et Parker (2010) proposent un modèle intégratif permettant d'expliquer le processus d'activation du comportement proactif au travail et d'analyser les conséquences au niveau individuel, de l'équipe ou au niveau organisationnel. Ce modèle est considéré comme l'un des modèles théoriques de référence permettant d'analyser et de comprendre le comportement proactif au travail. Cependant, à notre connaissance, à ce jour, la structure générale de ce modèle – avec les antécédents, les processus cognitifs motivationnels, le comportement proactif et les conséquences de la proactivité – n'a toujours pas été testée. En effet, les chercheurs qui étudient le comportement proactif au travail s'intéressent majoritairement à l'analyse des antécédents de la proactivité. De plus, les recherches sur les antécédents et les conséquences de la proactivité sont bien souvent réalisées dans des études



indépendantes. L'objectif de cette étude est de tester la structure générale de la proactivité telle que proposée par Bindl et Parker (2010) afin d'étudier et de comprendre la proactivité au travail des cadres hospitaliers. Nous examinons le rôle des antécédents distaux (caractéristiques du travail) et proximaux (l'habilitation psychologique), ainsi que quelques conséquences du comportement proactif (comportement d'innovation et performance au travail). Dans cette étude, nous posons l'hypothèse de l'existence d'une médiation séquentielle de l'habilitation psychologique et de la proactivité au travail dans la relation entre l'autonomie, la variété du travail et la performance au travail et le comportement d'innovation au travail. Nous avons réalisé une étude transversale auprès de 321 cadres hospitaliers travaillant dans un hôpital français. Les résultats confirment l'existence d'une médiation séquentielle totale entre l'autonomie, la variété du travail et le comportement innovant par l'habilitation psychologue et la proactivité au travail. L'analyse des effets indirects montre une médiation séquentielle partielle entre l'autonomie, la variété du travail et la performance au travail. Les résultats de cette étude permettent de comprendre le mécanisme par lequel les caractéristiques du travail peuvent contribuer à la mise en œuvre du comportement d'innovation et à la performance au travail des cadres hospitaliers. De plus, ces résultats soulignent l'importance de l'état psychologique des cadres hospitaliers dans l'activation de leur comportement proactif au travail.

## **Chapitre 2: Etude 2: Le comportement proactif au travail a-t-il des effets positifs dans le temps sur la qualité de vie au travail (QVT), le comportement d'innovation ainsi que la performance au travail ? Une étude par panel réalisée auprès de cadres hospitaliers travaillant au sein d'un hôpital français**

Dans cette étude, nous analysons les effets dans le temps du comportement proactif sur des indicateurs de QVT (satisfaction au travail, stress) et d'efficacité au travail (innovation et

performance au travail). De plus, nous étudions le rôle des processus cognitifs motivationnels « sentiment de capacité » et « émotions positives » comme des antécédents proximaux du comportement proactif. Premièrement, nous posons l'hypothèse que le sentiment de capacité ainsi que les émotions positives contribuent à activer le comportement proactif au travail. Puis, nous faisons l'hypothèse que la proactivité au travail à son tour a des effets à long terme sur les indicateurs de QVT et d'efficacité au travail même après une période de six mois. Une étude par panel avec deux temps de mesure a été réalisée auprès de 152 cadres hospitaliers travaillant dans un hôpital français (six mois entre chaque recueil de données). Les résultats confirment la relation positive entre les processus cognitifs motivationnels (sentiment de capacité, émotions positives) et le comportement proactif au travail. Aucune relation n'a été trouvée entre le comportement proactif au travail et les indicateurs de QVT (satisfaction et stress au travail) et la performance au travail après une période de six mois. A l'inverse, les résultats révèlent l'existence d'une relation positive entre le comportement proactif au travail et le comportement d'innovation après six mois. Les résultats soulignent le rôle médiateur du comportement proactif au travail dans la relation entre les processus cognitifs motivationnels (sentiment de capacité, émotions positives) et le comportement d'innovation au travail. Ces résultats indiquent que les états psychologiques des cadres hospitaliers (sentiment de capacité, émotions positives) sont des antécédents déterminants dans l'activation de leur comportement proactif au travail et que leur comportement proactif au travail est associé à leur comportement innovant dans le temps.

### **Chapitre 3: Etude 3: Relation entre le sentiment de capacité, le comportement proactif au travail et la qualité de vie au travail des cadres hospitaliers**

Cette recherche s'intéresse à la relation entre le comportement proactif au travail et la QVT des cadres hospitaliers. Nous avons réalisé deux études auprès de 340 cadres de santé

travaillant dans des hôpitaux italiens. Dans la première étude, nous analysons la relation entre le sentiment de capabilité et le comportement proactif au travail. Puis, nous étudions la relation entre le comportement proactif au travail et plusieurs indicateurs de QVT (satisfaction, engagement affectif organisationnel, stress au travail). Nous examinons également le rôle médiateur du comportement proactif au travail dans la relation entre le sentiment de capabilité et les indicateurs de QVT. Dans l'étude 2, nous étendons les résultats de l'étude 1, afin d'examiner l'effet modérateur de la qualité des échanges avec le supérieur dans la relation directe entre la proactivité au travail et l'engagement affectif organisationnel et dans la relation indirecte entre le sentiment de capabilité et l'engagement affectif organisationnel au travers de l'interaction entre la proactivité au travail et la qualité des échanges avec le supérieur. Les résultats de l'étude 1 montrent une relation positive entre le sentiment de capabilité et le comportement proactif au travail. Le comportement proactif au travail est significativement lié à tous les indicateurs de QVT. Les résultats de l'étude 1 indiquent que la relation entre le sentiment de capabilité et la satisfaction au travail ainsi que le stress est partiellement médiée par le comportement proactif au travail. Les résultats révèlent également que la relation entre le sentiment de capabilité et l'engagement affectif organisationnel est totale médiatisée par le comportement proactif au travail. Les résultats de l'étude 2 montrent que l'interaction entre le comportement proactif au travail et la qualité des échanges avec le supérieur contribue à renforcer l'engagement affectif organisationnel. L'effet indirect conditionnel entre le sentiment de capabilité et l'engagement affectif organisationnel est également renforcé par l'interaction entre la proactivité au travail et la qualité des échanges avec le supérieur. Pour aller plus loin, ces résultats indiquent que le comportement proactif au travail des cadres contribue à promouvoir leur QVT et que cette relation peut être renforcée par des facteurs contextuels.

#### **Partie 4: Discussion générale**

Au travers des études réalisées, nous analysons le rôle de quelques antécédents et conséquences du comportement proactif au travail. Pour ce faire, différentes approches et méthodologies sont utilisées (études transversales, étude par panel, modèle de médiation, médiation séquentielle, médiation modérée, cadres travaillant dans un hôpital/différents hôpitaux) dans le but de mieux comprendre la formation du comportement proactif au travail des cadres hospitaliers, d'étudier les conséquences de ce comportement à un niveau individuel et d'analyser comment les effets du comportement proactif au travail peuvent être renforcés.

Les résultats de ces études contribuent à souligner l'importance des processus cognitifs motivationnels dans l'activation du comportement proactif au travail des cadres hospitaliers. Par exemple, les études 1, 2 et 3 révèlent l'existence de liens directs entre les processus cognitifs motivationnels et le comportement proactif au travail. De plus, les résultats de l'étude 1 montrent que les caractéristiques du travail (autonomie et variété du travail) sont liées de manière indirecte au comportement proactif au travail via l'habilitation psychologique. Pour aller plus loin, les résultats des trois études indiquent également que les processus cognitifs motivationnels ont des effets directs sur la performance au travail (étude 1), plusieurs indicateurs de QVT (étude 3) et peuvent avoir des effets positifs dans le temps sur tous les indicateurs de QVT et d'efficacité au travail (étude 2). Par ailleurs, ces résultats invitent à poursuivre les recherches sur les effets des processus cognitifs motivationnels sur les comportements au travail (comportement proactif, innovant, etc.), sur la performance au travail ainsi que sur les indicateurs de QVT des cadres hospitaliers.

Dans ce travail de recherche, l'utilisation de différentes méthodologies concourent également à démontrer que le comportement proactif au travail peut avoir des conséquences différentes. Par exemple, dans l'étude 1 et 2 - réalisées auprès d'un même échantillon -, les résultats indiquent qu'il existe une relation positive entre le comportement proactif au travail

et la performance au travail (étude 1) alors que dans l'étude 2 (effets dans le temps) aucune relation n'est observée entre le comportement proactif au travail et la performance au travail après six mois. De même, dans l'étude 2 (panel), aucune relation n'est trouvée entre le comportement proactif au travail et les indicateurs de QVT, alors que dans l'étude 3 (transversale), des relations positives sont trouvées entre le comportement proactif au travail et tous les indicateurs de QVT. Dans la mesure où les échantillons des études 2 et 3 sont différents, ces résultats peuvent aussi être dus à un effet de contexte ou à un effet de culture. D'une manière générale, les résultats des trois études offrent des perspectives intéressantes pour de futures recherches et confirment qu'il est également important d'utiliser des approches différentes pour étudier le comportement proactif au travail (Wu, Parker, Wu et Lee, 2017). Par conséquent, des recherches supplémentaires sont nécessaires pour confirmer et étendre les résultats de cette recherche.

## **Conclusion**

Pour conclure, les résultats des trois études permettent d'analyser le comportement proactif au travail des cadres hospitaliers. Premièrement, ils soulignent le rôle déterminant des processus cognitifs motivationnels dans l'activation du comportement proactif au travail des cadres hospitaliers. Deuxièmement, ces résultats révèlent que le comportement proactif au travail est un déterminant clé pour promouvoir le comportement d'innovation au travail des cadres hospitaliers, mais semble être moins déterminant pour favoriser leur performance au travail. Pour finir, les résultats montrent qu'il n'y a pas de relation entre le comportement proactif au travail et les indicateurs de QVT mesurés après six mois. Toutefois, les relations positives trouvées entre le comportement proactif au travail et tous les indicateurs de QVT dans l'étude 3 invitent à poursuivre les recherches sur la relation entre la proactivité au travail et la QVT. Ces résultats ouvrent de nombreuses voies de recherche pour analyser la proactivité au travail des cadres hospitaliers.

## **Contribution**

### **Long texts**

Pierre, L., & Battistelli, A. (2018). La qualité de vie au travail des managers. In A Casini, A Van Daele & C Hellemans (Eds.), *Bien-être et diversité des situations de travail. Pratiques organisationnelles et innovation* (Tome 3, pp. 209-221). Paris: L'harmattan.

Dal Santo, L., Lovato, S., Marognolli, O., Battistelli, A., Galletta, M., & Pierre, L. (2018). *Evaluer le concept de travail émotionnel dans le travail de soins. Une étude exploratoire menée auprès d'étudiants en soins infirmiers pendant les soins corporels du patient*. Manuscript submitted for publication.

### **Articles**

Pierre, L., Galletta, M., Gréard, N., Verdun-Esquer, C., & Battistelli, A. (2017). *Psychosocial risks in public hospitals: a literature review and a retrospective analysis of psychosocial risk factors among healthcare professionals*. Manuscript submitted for publication.

### *Articles from doctoral research*

Pierre, L., & Battistelli, A. (2018). *Relationship between job characteristics, innovative work behaviour, and job performance of hospital middle managers: Do psychological empowerment and proactive work behaviour as sequential mediators really matter?* Manuscript in preparation.

Pierre, L., & Battistelli, A. (2018). *Does proactive work behaviour lead to positive outcomes on quality of work life, innovative work behaviour, and job performance over time? A panel study among hospital middle managers working in a French hospital*. Manuscript in preparation.

Pierre, L., & Battistelli, A. (2018). *Relationship between role breadth self-efficacy, proactive work behaviour, and hospital middle managers' quality of work life*. Manuscript in preparation.

### **Oral presentations**

Lhospital, O., Pierre, L., Garrigou, A., Lagabrielle, C., & Battistelli, A. (2016, october). *Understanding organizational efficiency by understanding work activity in medication errors*. Paper presented at the 5<sup>th</sup> Congress HEPS, Toulouse, France.

Pierre, L. (2017, june). *Antécédents et effets de la proactivité sur la qualité de vie au travail et l'efficience des cadres hospitaliers*. Oral presentation at the 7<sup>ème</sup> Junior Colloque du Réseau de Recherches en Psychologie du travail et des Organisations, Bordeaux, France.

Pierre, L., & Battistelli, A. (2018, june). *Job autonomy and excessive workload are they good predictors of proactive work behaviour? What is the role of positive emotions at work in this relationship?* Paper presented at the 29<sup>th</sup> International Congress of Applied Psychology (ICAP), Montreal, Quebec.

Pierre, L., & Battistelli, A. (2018, july). *Rôle des processus cognitifs motivationnels dans l'activation des comportements proactifs et effets de la proactivité sur l'innovation au travail*. In L. Pierre (Chair) & G. Déprez (Chair), *Le comportement d'innovation au travail : analyse des facteurs antécédents et conséquents d'un construit essentiel aux organisations*. Symposium conducted at the XX<sup>ème</sup> congrès de l'Association Internationale de Psychologie du Travail de Langue Française (AIPTLF), Bordeaux, France.

## **Paper presentations**

Pierre, L., & Battistelli, A. (2016, july). *La qualité de vie au travail des managers*.  
Poster presented at the XIX<sup>ème</sup> congrès de l'Association Internationale de Psychologie du Travail de Langues Françaises (AIPTLF), Bruxelles, Belgium.

Pierre, L., & Battistelli, A. (2018, june). *Do role breadth self-efficacy and problem prevention mediate the relationship between job resources and performance/innovation?*  
Poster presented at the Institute of Work Psychology International Conference, Sheffield, United Kingdom.



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## Abbreviations and symbols

ANACT	Agence Nationale pour l'Amélioration des Conditions de Travail
FHF	French Hospital Federation (i.e., <i>Fédération Hospitalière de France</i> )
HAS	French National Authority for Health (i.e., <i>Haute Autorité de Santé</i> )
HR	Human resources
HRM	Human resource management
JAWS	Job-Related Affective Well-Being Scale
LMX	Leader–member exchange
OCB	Organizational citizenship behaviour
POB	Prosocial organizational behaviour
QVT	Qualité de vie au travail
QWL	Quality of work life
RBSE	Role breadth self-efficacy
RQ	Research question
WDQ	Work Design Questionnaire
AIC	Akaike information criterion
BIC	Bayesian information criteria
CFA	Confirmatory factor analysis
CFI	Comparative fit index
<i>Df</i>	Degrees-of-freedom
ML	Maximum likelihood
SEM	Structural equation modelling
SD	Standard deviation
RMSEA	Root mean square error of approximation
SRMR	Standardized root mean square residual
TLI	Tucker–Lewis Index
$\chi^2$	Chi-squared statistic
$\Delta\chi^2$	Chi-squared difference
A	Cronbach's alpha
B	Standardized regression coefficient
R	Correlation coefficient



## INTRODUCTION

### General context of the research

For more than 20 years, public healthcare institutions have been subject to major changes in terms of new standards and procedures, methods of financing, financial and human-resources management strategies, infrastructure and equipment, and medical techniques (e.g., mergers; reorganization of poles, services, and sectors; regional hospital groups; fee-for-service; outpatient surgery; patient path optimization; downsizing; hiring freezes; wage freezing) (Boya, Demiral, Ergor, Akvardar, & De Witte, 2008; Burke, Ng, & Wolpin, 2015; Mousazadeh, Jannati, Jabbari Beiramy, AsghariJafarabadi, & Ebadi, 2013; Spurgeon, Cooper, & Burke, 2012). These measures have taken aim at reducing hospital deficits, controlling public health expenditure, and modernizing healthcare systems and treatment offers while improving their performance – overall, providing effective patient care.

The law on the modernization of the health systems that was supported by the French government (2015–2017) planned on saving €3 billion over three years, and was applicable to all French healthcare institutions. In this three-year plan, it was expected that controlling the payroll costs alone would save around €860 million, the equivalent of 22,000 jobs in hospitals. More recently, the 2018 budget proposal supported by the government planned to save €1.6 billion in 2018 alone. These new reforms encourage institutions to review their organizational methods. They are intended to lead to new performance-based operating schemes and have a strong impact on the organization of work, modes of governance, and hospital financing (Damart & Kletz, 2014).

On the other hand, this economic context also pushes public healthcare institutions to pursue complex objectives, sometimes irreconcilable, in order to become competitive, efficient, and profitable. In 2017, the French Hospital Federation (*Fédération Hospitalière de France* [FHF]) pointed out that these reforms and cost savings targets have serious

consequences for hospitals, which are “held hostage between the quality of care they must provide to patients, preservation of the working conditions, employment of the hospital teams, and the obligation to restore balance to accounts”. Indeed, this race for innovation, performance, and profitability has profoundly modified the functioning of hospitals and has changed the activity of all hospital staff (i.e., administrative, healthcare, socio-educational, medico-technical, technical). These transformations have altered the organization of work, changed the working conditions of hospital staff, and generated new risks for staff health and safety (Borteyrou, Truchot, & Rascle, 2009; Estryn-Behar et al., 2007; Mudaly & Nkosi, 2015; Safy-Godineau, 2013; Sorensen & Brahe, 2014). They have also created new risks for quality of care (Boya et al., 2008; Burke et al., 2015; Mousazadeh et al., 2013; Spurgeon et al., 2013; Tanaka et al., 2010).

Since 2010, French public healthcare institutions have realized the importance of preserving the occupational safety and quality of work life (QWL) of hospital staff. Correlations have been demonstrated between QWL and the quality and safety of care (Armstrong & Laschinger, 2006; Brunelle, 2009; Havens & Aiken, 1999; Kramer, Brewer, & Maguire, 2013; Poghosyan, Clarke, Finlayson, & Aiken, 2010; Smith, 2011). This evidence has led the French National Authority for Health (*Haute Autorité de Santé* [HAS]), and the government to include QWL as a top priority in healthcare institutions. This prioritization is evident in such events as the HAS certification for QWL in 2014 and the government’s launch of the national strategy to improve the QWL of healthcare professionals in 2016, “taking care of those who take care of us”.

### **Problem statement**

In this context, healthcare institutions are trying to modify their organizations. However, because of the economic constraints, a number of resources that were previously available are not available anymore (Brami, Damart, & Kletz, 2013). The implementation of

actions to improve the QWL in hospitals has become increasingly difficult, and actions often remain limited or insufficient.

Furthermore, despite the growing attention given to the concept of QWL in healthcare institutions (Almalki, Fitzgerald, & Clark, 2012; González-Baltazar et al., 2015; Kelbiso, Belay, & Woldie, 2017; Moreno, Aranda, Preciado, & Valencia, 2010; Nayak & Sahoo, 2015), it is important to notice that most initiatives taken or studies conducted have focused primarily on the QWL of healthcare workers. Specifically, the majority of attention has been given to the QWL of nursing personnel, because they work closer to patients and families and are at the first stage in the process of nursing (e.g., providing care, identifying medication errors). The quality and safety of care is largely dependent on their work.

Often overlooked in literature and interventions, it should be emphasized that the recent changes introduced in hospitals have also altered the working conditions and the QWL of hospital middle managers. Hospital middle managers are often pointed out as being responsible for the poor or deteriorating QWL of their staff members, while their QWL is neglected. These personnel (i.e., healthcare, administrative, socio-educational, medico-technical, technical) are key components of the functioning of hospitals. They are responsible for organizing care and services in a relevant and efficient way, and they are also responsible for creating motivating work environments. They make the links between the top management of healthcare institutions, the various departments, and the different teams. They manage their teams and operationalize the reforms and changes decided by the government and top management. Thus, hospital efficiency and quality of care strongly depend on their ability to manage, innovate, and carry out change and to find solutions to problems. As De Singly (2009) points out, the new challenge of the efficiency of public healthcare institutions can be solved only by fully involving hospital managers: that is to say, all those who are in a position to conceive, federate, pilot, and decide on solutions in healthcare organizations.

Due to their hierarchical position, hospital managers' QWL – as well as their innovative behaviour – seems to be particularly important to consider for the efficiency of healthcare institutions. Unfortunately, the research, interventions, and discussions of solutions to preserve the QWL of hospital middle managers seem to be lacking in the literature. To our knowledge, few studies have yet been conducted with hospital managers (Laschinger, Purdy, & Almost, 2007). However, because of their important role, it is essential to identify new ways to preserve the QWL and work efficacy of these personnel.

As a result of the lack of findings in the literature on this topic, the principal objective of this doctoral research is to investigate the potential benefit of certain factors to enhance hospital middle managers' QWL and their effectiveness at work.

### **Thesis assumptions**

As mentioned previously, because of economic priorities and competition for innovation and performance, some healthcare institutions have failed in their objective of promoting well-being and safety in the workplace. For instance, to achieve their new objectives and to continue to respond to growing demand for care, hospital middle managers – like all other hospital personnel – are asked to do more (e.g., to treat more patients, to work faster, to innovate, to be creative, to provide care and quality service, to find solutions to problems, to work efficiently) while having less means (financial, human). In the literature, it is increasingly recognized that this work context generates higher levels of stress, alters well-being, and reduces efficacy at work of hospital personal.

However, several models have highlighted the importance of having resources available in order to cope with job demands and stressful work contexts (Bakker & Demerouti, 2007; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Hobfoll, 1988; Karasek, 1979; Lazarus & Folkman, 1984) and to reduce psychological costs due to work

demands (Bakker, Demerouti, De Boer, & Schaufeli, 2003). Hobfoll (1989) defines resources “as objects, personal characteristics, conditions, or energies that are valued by the individual” (p. 516). For instance, scholars have demonstrated that having job resources available are particularly relevant to fostering well-being, improving individual performance, and helping employees to achieving their professional goals (Demerouti et al., 2001; Hackman & Oldham, 1976). This means that organizations should provide resources in work environments (e.g., efficient organization of the work, opportunities to develop, training courses) and sufficient job resources (e.g., social support, feedback, autonomy) (Tims, Bakker, & Derks, 2012; Warshawsky, Havens, & Knafl, 2012), which they do not always do. Indeed, as Bakker, Bakker, Tims and Derks (2012) have stated, when organizations are confronted with economic constraints, they may set other priorities than providing resourceful work environments to their employees. Further, the literature highlights that when job resources from organization are not available (Hobfoll, Johnson, Ennis, & Jackson, 2003), individuals often try to compensate for this lack of resources by using or relying on other resources (Hobfoll, 1989).

Recent studies have demonstrated that individuals can use personal resources (e.g., positive evaluation of self, experience, individual traits, abilities, behaviours) or personal strategies to protect themselves and their well-being and to maintain their performance, commitment, and job satisfaction (Judge, Van Vianen, & De Pater, 2004; Luthans & Youssef, 2007; Warshawsky et al., 2012). The literature indicates that personal resources refer to individuals’ abilities to control and impact their environment during challenging circumstances (Hobfoll et al., 2003). As Bakker et al. (2012) specify, it is important that employees mobilize their resources when faced with challenging work. In addition, scholars have suggested that when job resources are lacking, individuals can rely on personal resources by (a) changing the way they see the situation (cognitive changes) or (b) engaging in physical

changes. Bakker et al. (2012) have further argued that “employees may actively change the design of their jobs by choosing tasks, negotiating different job content, and assigning meaning to their tasks or jobs. This process of employees shaping their jobs has been referred to as ‘job crafting’ ” (p. 1361). They suggest that individuals engage in physical changes such as job crafting – which is considered a proactive behaviour (Tims et al., 2012; Wrzesniewski & Dutton, 2001) – to increase job resources (structural and social), decrease hindrances of job demands, take control over certain aspects of their work in order to give meaning to their work, fulfil their basic human needs, and create conditions in which they can work healthily and be stimulated at work. For example, when employees engage in physical changes such as proactive job crafting behaviours, they refuse to rely passively on solutions proposed by others, solutions that might be inadequate or never come. Rather, they actively try to find the right balance between job demands and job resources (Bakker & Demerouti, 2014; Tims et al., 2012). Furthermore, they actively work to identify new strategies, work methods, and resources that may be able to help them to face or decrease job demands and stressors in order to promote their performance and preserve their health and well-being at work.

For this reason, Bakker et al. (2012) have indicated that, when resources from superiors or organizations are lacking, “under such conditions, it may be particularly important for employees to mobilize their own resources and to show proactive behaviour” (p. 1360). Based on prior findings, proactive work behaviour is considered in this thesis as an important individual resource that can help hospital middle managers cope with growing demands while having less means available. We make the assumption that hospital middle managers’ proactive work behaviour could promote their QWL, as well as encouraging innovative work behaviour and job performance.

## **Research goal**

The main research aim of this thesis is to investigate the potential role of proactive work behaviour of hospital middle managers in enhancing their QWL and other behavioural outcomes, such as innovative work behaviour and job performance. We divide this main goal into three sub-objectives.

1. We aim to provide a general overview of the proactivity literature, in order to clarify this concept and depict how proactivity may be relevant in fostering hospital middle managers' QWL and effectiveness at work.
2. Due to the growing impoverishment of healthcare institutions' resources (i.e., financial, human), we suggest that the adoption of proactive work behaviours could be a protective behaviour (resource) that would allow hospital middle managers to continue to work, innovate, and perform well while maintaining their health and well-being at work. However, as Briner and Rousseau (2011) point out, to promote, facilitate, support, and consolidate proactivity and innovation, it is necessary to know the determining factors, so as to define an integrated strategy of human resources (HR) management at all levels. Based on the existing literature, we proposed and tested a research model of proactive work behaviour from antecedents to consequences to build knowledge on the mechanisms leading to hospital middle managers' proactive behaviours. In this thesis, we focus on the analysis of few antecedents and consequences that seem pertinent to understanding hospital middle managers' proactivity behaviour (from antecedents to individual consequences).
3. Finally, we conducted additional studies and used different methodologies (cross-sectional, panel) with the intention to analyse whether our assumptions of a positive relationship between proactive work behaviour and QWL indicators, including job performance and innovative work behaviour, were confirmed or rejected.

This research contributes to the proactivity literature in several ways. First, it is important to notice that despite the extensive literature on proactivity, most studies have focused on ways to promote proactive behaviour. Furthermore, analysis of the consequences of proactive behaviour has been neglected for a while. Moreover, analysis of antecedents and consequences has been offered through independent studies. Therefore, we have proposed a research model and conducted an empirical study to fill this gap and to gain deeper understanding of both the underlying mechanisms of proactivity and its outcomes. To our knowledge, we are the first to examine distal antecedents, cognitive motivational states, and proactive work behaviour outcomes in a single study. Secondly, in the literature, little attention has been devoted to the proactivity of leaders. In this thesis, by focusing on hospital middle managers' proactive work behaviour, we worked to close a gap identified in the literature. Additionally, this thesis adds knowledge to the current proactivity literature by testing one of the main theoretical models of proactivity proposed by Bindl and Parker (2010), which has not been done until now. Finally, by analysing the consequences of proactive work behaviour on QWL, we also answer a recent call for more research on the consequences of proactivity for well-being and health at work (Cangiano & Parker, 2016; Liu, Tangirala, Lee, & Parker, 2016).

### **Design of thesis**

This thesis is structured in four main parts: a theoretical part, a research framework part, an empirical part, and a general discussion and conclusion part.

The theoretical part is divided into three chapters. In Chapters 1 and 2, we present a brief review of the concept of proactivity. Most specifically, in Chapter 1 we present information to clarify the general concept of proactivity (e.g., definition, goal, theories, manifestations) and discuss previous findings. In Chapter 2, we focus on the specific form of



proactive behaviour called *proactive work behaviour*. In Chapter 3, we briefly review the concept of QWL. Additionally, we examine the relationship between proactive work behaviour and QWL indicators.

In the research framework part, we discuss the research problem and introduce the research questions (RQs) and objectives. We then present the general research model. In this part, we also outline the design of the three empirical studies conducted.

The empirical work is presented in the third part of this thesis, comprised of three chapters, one for each study conducted. We conducted two studies on a sample of French hospital middle managers working in the same hospital. Additionally, to extend knowledge on the proactivity outcomes, we conducted a study on a sample of hospital nurse middle managers working in different hospitals in Italy. In Chapter 1, we present the first study (Study 1). Here, we investigate in one research model the antecedents, motivational states, and consequences of proactive work behaviour as proposed by Bindl and Parker (2010). The aim of this study was to better understand how hospital middle managers' proactive work behaviour can be activated and to investigate its outcomes. In Chapter 2, to investigate the hypothesis that proactive work behaviour can be a resource to enhance hospital middle managers' QWL as well as their effectiveness at work, we conducted a panel study to analyse the effects of proactive work behaviour on QWL indicators and indicators of job effectiveness after a period of six months (Study 2). In Chapter 3, in order to continue to improve the knowledge on the relationship between proactive work behaviour and QWL, we conducted a study among Italian hospital nurses' middle managers (Study 3) and extended the findings in a complementary model.

In the last part of this thesis, we discuss key findings and the contribution of the three studies in order to answer the general RQ proposed in the research framework. Theoretical implications and future directions for research are also discussed.

## **PART 1: THEORETICAL FRAMEWORK**

This part aims to clarify the concept of proactivity in order to have a better understanding of how this behaviour occurs and to identify the main outcomes related to it. In this part, we intend to provide an explanation of this concept by answering to several questions: *What is proactivity? Who is proactive? What motives an employee to be proactive? How is proactive behaviour manifested? How can employee proactive work behaviour be fostered? What are the consequences of proactive work behaviour?* Specifically, in Chapter 1, we provide a brief literature review on proactivity to explain how this behaviour is conceptualized. Additionally, we explain the process by which an individual engages in proactive behaviour. In Chapter 2, we focus on the category of proactive work behaviour. Specifically, we identify the most pertinent antecedents identified in the literature to explain employees' proactive work behaviour. To complete this chapter, we also analyse the main outcomes related to proactive work behaviour. Then, in Chapter 3, we briefly attend to the relationship between proactive work behaviour and QWL.

## **Chapter 1: Literature review on proactivity**

In past decades, employees were seen as passively fulfilling their tasks and following instructions from top managers (Campbell, 2000; Locke & Latham, 2002; Parker & Wang, 2015). Things have changed. Since the 1950–1960s, the economic and industrial revolution introduced wide changes in the working environment. Due to organizational transformation, innovation, and modernization, the nature of work has changed. As an immediate consequence, employees' behaviours, attitudes, and beliefs have changed as well, and their expectations have risen (Caker & Siverbo, 2014; Grant & Parker, 2009).

Employees no longer act like spectators and no longer fulfil only their prescribed tasks. Instead, they now play roles as active actors and sculptors of their working environment. For instance, they negotiate job tasks with superiors (Ilgen & Hollenbeck, 1991), bargain for job boundaries (Wrzesniewski & Dutton, 2001), work actively to influence and modify their work environments, and revisit and improve their tasks (Staw & Boettger, 1990). Additionally, the literature indicates that they think, plan, organize, and implement ideas in order to introduce change. Employees also try to adapt procedures and work to match with their own preferences, personal goals, skills, and values (Crant, 2000; Grant & Parker, 2009; Parker, 1998; Parker & Wang, 2015; Staw & Boettger, 1990) for greater effectiveness. As Grant and Ashford (2008) state, they “actively change, shape, expand, and use their roles as resources” (p. 7).

In the 1990s, scholars began to focus on these particular behaviours in organizations (Spychala, 2009), and the literature began to mention the concept of “*proactivity*”.

## **1. Proactivity: A new resource in organizations**

### **1.1 Proactivity: A concept with several definitions**

There is a growing body of literature on the concept of proactivity in the workplace (Fuller, Marler, & Hester, 2012). Scholars agree that proactivity at work is a resource in organizations (Crant, 2000; Parker, 2000). However, there are several definitions of this concept and theories, and there are several ways to assess this organizational behaviour (Crant, 2000). Despite this variance, scholars have worked to clarify the concept of proactivity and have come to a global consensus on its definition (Table 1).

“Proactivity” refers to all actions that employees implement in order to introduce change. Proactive behaviour is not prescribed behaviour, nor reactive or passive behaviour. Rather, individuals act in advance before events occur and anticipate future outcomes. Proactivity refers to behaviour that is self-initiated, future-focused, and aimed at introducing change for oneself, the team, or the organization (Bindl & Parker, 2010, Bindl et al., 2012; Frese & Fay, 2001; Grand & Ashford, 2008; Parker, Bindl, & Strauss, 2010; Parker & Wang, 2015; Wu & Parker, 2011). Literature indicates that this behaviour is self-initiated because employees act on their own initiative (Bindl & Parker, 2010; Frese & Fay, 2001; Parker, et al., 2010) without waiting for guidelines or directions from superiors (Crant, 2000; Griffin, Neal, & Parker, 2007; Parker, 1998). Likewise, it is a way of behaving (Wu & Parker, 2011) in which employees envision the future and try to improve things such as their work methods or influence organizational strategies.

In summary, scholars have suggested that proactivity is a conscious behaviour in which employees think, plan, anticipate, and take control of a situation to implement changes and improve the status quo (Grant & Ashford, 2008; Parker et al., 2010) rather than waiting for something to happen.

**Table 1.** Definition of the concept of proactive behaviour, proactive personality

Authors	Definition
Frese, Kring, Soose, & Zempel (1996)	“Behavior that is self-starting (doing something without being told or without an explicit role requirement), proactive (having a long-term focus and anticipating future problems or opportunities), and persistent (overcoming barriers to bring about change)”.
Crant (2000)	“Taking initiative in improving current circumstances; it involves challenging the status quo rather than passively adapting present conditions” (p. 436).
Unsworth & Parker (2003)	“Proactivity is about being self-starting and change-oriented in order to enhance personal or organizational effectiveness, such as by making improvements to work procedures or using one’s initiative to solve a problem” (p. 5).
Parker, Williams, & Turner (2006)	“Self-initiated and future-oriented action that aims to change and improve the situation or oneself” (p. 636).
Griffin, Neal, & Parker (2007)	“Proactivity, describes the extent to which individuals engage in self-starting, future-oriented behavior to change their individual work situations, their individual work roles, or themselves” (p. 332).
Grant & Ashford (2008)	“Proactive behavior refers to anticipatory action that employees take to impact themselves and/or their environments” (p. 4).
Parker, Bindl, & Strauss, (2010)	Proactivity is defined as “taking control to make things happen rather than watching things happen. It involves aspiring and striving to bring about change in the environment and/or oneself to achieve a different future” (p. 828).
Bindl & Parker (2010)	“Self-directed and future-focused action in an organization, in which the individual aims to bring about change, including change to the situation (e.g., introducing new work methods, influencing organizational strategy) and/or change within oneself (e.g., learning new skills to cope with future demands)” (p. 4).
Yin, Xing, Li & Guo (2017)	“Proactive behavior also referred as personal initiative or proactivity, is a specific form of work motivation. It can be defined as self-starting, anticipatory, long-term oriented and persistent work behaviors of individual employees” (p. 3).

## **1.2 Proactive behaviour and other related concepts**

The concept of proactive behaviour is often conflated with those of other organizational behaviours, such as organizational citizenship behaviour (OCB) and prosocial organizational behaviour (POB). Organizational citizenship behaviour refers to “individual behaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization” (Organ, 1988, p. 4), while POB refers to “positive acts carried out to produce and maintain the well-being and integrity of others” (Brief & Motowidlo, 1986, p. 1). However, literature reveals that even if these two concepts are sometimes related to proactivity (e.g., volunteer behaviours, going beyond assigned tasks, aiming to create safety, contributing to organization effectiveness) (Morrison & Phelps, 1999), they remain different (Belschak & Den Hartog, 2010; Bolino, Valcea, & Harvey, 2010; Curcuruto, Conchie, Mariani, & Violante, 2015; Grant & Ashford, 2008; Li, Frese, & Haidar, 2017). Not all OCB or POB can be categorized as proactive behaviour (Bolino et al., 2010) because contrary to proactive behaviour, an OCB can be a passive, adaptive, or reactive behaviour (Belschak & Den Hartog, 2010; Parker, 1998). Furthermore, proactive behaviour seems to be more turned towards challenges and creating change in the workplace, and less to individual social relationships, while POB or OCB seem to be more attuned to cooperation and helping others (i.e., collective objectives) (Curcuruto et al., 2015).

## **1.3 Characteristics of proactive employees and non-proactive employees**

Scholars have stated that there are three kinds of employees in an organization: those who make things happen, those who watch things happen, and those who wonder what happened (Parker & Bindl, 2017). Proactive employees are considered to be those “who make

things happen” instead of remaining inactive and “watching things happen” (Parker et al., 2010).

In the literature, proactive employees are often depicted as the best performing employees for several reasons. First, proactive employees perform their core tasks better than others do (Bindl & Parker, 2010; Fay & Frese, 2001; Parker & Collins, 2010; Thompson, 2005; Unsworth & Parker, 2003). Additionally, the literature indicates that these people are also long-term focused, self-starting, and change-oriented (Wu & Parker, 2011), and they actively work to introduce changes to improve things (Bateman & Crant, 1999; Strauss, Griffin, & Rafferty, 2009).

Second, proactive employees often feel responsible for their organization’s failures and successes. Consequently, they make additional efforts and are highly involved in their job in order to contribute to their organization’s success (Campbell, 2000). For instance, they are highly engaged in the organization’s strategy processes and work to help to identify potential strategic opportunities or threats (Strobel, Tumasjan, Spörrle, & Welppe, 2017). They make efforts to implement constructive ideas, solve problems, and improve work methods, and they try to work efficiently (Li, Fay, Frese, Harms, & Gao, 2014; Parker et al., 2006; Strauss, Griffin, Parker, & Mason, 2015). They also actively try to acquire new skills and knowledge to cope with future demands (Grant & Ashford, 2008; Sonnentag, 2003).

Third, they are more persistent in overcoming barriers and obstacles (Frese & Fay, 2001; Speier & Frese, 1997). Fourth, these employees use routines or negative job demands as resources and make additional efforts to create efficient working conditions (Bolino et al., 2010; Feldman & Pentland, 2003). Fifth, proactive employees are proactive in various contexts and remain proactive over time regardless of opportunities (Bindl & Parker, 2010). Finally, the literature emphasises that proactive employees are not impulsive, but rather are reflective people who first think, calculate, and analyse whether their suggestions or actions

will have favourable impacts (Grant & Ashford, 2008; Parker, Williams, & Turner, 2006). Furthermore, they deliberately analyse the implicit or explicit cost-benefit of actions in order to foresee whether these actions will be successful or harmful. They engage in change only when they determine that their proactive actions will have a high return and low risk.

On the other hand, the literature indicates that non-proactive employees tend to adopt passive behaviour, take little initiative, and do not seek to influence things or their work environment (Bateman & Crant, 1993). Conversely, they prefer to rely on others, passively adapt to situations, and endure events. They can absorb knowledge, abilities, and skills through training, but they wait for opportunities to be offered. Bateman and Crant (1993), in speaking about the proactive personality, stipulate that a person who is not proactive only tries to maintain, goes with the flow and passively hopes for changes. For example, faced with a difficult situation, a non-proactive employee will remain passive, whereas a proactive employee will actively take control and try to introduce change (Parker & Liao, 2016). Parker and Liao (2016) have suggested that non-proactive people seem to be passive for several reasons. First, they believe that they might fail, make mistakes, or not succeed. Second, they believe that making suggestions, implementing ideas, or introducing change is too risky. Third, they seem to be more passive because they think things are not their responsibility or feel disengaged at work.

Additionally, the difference between proactive and non-proactive employees' actions can also stem from their positions in the organization. The literature indicates that, generally, employees with more power tend to be more proactive than employees with less power (Morrison & Phelps, 1999) because they are more confident that they can introduce change and are less likely to be victims of organizational or group sanctions.



#### **1.4 Proactive employees' motivation to introduce change**

The literature indicates that employees can engage in proactive behaviours when there are no formal expectations by managers or their organization. They go beyond their normal work role and task requirements without the need for close supervision (Belschak, Den Hartog, & Fay, 2010), even when there is no personal benefit involved (Morrison & Phelps, 1999).

Employees can be stimulated to engage in proactive change for several reasons: for their own benefit, for their team's benefit, or for their organization's benefit (Den Hartog & Belschak, 2010; Grant & Ashford, 2008; Griffin, Neal, & Parker, 2007; Parker et al., 2010). The literature speaks about individual task proactivity (Griffin et al., 2007), or "pro-self" proactivity (Belschak & Den Hartog, 2010), when an individual engages in proactive behaviour directed toward himself (e.g., improving work role and tasks, changing procedures, achieving career goals) in order to be more effective at work, to learn new skills and knowledge (Morrison, 1993), to satisfy his ego or self-esteem, to gain rewards, or to adapt to work demands or environments.

Previous studies have underlined that proactive behaviour is not necessarily an individualistic behaviour – it can also be altruistic (Feldman & Pentland, 2003; Sonnentag, 2003). Scholars have found that employees can also engage in proactive behaviour for the profit of a team. Literature talks about team member proactivity (Griffin et al., 2007) or "pro-social" proactivity (Belschak & Den Hartog, 2010). Team member proactivity refers to an individual who engages in proactive actions to help the team or team members to work better (e.g., makes suggestions to improve the work process of the team, changes work methods that are ineffective).

In addition, the literature also states that individuals can engage in proactivity for an organization's benefit, referred to as organization member proactivity (Griffin et al., 2007) or

“pro-organizational” proactivity (Belschak & Den Hartog, 2010). In organization member proactivity, individuals engage in proactive behaviour in order to introduce positive changes for the organization (e.g., improve systems, practices, and policies), including improving the organization’s functioning or reducing errors and costs in order to increase the quality of the organization’s services and performance (Griffin et al., 2007).

## **1.5 Theories and approaches**

Despite the growing attention to proactive behaviour, no agreement has yet been reached on the operationalization of the concept of proactivity (Salanova & Schaufeli, 2008). In the literature, there are different schools of thought and theories concerning this concept (Crant, 2000).

### **1.5.1 Proactivity as a stable individual disposition**

Proactivity as a stable individual disposition has been widely studied (Bateman & Crant, 1993; Van Dyne & LePine, 1998). In this approach, scholars have focused on the influence of employees’ natural dispositions, such as cognitive abilities or personality, also called “proactive personality” (Bateman & Crant, 1999; Crant, 2000). In this theory, proactive people are seen as people who have the natural tendency to introduce change. Scholars have explained that proactive behaviour is innate and does not depend on contextual influences. For instance, they consider that people who are proactive (i.e., with proactive personality or personality traits) identify opportunities, introduce change, show initiative, and persevere until meaningful changes occur, while others (i.e., those without natural dispositions) are classified as relatively passive people (Bateman & Crant, 1993). Consistent with this statement, the literature has found a positive relationship between personality traits, proactive personality, and proactive behaviours (Fuller & Marler, 2009; Thomas, Whitman, & Viswesvaran, 2010)

such as proactive strategic behaviour (Parker & Collins, 2010) and proactive work behaviour (Parker et al., 2006, 2010).

However, this approach has been widely criticized in the literature due to its generalist and reductive nature (i.e., it categorizes people in two categories: proactive individuals with an innate tendency versus others). Scholars also abandoned this approach because dispositional antecedents such as personality traits or proactive personality are relatively stable, less malleable, and hard to change (Wu, Parker, & Bindl, 2013), which does not allow for the proposal of intervention to enhance the proactivity of employees. For this reason, the literature has mostly focused on situational factors that are seen as modifiable and that can be redefined by organizations and managers.

### **1.5.2 Proactivity as influenced by personal and situational determinants**

Bandura (1986, 2006) has indicated that individual behaviours are not fully determined by personal or situational determinants. Rather, individual actions are the product of reciprocal interactions between personal influences and situational determinants.

In line with Bandura's theory, there is a growing consensus that proactive behaviour is influenced not only by individual dispositions nor situational determinants, as other scholars have postulated (Fay & Frese, 2001; Morrison & Phelps, 1999). Rather, proactive behaviour is now thought to be "born and made" (Parker & Wang, 2015), which means that this behaviour depends on the interplay between individual dispositions and situational determinants (Farell & Strauss, 2013; Parker et al., 2006; Parker & Wu, 2014). This approach is also widely accepted in the proactivity literature because it allows scholars to propose practical implications in order to enhance employees' proactive behaviour. In this thesis, we also adopt the point of view that hospital middle managers' proactive behaviour can be influenced by both individual dispositions and situational determinants.

### 1.5.3 Proactivity as a goal process perspective

This third school of thought sees proactive behaviour as a goal-driven process (Bindl et al., 2012; Grant & Ashford, 2008; Parker et al., 2010) rather than a set of behaviours or a simple observable behaviour. In this approach, scholars consider proactive behaviour as a goal-oriented process that implies unobservable cognitive elements (Bindl et al., 2012) involving distinct phases.

Several models of the proactive goal-oriented process have been proposed in the literature to explain the different phases that occur before an individual engages in proactive behaviour. For example, Grant and Ashford (2008) proposed a model of proactive goal process with three main phases: *anticipation* (i.e., anticipate, imagine, think before, analyse costs and benefits), *planning* (i.e., plan action, develop alternative strategies if needed) and *action directed toward future impact* (i.e., apply a plan while considering the impact of these behaviours on the long term versus the short term). Recently, Bindl et al. (2012) have suggested a model with four phases: envisioning, planning, enacting, and reflecting. *Envisioning* refers to when an individual identifies things that can be changed and imagines ways to improve them. *Planning* refers to when an individual first envisions different plans and scenarios to know how to best implement changes. *Enacting* refers to when an individual engages and implements proactive behaviours, and *reflecting* is when an individual analyses the consequences of behaviours to understand success, failure, or future improvement.

Additionally, Parker et al. (2010) have classified the four phases identified by Bindl et al. (2012) into two main processes: *proactive goal generation* (envisioning and planning) and *proactive goal striving* (enacting and reflecting). Proactive goal generation refers to when employees allocate their time and energy across a range of behaviours or tasks in order to change themselves, others, or their environment (Parker et al., 2010), as well as when they make efforts to produce effective and novel ideas. By contrast, goal striving refers to the

psychological and behavioural mechanisms by which employees intentionally try to accomplish their proactive goals.

Altogether, the models developed in this third approach contribute to demonstrating that before employees engage in observable proactive behaviours, they must first pass through an unobservable psychological process in which they develop a thoughtful plan before engaging in proactive change (De Vos, De Clippeleer, & Dewilde, 2009; Raabe, Frese, & Beehr, 2007).

#### **1.5.4 Proactivity as a way to protect resources**

Hobfoll has stated (1989) that individuals are motivated to retain, protect, and build resources. Within the work context, the literature indicates that proactive behaviours can also be considered as a way to protect resources (Hobfoll & Shirom, 2000; Ng & Feldman, 2012; Parker, Johnson, Collins, & Nguyen, 2013; Strauss, Parker, & O’Shea, 2016) for both individuals and organizations (Bolino et al., 2010). As stated by Parker et al. (2013), employees engage in proactive behaviours to “exert control over the environment so as to gain new resources that equip them for future challenges” (p. 872). Proactive behaviours are also considered as a strategy to reduce discrepancies between the ideal and reality (Strauss et al., 2016). Furthermore, the literature indicates that employees can engage in proactive behaviours to cope with stressful situations, negative psychological states, or the threat of resource loss (Ellis, 2012) in order to protect themselves while remaining performing. Ellis (2012) stipulated that “to cope with this threat of resource loss, one may actively ‘invest’ in proactive behaviours, perhaps by seeking out learning opportunities that facilitate future performance. Therefore, investing resources may serve to mitigate further loss of resources and aid in acquiring future resources” (p. 22).

Unfortunately, this approach is limited because the literature does not specify what type of proactive behaviour helps individuals to protect resources. Furthermore, prior studies

have not distinguished when employees are proactive to protect resources (Strauss et al., 2016) from when they are proactive to improve themselves, teamwork methods, or their organizations' internal functioning.

### **1.6 Principal models of proactivity at work**

Proactivity is a complex behaviour with multiple causes and outcomes (Crant, 2000). In order to identify determinants of proactive behaviours as well as their consequences, several models have been proposed (Bindl & Parker, 2010; Crant, 2000; Fay & Frese, 2001; Fuller, Marler, & Hester, 2006; Grant & Ashford, 2008; Griffin et al., 2007; Morrison & Phelps, 1999; Parker et al., 2010; Parker & Wang, 2015; Parker et al., 2006; Unsworth & Parker, 2003; Wu & Parker, 2011; Wu et al., 2013). In these models, scholars have explored key antecedents of proactive behaviours. Recently, studies have begun to focus specifically on the analysis of the consequences of proactive behaviours (Cangiano & Parker, 2016; Strauss et al., 2009; Strauss et al., 2015).

Here, we present four main models of proactivity proposed in the literature (i.e., Crant, 2000; Parker et al., 2006; Bindl & Parker, 2010 and Cangiano & Parker, 2016):

- Crant (2000) has proposed a model that integrates both antecedents (individual and organizational) and consequences of proactivity. He proposes that individual differences (e.g., proactive personality, personal initiative, role breadth self-efficacy [RBSE]) and contextual factors (e.g., organizational culture, norms) are determinants that contribute to general proactive behaviours (e.g., identifying opportunities to improve things, challenging the status quo) and context-specific proactive behaviours (e.g., socialization, feedback seeking, issue selling). Furthermore, in this model, he integrates the consequences of proactive behaviours such as job performance, career success, job attitudes, and more. Unfortunately, as a principal limitation, it is important to note that this model remains theoretical and has not been tested.

In addition, Crant postulates direct relationships between antecedents and proactive behaviours, while recent studies have underlined the important role of cognitive motivational states as mediators in the relationship between distal antecedents and the activation of proactive behaviours (Bindl & Parker, 2010; Parker et al., 2010; Parker & Wang, 2015; Parker et al., 2006; Wu & Parker, 2011).

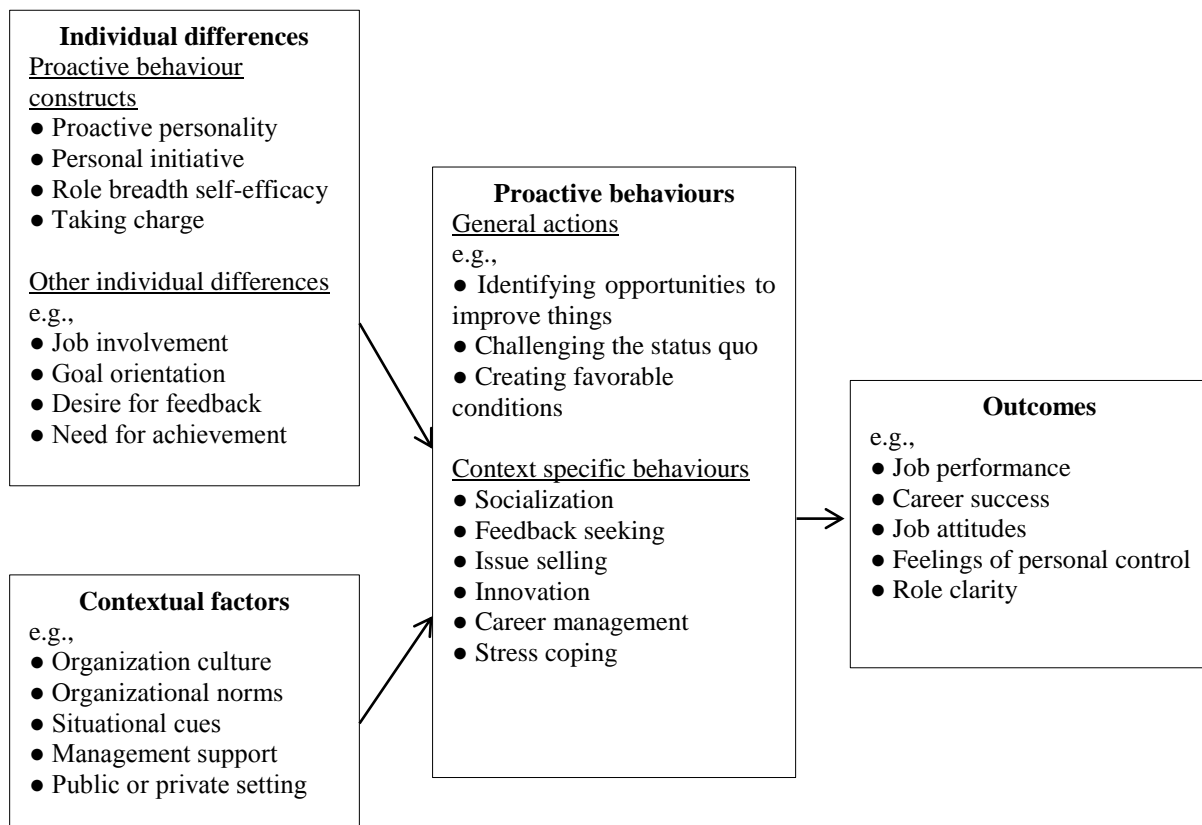


Figure 1. Integrative model of antecedents and consequences of proactive behaviour (Adapted from Crant, 2000; p. 438).

- Parker et al. (2006) have proposed one of the main reference models of proactive work behaviour. This is one of the first studies to focus on the mediating role of cognitive motivational states in the proactivity process. Previous studies focused only on the direct links between individual and situational determinants and proactive behaviours (Crant, 2000; Fay & Frese, 2001; Unsworth & Parker, 2003). Parker et al. integrated employee motivational states to explain proactive work behaviour in their model. Specifically, they analysed the effects of individual dispositions (e.g., proactive personality) and work environment (e.g., job

autonomy, co-worker trust, supportive supervision) on 282 wire makers' proactive work behaviour via the mediating role of four cognitive motivational states (e.g., RBSE, control appraisal). By integrating the role of psychological states in the proactivity process, they demonstrated that psychological mechanisms are also key determinants in explaining why an employee engages in proactive action.

Although Parker et al. (2006) model showed interesting results, it should be noted that their model also has limitations. They focused on the analysis of determinants of proactive work behaviour and analysed proactive behaviour as if it was at the end of the process. Unfortunately, they did not integrate the analysis of consequences of proactive work behaviour (e.g., job performance, creativity, job satisfaction). Such an addition would have been interesting and would have allowed an overview of the general proactive work behaviour mechanism from antecedents to consequences.

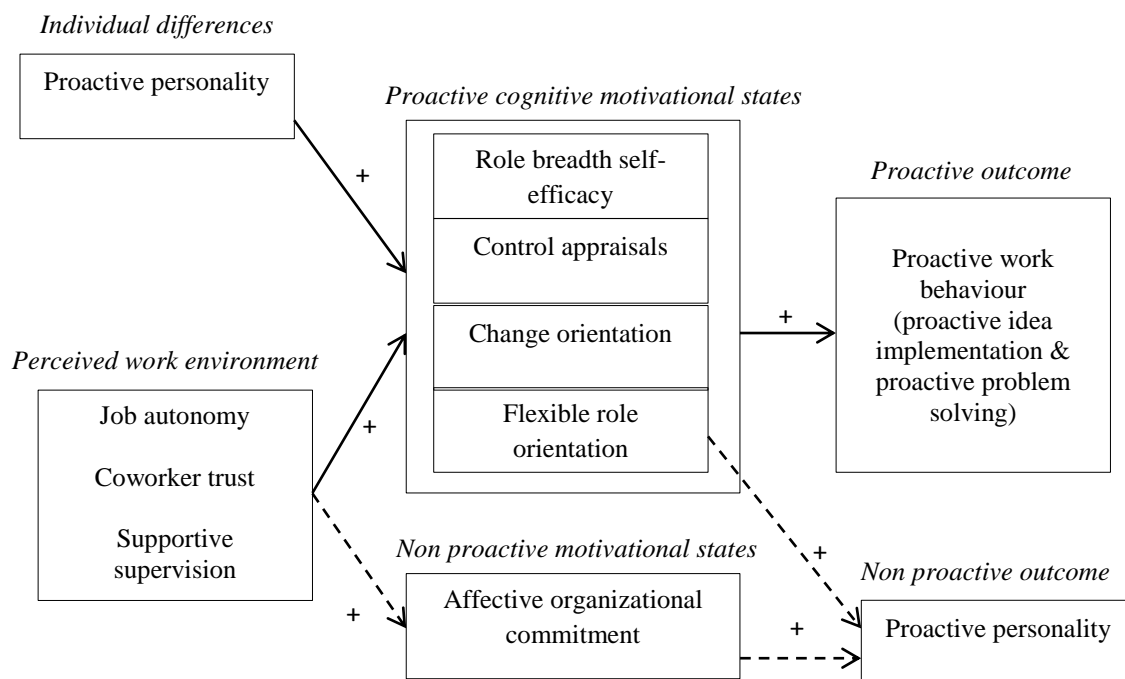


Figure 2. Proposed model of proactive work behaviour (Adapted from Parker, Williams, & Parker, 2006; p. 637).



- Bindl and Parker (2010) have proposed an integrative model of proactivity based on the literature and existing models (Crant, 2000; Grant & Ashford, 2008; Parker et al., 2006). To our knowledge, to date, this model is one of the most integrative and complete models of proactivity. In their model, Bindl and Parker (2010) include individual differences (e.g., demographics) and organizational antecedents (e.g., job design, climate) such as distal antecedents of proactive behaviour. They also included proximal antecedents – also called cognitive or psychological motivational processes –, such as key mediators to explain the link between distal antecedents and proactive behaviour. This model also encompasses the consequences of proactive behaviour on three levels (individual, team, and organization). By integrating these elements, Bindl and Parker (2010) model improves our understanding of the general process by which proactive behaviour can be activated and in turn can lead to positive outcomes. Unfortunately, as is the case with many models of proactive behaviour, this model remains theoretical. Although this model has been partially tested in different studies, to date, the general structure of the model (i.e., antecedents, cognitive motivation processes, proactive behaviour and consequences) has not been tested.

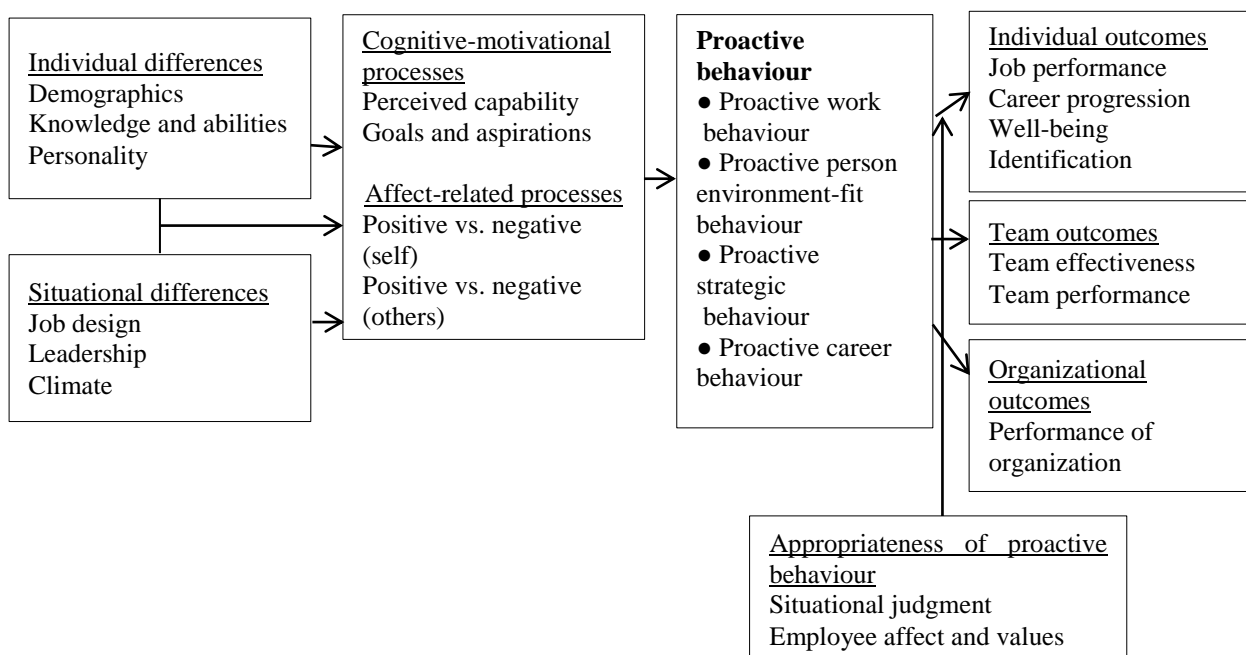


Figure 3. Model of individual-level proactive behaviour (Adapted from Bindl & Parker, 2010; p. 10).

- During years, scholars have focused on the outcomes of proactive behaviour (e.g., performance, career success), while the effects on employee health and well-being have remained unexplored. Based on this observation in 2016 Cangiano and Parker presented a research model to explain how engaging in proactive work behaviour can impact health and well-being. Their model proposes two paths to explain the possible beneficial or detrimental outcomes of proactive work behaviour. In the first, the *motivational pathway* (positive outcomes), they suggest that the individual cognitive motivational states *can do*, *reason to*, or *energy for* can boost engagement in proactivity, which in turn can lead to well-being. In the second, the *resource depletion pathway* (negative outcomes), they posit that in certain situations, proactive work behaviour can deplete individual resources, which in turn may lead to negative mental health. They further suggest that when proactivity leads to positive outcomes on well-being, it can work like a feedback loop to explain why an individual engages in proactive work behaviour over time. Cangiano and Parker (2016) model offers an interesting perspective to research. Unfortunately, this model – like many research models of proactive behaviour – has not been tested and remains theoretical.

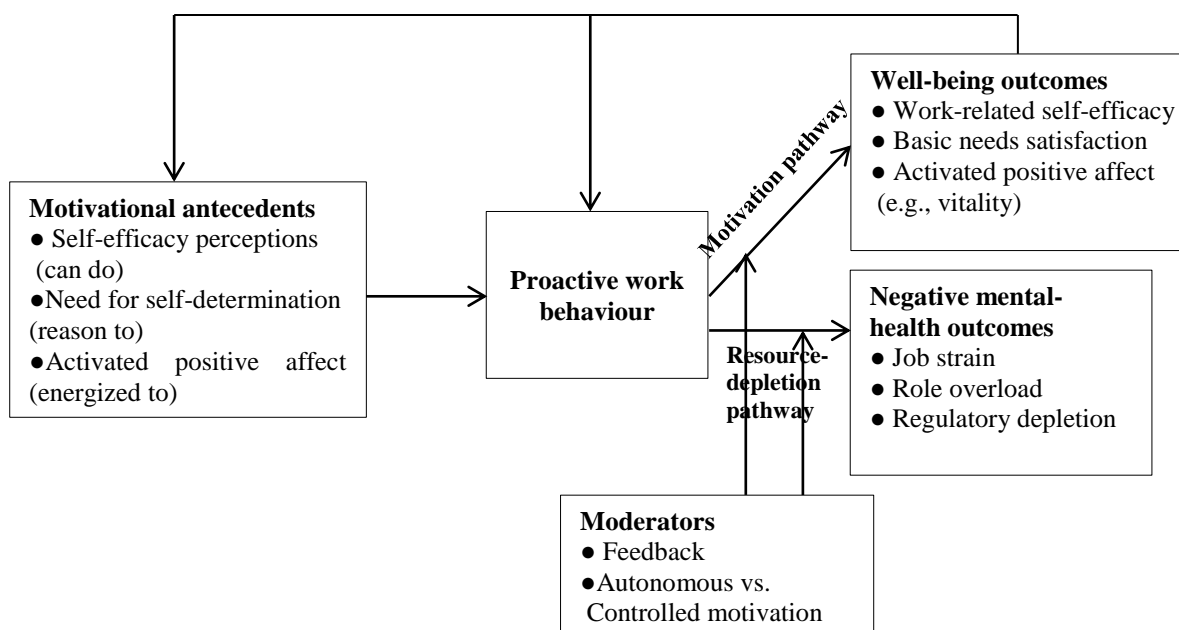


Figure 4. Model of well-being outcomes of proactive work behaviour (Adapted from Cangiano & Parker, 2016; p. 233).

## 2. Chapter summary

To summarize, this first chapter gives additional information to answer to the following questions: *What* is proactivity? *Who* can be considered proactive? *What* motives employees to engage in change? And *how* is proactivity studied in the literature?

Notably, we have presented a theoretical analysis of the concept of proactivity and explained that proactive behaviour is anticipatory, self-initiated, future-focused, and aimed to bring internal change for the self, others, or organizations. Additionally, we have noted that being proactive is not necessarily caused only by individual innate dispositions or situational influences, but rather this behaviour can be stimulated by both individual and situational determinants and can be seen as a way that employees can protect resources. Last, we have identified main research models of proactivity to understand and capture the process by which proactive behaviour can be activated or generates positive outcomes.

Despite the abundant literature on this concept, much work is still needed. Literature has analysed proactive behaviour in piecemeal approaches, which at times causes confusion in the understanding of the mechanisms leading to proactivity. Moreover, several research models remain theoretical, and empirical studies have focused mostly on the analysis of proactive behaviour determinants.

Therefore, in this thesis we propose and test a research model of proactive work behaviour from antecedents to consequences that was adapted from Bindl and Parker (2010) theoretical model (Part 3, Study 1).

## Chapter 2: Proactive behaviour in the workplace

The concept of proactivity covers several behaviours. The literature indicates that proactive behaviour is not a unique behaviour. Conversely, scholars have identified that this behaviour can manifest in different ways, such as taking charge, problem prevention and problem solving, feedback-seeking, job crafting, personal initiative, suggesting improvements (e.g., voice), negotiating tasks, building networks, influencing others, breaking rules, and so on (Ashford & Black, 1996; Ashford, Blatt, & VandeWalle, 2003; Axtell et al., 2000; Belschak & Den Hartog, 2010; Frese & Fay, 2001; Frese, Kring, Soose, & Zempel, 1996; LePine & Van Dyne, 1998; Morrison, 2006; Morrison & Phelps, 1999; Parker et al., 2006; Scott & Bruce, 1994; Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001).

In this thesis, we examine proactive behaviour in accordance with Parker and Collins (2010) classification. In 2010, Parker and Collins proposed classifying these behaviours into three main categories of behaviours. They identified a first category called *proactive work behaviour*. Proactive work behaviour refers to actions that employees take to bring about change for themselves, others, or their organization. This category includes behaviours such as voice (Van Dyne & Lepine, 1998), taking charge (Crant, 2000; Frese & Fay, 2001; Griffin et al., 2007; Morrison & Phelps, 1999; Parker et al., 2006), individual innovation (Janssen, 2000; Scott & Bruce, 1994), and problem prevention (Parker & Collins, 2010). They identified a second category of behaviours called *proactive strategic behaviour*. This category of behaviours refers to when employees introduce change in organization strategy. Proactive strategic behaviour includes strategic scanning (Parker & Collins, 2010) and issue selling (Ashford & Black, 1996; Ashford, Rothbard, Piderit, & Dutton, 1998; Dutton & Ashford, 1993). Parker and Collins identified a third category of proactive behaviours that they called *proactive person-environment, fit behaviour*. This behaviour is exhibited when employees try to achieve a better fit between their own attributes and those of the internal

work environment. This third category includes feedback seeking (Ashford & Cummings, 1983; Ashford et al., 2003) and job crafting (Tims, et al., 2012; Wrzesniewski & Dutton, 2001). An additional dimension called *proactive career behaviour* has also been identified (Grant & Parker, 2009). This behaviour refers to the actions that individuals initiate to improve their careers (Seibert, Kraimer, & Crant, 2001), including negotiating job, tasks, or changes in their jobs (Ashford & Black, 1996; Rousseau, Ho, & Greenberg, 2006).

Although these four categories of proactive behaviours are all different, studies often identified common antecedents, processes, and consequences between them (Bindl & Parker, 2010; Parker & Collins, 2010; Wu & Parker, 2012). However, it should be noted that scholars have mostly focused on the analysis of proactive work behaviour because this type of behaviour is the most frequent and observable proactive behaviour in organization. In addition, this behaviour does not depend on a specific context. For these reasons, in thesis, we focus specifically on the analysis of proactive work behaviour.

## **1. Proactive work behaviour**

As we stated above, proactive work behaviour refers to all actions that employees take to bring about changes for themselves, others, or their organizations (e.g., changing work methods, influencing colleagues, influencing the internal work environment). Literature identifies four main types of proactive work behaviour: voice, taking charge, problem prevention, and individual innovation.

*Voice.* The concept of “voice” refers to communication and verbal proactive behaviour. Voicing behaviour refers to when employees speak up by formulating constructive suggestions and ideas to improve things or situations, or when they speak up to point out organization or team problems (LePine & Van Dyne, 1998; Van Dyne & LePine, 1998) in order to find solutions even if their views differ and others disagree (Parker & Collins, 2010).

Van Dyne and LePine (1998) define this concept as a “nonrequired behaviour that emphasizes expression of constructive challenge with an intent to improve rather than merely criticize” (p. 109). Voicing behaviour is generally constructive and meant to improve things, while other verbal proactive behaviours such as whistle-blowing can be meant to stop an activity, as opposed to being constructive (Lepine & Van Dyne, 1998).

*Taking charge.* Taking charge as a proactive behaviour – like other proactive work behaviours – is considered a discretionary behaviour (Morrison & Phelps, 1999) that intends to introduce positive improvements in work methods, policies, and procedures (Fuller et al., 2012; Morrison & Phelps, 1999; Parker & Collins, 2010; Parker et al., 2006). Morrison and Phelps (1999) define taking charge as “voluntary and constructive efforts, made by individual employees, to effect organizationally functional change with respect to how work is executed within the contexts of their jobs, work units or organizations” (p. 403). For instance, proactive employees will engage in taking charge behaviour to improve organizational work and policies rather than to keep working with incorrect rules, tasks, or procedures. Contrary to voicing behaviour, which is verbal, the concept of taking charge is behavioural and turns toward action (Fuller et al., 2012).

*Individual innovation.* Individual innovation is essential for organization competitiveness, efficiency, and success (Ancona & Caldwell, 1987). Individual innovation refers to “the intentional introduction and application within a role, group, or organization of ideas, processes, products, or procedures, new to the relevant unit of adoption, designed to significantly benefit to the individual, the group, the organization, or wider society” (West & Farr, 1990, p. 9). Certain scholars have identified individual innovative behaviour as proactive work behaviour (Parker & Collins, 2010; Parker, Collins, & Grant, 2008). On the other hand, others have indicated that although these two concepts are similar in several points, they remain different (Bindl & Parker, 2010; Unsworth & Parker, 2003). For these scholars, the

main difference between the two concepts is that proactive work behaviour does not refer to something necessarily new, whereas innovation refers to novelty by definition (Bindl & Parker, 2010). They suggest that proactive work behaviour is related to each step of innovation because both are future change-oriented behaviours, but employees can be proactive without necessarily introducing new things or processes, or being creative. For instance, an employee can anticipate a problem by looking for solutions without necessarily introducing novelty. Nevertheless, to innovate, proactive work behaviour is beneficial. Going further, scholars have suggested that proactivity is a crucial component of the innovation process (Strauss et al., 2015) or is likely to be an “important driver of innovation” (Unsworth & Parker, 2003, p. 8). This point of view is shared by other scholars (Binnewies, Ohly, & Sonnentag, 2007; Déprez & Battistelli, 2017; Kickul & Gundy, 2002) who consider innovation to be an outcome of proactivity. In this thesis, we also adopt this statement and analyse innovative work behaviour as a consequence of proactive work behaviour rather than as a specific proactive work behaviour.

*Problem prevention.* Problem prevention or problem solving (Parker et al., 2006) refers to all anticipatory actions that an employee undertakes to prevent the reoccurrence of work problems (Frese & Fay, 2001) or to find root of problems (Parker & Collins, 2010). For instance, nurse middle managers can be proactive in order to find solutions to prevent the reoccurrence of medication errors. This proactive behaviour is an important behaviour in organizations; however, it is important to note that this special type of proactive work behaviour has received little attention in the literature (Frese & Fay, 2001; Parker & Collins, 2010).

## **2. Antecedents, cognitive motivational states, and consequences of proactive work behaviour**

### **2.1 Distal antecedents of proactive work behaviour**

Proactive work behaviour is often associated with positive outcomes (Baer & Frese, 2003; Den Hartog & Belschak, 2007; Frese & Fay, 2001; Kirkman & Rosen, 1999; Wu & Parker, 2012). In order to promote this behaviour, scholars have tried to identify the characteristics of proactive employees (Parker et al., 2006) by focusing on individual determinants. Additionally, they have analysed situational determinants that could help activate proactivity (Cangiano & Parker, 2016). For instance, at the individual level, it has been found that demographic characteristics such as age (Axtell et al., 2000; Janssen & Van Yperen, 2004; Kanfer, Wanberg, & Kantrowitz, 2001; Maurer, Weiss, & Barbeite, 2003; Warr & Fay, 2001) and gender (Kanfer et al., 2001; LePine & Van Dyne, 1998; Strauss, Parker, & O'Shea, 2017) are related to proactive behaviour. Scholars have also identified that individual knowledge, skills, and abilities (Fay & Frese, 2001; Sonnentag, 2003) and proactive personality (Bateman & Crant, 1993; Crant, 1995; Fuller & Marler, 2009; Parker, 1998; Parker & Collins, 2010; Parker & Sprigg, 1999; Parker et al., 2006; Seibert et al., 2001) are related to proactive behaviour at work.

At the organizational level, scholars have found that job characteristics such as job autonomy (Ohly & Fritz, 2010; Parker et al., 2010; Parker et al., 2006; Sonnentag & Spychala, 2012), job variety (Salanova & Schaufeli, 2008), climate for innovation (Morrison & Phelps, 1999), relationships with superiors, leadership style of superiors (Axtell et al., 2000; Den Hartog & Belschak, 2012; Crant, 2000; Parker & Wu, 2014; Rank, Nelson, Allen, & Xu, 2009; Strauss et al., 2009), and co-worker trust (Parker et al., 2006) are all associated with proactive work behaviour. Furthermore, scholars have demonstrated that high job demands, stressors, and time pressure – associated with challenges – can also in certain cases



lead to proactive behaviour at work (Fay & Sonnentag, 2000; Salanova & Schaufeli, 2008; Unsworth & Parker, 2003; Wu & Parker, 2011).

## **2.2 Cognitive motivational states as proximal determinants of proactive work behaviour**

Literature states that proactivity can be challenging and quite risky for employees (Parker & Liao, 2016; Parker et al., 2010). To engage in proactive work behaviour, an individual needs to be strongly motivated or have a specific motivation to engage in introducing change. In a recent review, Bindl and Parker (2010) identified three common categories of cognitive motivational states that underpin proactive work behaviour: *can do*, *reason to*, and *energy for* (Bindl & Parker, 2010; Bindl et al., 2012; Parker et al., 2010; Parker et al., 2006).

*Can do* refers to the belief that individuals are capable of engaging in proactive behaviour. Scholars often speak about individuals' perceived capability. The *can do* cognitive motivational state also refers to the question "can I do it?" (Fuller et al., 2012). Before trying to introduce change –which can be rejected or punished – employees need to feel that they have the capacity to engage in this behaviour. When employees believe that they are able to influence decisions at work and have an impact on outcomes (Frese & Fay, 2001), this belief can enhance their proactive work behaviour. Many constructs are similar to *can do* motivational state. In the literature, self-efficacy refers to peoples' beliefs about their capacity to perform tasks (Bandura, 1997) and is an important determinant of proactive work behaviour (Fay & Frese, 2001; Morrison & Phelps, 1999; Withey & Cooper, 1989). Scholars have also identified the construct of RBSE as a key determinant of proactive work behaviour (Morrison & Phelps, 1999; Parker & Collins, 2010). The RBSE motivational state is one of the most studied in the literature. Additionally, even if less attention had been given to the

concept of psychological empowerment in comparison to the cognitive motivational states of self-efficacy or RBSE, further studies have found that this specific psychological motivational state can also mediate the relationship between distal antecedents (e.g., job characteristics, leadership style, organizational climate, job stressors) and proactive work behaviour (Arefin, Arif, & Raquib, 2015; Luth, 2012; Zhang, Song, Wang, & Lui, 2018).

However, literature on the *can do* psychological motivational state underlines that employees might feel capable of introducing change, but they will not engage in proactive tasks if they have no reason to do so (Eccles & Wigfield, 2002; Parker et al., 2010; Parker, Wall, & Jackson, 1997). As Bindl and Parker (2010) state, “it is not enough for individuals to believe that they ‘can’ achieve an outcome; they also need to want to” (p. 12). Bindl and Parker speak about the *reason to* motivational state. The *reason to* cognitive motivational state can be intrinsic (e.g., desire to learn) as well as external (e.g., rewards, recognition). Scholars have identified several *reason to* motivational constructs, such as feeling responsible (Morrison & Phelps, 1999), desire for control (Fay & Frese, 2001), need for cognition (Wu et al., 2014), goal orientation (learning verses performance) (Tuckey, Brewer, & Williamson, 2002; Parker & Collins, 2010), and flexible role orientation (Axtell et al., 2000; Dorenbosch, Van Engen, & Verhagen, 2005; Parker et al., 1997; Parker et al., 2006). It has also been demonstrated that these constructs can lead to proactive work behaviour (Parker et al., 2006).

The third motivational state is an affective mechanism called *energy for*. This third construct has been less studied in literature than the *can do* and *reason for* cognitive mechanisms (Bindl et al., 2012; Lam, Spreitzer, & Fritz, 2014). However, several studies have demonstrated that emotions play an important role in promoting proactive behaviour at work (Bindl & Parker, 2010, Bindl et al., 2012; Den Hartog & Belschak, 2007; Warr, Bindl, Parker, & Inceoglu, 2013). As stated by Parker and Wang (2015), “how people feel can provide an ‘energising’ fuel that motivates individuals to engage in proactive behaviour” (p.

67). However, the literature indicates that positive emotions can lead to proactivity only when an individual considers the goals or tasks to be important (Bindl & Parker, 2010).

In sum, these three categories of motivational states are considered the most proximal and direct predictors of proactive work behaviour (Bindl & Parker, 2010; Fuller et al., 2012). Scholars have found that they also intervene like mediators in the relationship between distal antecedents and proactive work behaviour (Frese & Fay, 2001; Parker, et al., 2010; Parker, et al., 2006). However, the mechanism by which individual psychological motivational states intervene like mediators in the proactivity process is not always clearly specified (Wu & Parker, 2011).

### **2.3 Consequences of proactive work behaviour**

Due to the growing interest in the concept of proactive work behaviour, scholars have focused attention on the analysis of key determinants and mechanisms that can foster or inhibit this behaviour (Bindl & Parker, 2010; Grant & Ashford, 2008; Parker et al., 2010; Parker & Collins, 2010), but less attention has been given to analysis of their consequences. Nevertheless, it is generally accepted that proactive work behaviour is beneficial and leads to positive outcomes for individuals, teams, and organizations (Belschak & Den Hartog, 2010; Fuller & Marler, 2009; Kirkman & Rosen, 1999; Thomas et al., 2010; Wu & Parker, 2012). Studies have found that proactive behaviour at work is positively related to individual performance (Belschak & Den Hartog, 2010; Thompson, 2005; Van Dyne & LePine, 1998), innovation (Kickul & Gundy, 2002), career success (Seibert et al., 2001), affective commitment (Belschak & Den Hartog, 2010), reduction of absenteeism (Greenglass & Fiksenbaum, 2009), job satisfaction (Wanberg & Kammeyer-Mueller, 2000), organization performance and success (Crant, 2000; Frese & Fay, 2001; Parker, 2000).

By focusing mainly on the positive effects of proactive work behaviour (e.g., job satisfaction, career success, performance), scholars have long neglected to also analyse the costs of proactive behaviours for employee health and well-being. Recent studies have begun to introduce the idea that proactive behaviours at work can have a cost and may lead to negative outcomes (Bolino et al., 2010; Cangiano & Parker, 2016; Strauss et al., 2017). Bolino et al. (2010) have investigated the dark side of proactivity at the individual and organizational levels. In their study, they hypothesise that proactivity can contribute to stress and friction and that “relying on proactive behaviour may cause harm to an organization by undermining its ability to socialize employees and foster its organizational culture, weakening its learning capability and reducing its ability to develop future leaders” (p. 325). Unfortunately, Bolino et al. (2010) have not tested their assumptions, although they propose a theoretical framework that provides directions for future research.

In sum, for many years, the analysis of proactive work behaviour consequences has been overlooked. Scholars have essentially focused on behavioural and attitudinal outcomes, such as job satisfaction and job performance, while the potential dark side for employee health and well-being has been neglected. As a consequence, little is known of the real benefit or cost of proactive work behaviour for employees (Bateman & Crant, 1999), specifically on employee health and well-being (Strauss et al., 2017).

### 3. Chapter summary

In sum, this second chapter has focused in particular on the specific category of proactive work behaviour. We have aimed to answer to the following questions: *How* is proactive behaviour manifested? *How* can employee proactive work behaviour be fostered? And *what* are the consequences of proactive work behaviour?

We have identified a large body of research on proactive work behaviour determinants (distal and proximal). However, despite this abundant literature, we have noted that literature shows a lack of consensus about the conceptualization of proactive work behaviour determinants. Moreover, literature on this topic is fragmented and studies are often made in silos or in an independent manner. For instance, certain scholars focus on the direct links between distal antecedents (e.g., individual and situational determinants) and proactive work behaviour, while others claim that distal antecedents influence proactive work behaviour via the mediating role of proximal antecedents (i.e., cognitive motivational states). Hence, much work is needed to bring together previous findings in order to provide a comprehensive understanding of the mechanisms of activation and outcomes of proactive work behaviour. In addition, we have identified that antecedents and consequences of proactive work behaviour are often studied independently. As a consequence, at the present time, the existing literature does not allow a broader view of the phenomenon.

Drawing on these findings, in this doctoral research, one of the objectives is to bring together previous findings – including antecedents and consequences of proactive work behaviour – in order to provide a better understanding of hospital middle managers proactive work behaviour.

### **Chapter 3: Proactive work behaviour and quality of work life**

Before analysing the relationship between proactive work behaviour and quality of work life (QWL), we briefly present additional information on the concept of QWL in this section.

#### **1. Quality of work life conceptualization**

##### **1.1 Definition and origin of a constantly evolving concept**

In recent years, the concept of QWL has been increasingly discussed. Often associated with other notions such as working conditions, job satisfaction, and well-being, the concept of QWL has an important place within organizations. This concept has undergone many changes and has an abundant presence in academic literature.

The concept of QWL was introduced for the first time in 1972 at the Arden House Conference in the United States (Larouche & Trudel, 1983). The aim of this conference was to analyse the relationship between employees and their work in order to find new measures to increase their productivity while improving the work environment (Kotze, 2005). Over time, many scholars have tried to provide additional information to conceptualize this concept.

In 1980, Hackman and Oldham proposed a model to assess QWL. They stated that individuals have needs (e.g., personal growth and personal development needs) that they try to satisfy through their work. Hackman and Oldham indicated that these needs can be met through different job characteristics such as job variety, job autonomy, feedback, task significance, and task identity. Thus, for them, QWL depends of the presence of these elements in the job context. These job characteristics influence employees' reactions towards their jobs and can have a direct impact on productivity.

After its introduction, the concept of QWL was expanded to other facets, such as benefits and rewards, recognition, participation, and more. In 1973, Walton proposed various factors that could influence employees' QWL: salary equity, healthy and safe working conditions, opportunities to use current skills and acquire new skills, job security, social interactions, participation in decisions, work-life balance, organizational climate, and procedures within the organization. For Baba and Jamal (1991), QWL is determined by job satisfaction, participation in decision-making, role conflict and role ambiguity, job stress, organizational commitment, and intent to quit.

On the question of the QWL having no unanimous definition 13 years later, Martel and Dupuis (2006) stated,

the quality of life at work, at a given time, corresponds to a condition experienced by individual in his or her dynamic pursuit of his or her hierarchically organized goals within work domains where the reduction of the gap separating the individual from these goals is reflected by a positive impact on the individual's general quality of life, on organizational performance, and consequently the overall functioning of society.  
(p. 23)

Thus, these authors proposed a model where remuneration, possibilities of professional advancement, working hours, relationships with colleagues and superiors, work environment, job characteristics, and support offered to employees influence QWL.

In France in 2007, the National Agency for the Improvement of Working Conditions (in French, *Agence Nationale pour l'Amélioration des Conditions de Travail* [ANACT]), defined QWL as “a social process that makes it possible to act on the work (organization, context) for the development of people and enterprises”. They identified six factors important for QWL: social and professional relationships, job content, physical work environment, organization of work, professional development, and work-life balance.

In summary, since the concept of QWL was introduced, it has been constantly evolving. The definition and model proposed highlight that the concept of QWL can be composed of a plurality of components and that the priorities of the determinants differ according to authors. Ripon (1983) stated the concept of quality of life at work is a complex psychological phenomenon which everyone believed or believes holds the truth. Therefore, to date, there is no clear universal definition or ideal model of QWL. However, it should be noted that QWL does not refer directly to work dimensions but, as Priyadarshani and Bhagat (2014) indicate, it is “a generic expression that covers a person’s feelings about all the different dimensions of his work (e.g., rewards and economic benefits, safety, working conditions, interpersonal relationship at work) and its personal meaning in the person’s life” (p. 2).

### **1.2 Quality of work life: A difficult concept to measure**

Several studies have demonstrated that QWL attract and retain employees (Nanjundeswaraswamy & Swamy, 2013). However, because of its multiple determinants, the assessment of employee QWL is not easy to achieve (Martel & Dupuis, 2009). Certain scholars have focused on QWL drivers, while others have focused on QWL outcomes (Almarshad, 2015). Still other researchers have looked at QWL using mental and physical health indicators (Duyan, Aytac, Akyildiz, & Van Laar, 2013) with negative valences such as work-related stress (Killian, 2004; Van Laar, Edwards, & Easton, 2007), while others have focused on psychological well-being (Rathi, 2009) with positive valences such as well-being affects (Blumberga & Olava, 2016). Additionally, researchers have suggested that QWL varies according to the organization, category of employee (Taylor, Cooper, & Mumford, 1979), country, history, culture, socio-economic context (Thorsdud, 1979), age, and position in the organization (Kiernan & Knutson, 1990). It has also been posited that QWL varies from person to person, based on individual priorities (Varghese & Jayan, 2013). As a consequence,



no consensus has yet emerged in the literature on the measurement of QWL. However, although QWL is a subjective assessment, Ripon (1980,1983) indicate that it is possible to measure it at three different levels: (1) objective organizational factors (e.g., organization of work, remuneration), (2) subjective evaluation concerning different aspects of a job and attitudes in that job (e.g., freedom, relationships with colleagues), and (3) individual attitudes, behaviours, and mental and physical health indicators in response to employees' perceptions of working conditions (e.g., satisfaction, organizational commitment, absenteeism, low self-esteem).

Indeed, numerous studies have shown that QWL determinants in regard to job content and work environment affect individual attitudes towards jobs and organizations (e.g., job satisfaction, affective commitment) (Farid, Izadi, Arif Ismail, & Alipour, 2015; Nekouei, Othman, Masud, & Ahmad, 2014), behaviours at work (e.g., intent to quit, intent to remain, absenteeism) (Almalki et al., 2012; Karunanayake & Weligamage, 2016), and mental and physical health and well-being (e.g., well-being, job stress, exhaustion) (González-Baltazar et al., 2015; Rathi, 2009). In this sense, in this research, instead of focusing on the constitutive factors (predictors) of QWL, which are various, we focus on QWL outcomes. That is to say, we focus on individual attitudes towards the job and organization (e.g., job satisfaction, affective organizational commitment) and health and well-being indicators (e.g., job stress) as a reflection of QWL.

## **2. Proactive work behaviour and quality of work life indicators**

As mentioned previously, QWL can be assessed by evaluating employees' behaviours and attitudes towards the job and organization as well by using health (i.e., mental, physical) and well-being indicators.

In this research, we suggest that proactive work behaviour could be beneficial for QWL, based on findings that demonstrated the positive “bright side” of proactive work behaviour on different QWL indicators. For instance, employees’ proactive behaviour at work has been negatively associated with intent to quit (Ashforth, Sluss, & Harrison, 2007) and absenteeism (Greenglass & Fiksenbaum, 2009). Furthermore, proactive work behaviour has been associated with employees’ positive attitudes toward their job and organization, such as job satisfaction (Wanberg & Kammeyer-Mueller, 2000) and affective organizational commitment (Thomas et al., 2010). For instance, in their meta-analysis, Thomas et al. (2010) report significant correlations between proactive behaviour at work and job satisfaction (e.g., voice  $r = .20, p < .01$ ) and affective organizational commitment (e.g., voice  $r = .20, p < .01$ ). They explain these positive outcomes by the fact that proactive behaviour at work creates favourable situations that in turn lead employees to positive attitudes and behaviours in their job (Li, Crant, & Liang, 2010). Additionally, Greenglass and Fiksenbaum (2009) have found that proactivity is related to positive affects.

However, while the literature on the positive outcomes of proactive behaviour at work on job attitudes and behaviours is extensive, the outcomes for employee health and well-being remain under-explored (Cangiano & Parker, 2016). Except for Greenglass and Fiksenbaum (2009) study, the effects on health and well-being have not been analysed for many years. It is only recently that scholars have begun to point out that proactive work behaviour can be beneficial and lead to positive outcomes, such as in job performance, but is not necessarily good for employee health and well-being (Cangiano & Parker, 2016; Strauss et al., 2017). Scholars have suggested that proactive behaviour at work could also have a “dark side”, specifically for health and well-being (Bolino et al., 2010; Cangiano & Parker, 2016; Fay & Hüttges, 2017; Grant, Nurmohamed, Ashford, & Dekas, 2011; Strauss et al., 2017). For instance, Bolino and Turnley (2005) have found individual initiative at work to be related to

high levels of job stress ( $\beta = .36, p < .01$ ). Similarly Bolino et al. (2010) have suggested that proactive behaviour at work is related to job stress because being proactive (e.g., working extra hours, taking on broader responsibilities) consumes employee resources, such as time and mental and physical energy. Unfortunately, these assumptions have not been tested. Is it also important to note that several studies which suggest that proactive work behaviour deplete resources remain theoretical propositions. Recently, Strauss et al. (2017) realized a study using a sample of 127 employee-supervisor dyads. They found that proactive work behaviour of employees as rated by supervisors was associated with employee assessment of greater job strain when controlled motivation was high and when autonomous motivation was low. Additionally, they found that under other conditions (e.g., high controlled motivation and high autonomous motivation), there was no effect of proactive work behaviour on job strain. They conclude that proactive work behaviour can lead to stress, depending on what motivates employee, but proactive work behaviour mostly does not have a negative effect on employee well-being.

In sum, studies have demonstrated the existence of a relationship between proactive work behaviour and indicators of QWL. However, although these associations suggest that proactive work behaviour can have an impact on QWL, we notice that the studies were conducted independently. In addition, the hypothesis that proactive work behaviour can impact QWL has not been tested in a single study. Therefore, additional research is needed to investigate the potential effects of proactive work behaviour on QWL indicators (i.e., individual attitudes and behaviours towards the job and towards the organization as well as health and well-being) in single studies.

### 3. Chapter summary

In summary, in this third chapter, we have first provided additional information on the concept of QWL, investigating the association between proactive work behaviour and several indicators often considered indicators of QWL.

We have identified that the literature provides initial support to suggest that proactive work behaviour can lead to positive outcomes for QWL. For instance, associations between proactive work behaviour and several QWL indicators (i.e., employees' attitudes and behaviours towards job and organization) were found. However, for the "health and well-being" indicators of QWL, the few studies that have been conducted present contradictory findings. While some scholars postulate that proactive behaviour at work leads to well-being (e.g., positive affects), other researchers claim that proactive behaviour leads to negative outcomes for health and well-being (e.g., job stress). As a consequence, little is known about the real benefits of proactive work behaviour for employee health and well-being. Moreover, if scholars have found associations between proactive work behaviour and indicators of QWL, it should be noted that these studies were conducted separately. Furthermore, to our knowledge, there is no study that focuses specifically on the relationship between proactive work behaviour and QWL in a single study. In this regard, one of our aims is to analyse whether proactive work behaviour can lead to QWL, which encompass indicators such as health and well-being as well as employee attitudes and behaviours towards the job and organization.

## **PART 2: RESEARCH FRAMEWORK**

In this part, we discuss the research objectives and important gaps found in literature. In addition, we present the specific research context, and we introduce the general research model. The design of the studies conducted is also presented.

## RESEARCH FRAMEWORK

### 1. Research objectives and research questions

As mentioned in the introduction section, in healthcare institutions, the context of budget cuts has widely negatively affected hospital personnel's QWL and efficacy at work. In this thesis, we focus specifically on hospital middle managers' QWL, job performance and innovative work behaviour. The initial proposition was to identify a new way to promote their QWL as well as their effectiveness at work despite economic constraints.

The literature review allowed us to identify that proactivity could be a key resource to help hospital middle managers overcome lack of job resources and at the same time foster key QWL indicators (e.g., job satisfaction, affective commitment), as well as their efficacy at work (e.g., innovative behaviour and job performance). As mentioned in the theoretical part, employees' proactive behaviour can be considered a protective behaviour that can help them to cope with organizational job demands and stressors and find the right balance between job demands and their own resources in order to protect themselves and their performance.

A few studies have begun to analyse the relationship between proactive behaviour at work, health, and well-being. Nevertheless, the link between proactive work behaviour and QWL has not been demonstrated.

The overarching research question (RQ) of this thesis is as follows: *Does the proactive work behaviour of hospital middle managers enhance their QWL and promote their innovative work behaviour and job performance?* (RQ1)

Based on theoretical knowledge, we extended the general RQ into an additional RQ: *How can organizational factors enhance hospital middle managers' proactive work behaviour, and in turn lead to positive outcomes such as innovative work behaviour or job performance?* (RQ2)

## **2. Literature gap on hospital managers' proactive work behaviour**

It is expected that leaders must be proactive rather than reactive (Dias & Borges, 2017). With the new organizational challenges, managers and leaders are pushed to go beyond assigned tasks, find new directions for their teams, make necessary changes, and implement undefined tasks that are beneficial for themselves, for their teams, and for their organizations (Wu & Wang, 2011). However, the literature has mainly focused on lower-tier employees' proactivity, while managers' and leaders' proactivity has rarely been examined (Wu & Wang, 2011).

The same observation is made in the healthcare sector. Despite the importance of proactivity in this sector (e.g., effective and advanced care, innovation in care, finding solutions before a problem occurs, introducing new work methods, scanning the environment to find threats), it is surprising to note that in literature, most studies have focused on nurses' proactivity or analysed the relationship between management style and proactivity of healthcare professionals or team proactivity (Erkutlu & Chafra, 2012; Porto & Dall'Agnol, 2016; Wong, Laschinger, & Cummings, 2010). As mentioned previously, except Warshawsky et al. (2012) study focusing on hospital managers' proactive behaviour, to our knowledge no attention has been given to this specific category of hospital personnel. However, hospitals' efficiency and quality of care depend to a large extent on the ability of hospital managers to manage their teams and drive change, but also on their ability to act proactively. Goerdel (2005) argues that proactive management influences organizational performance by facilitating exchange, communication, interaction, coordination, and control. Additionally, Goerdel specifies that proactive managers try to reduce uncertainty, facilitate exchange, create a favourable climate for communication, and maximize benefits and reduce losses. Thus, it is important to understand hospital managers' proactivity. Focusing on this specific hospital

personnel's proactive work behaviour seems to be important also for healthcare institution success, innovation, performance, and quality care systems.

### **3. Specific research context**

A large part of our doctoral research was conducted among hospital middle managers in a French university hospital (3,000 beds and 14,000 employees). The healthcare institution in which most of the studies were conducted was engaged in a general process to improve the QWL and performance of all workers. A social audit performed months before the beginning of this research revealed that, in general, hospital middle managers feel particularly in difficulties in different aspects of their work.

In this thesis, we proposed that despite organizations experiencing a reduction in resources, hospital middle managers' proactive work behaviour could be an internal resource available to promote and protect their QWL as well as their performance and innovative behaviour at work. In addition, focusing on the proactive work behaviour of these specific hospital personnel is particularly relevant for several reasons. First, to improve the quality of care given to patients and improve general hospital services, hospital unit performance, and so on, middle managers need to work effectively and be proactive and innovative. Furthermore, to bridge the knowledge gap concerning hospital middle managers' proactive work behaviour, we have expanded this research to hospital middle managers working in another country (i.e., Italy).

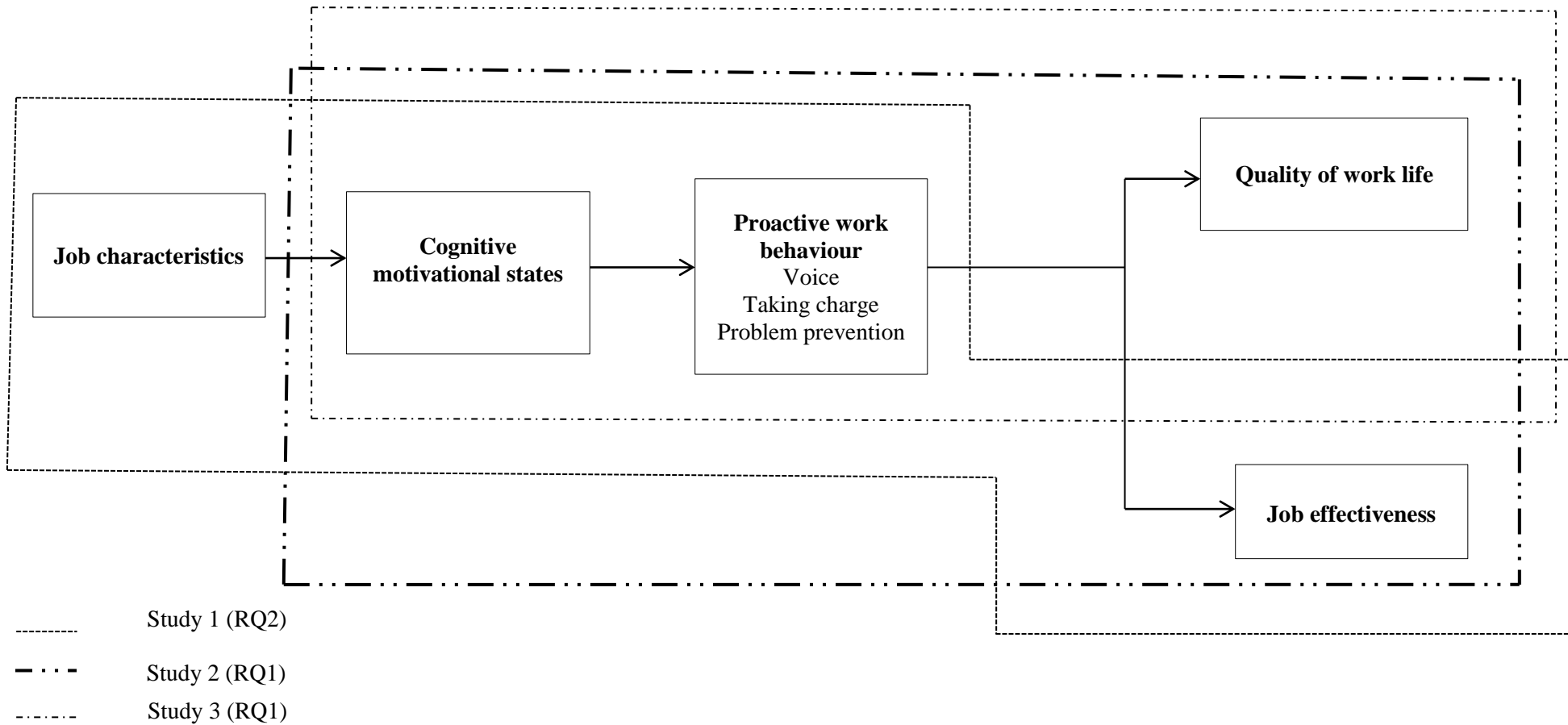
### **4. General research model**

No consensus has emerged in the scientific community on the determinants or on the main consequences of proactive work behaviour. However, based on prior studies, we identified key components for hospital middle managers' proactive work behaviour.



Additionally, we conducted 13 interviews with different categories of hospital middle managers (i.e., healthcare managers, administrative managers, medical technology managers, technical managers, and educational managers) in order to (1) gain contextual knowledge of the nature of their work; (2) identify the main determinants able to enhance their proactive work behaviour; (3) identify why and how they implement proactive changes or innovations in their work methods, teams, or work units; and (4) to understand whether proactive work behaviour can be a resource to promote their QWL and effectiveness at work.

Based on the theoretical literature and some results from interviews, we propose a general research model to study hospital middle managers' proactive work behaviour (Figure 5).



**Figure 5.** General research model of proactive work behaviour adapted from Bindl and Parker (2010) model of proactive behaviour and general design of studies conducted.

## 5. Design of studies

As the literature indicates, proactive work behaviour in an organization is more than a set of visible behaviours. Rather, it is a process. In the studies conducted, we sought to understand how hospital middle managers' proactive work behaviour can be activated and in turn lead to potential outcomes on their QWL, job performance, and innovative work behaviour. The general research model presented in Figure 5 was tested in three consequent empirical studies. Below, we summarize these empirical studies.

*Study 1: Relationship between job characteristics, innovative work behaviour, and job performance of hospital middle managers: Do psychological empowerment and proactive work behaviour as sequential mediators really matter?*

Consistent with Bindl and Parker (2010) integrative framework, we examine the role of distal antecedents (e.g., job characteristics), cognitive motivational state (e.g., psychological empowerment), and the individual consequences of proactive work behaviour (e.g., innovation and job performance) to gain a deeper understanding of hospital middle managers' proactivity (antecedents and outcomes). In particular, in this study, we aim to understand how job characteristics (e.g., job autonomy, job variety) and psychological empowerment can enhance hospital middle managers' proactive work behaviour and how, in turn, their proactive behaviour can foster their performance and innovative behaviour at work. To test these hypotheses, we conducted a cross-sectional study among hospital middle managers in a French healthcare institution. Findings from this study help to answer RQ2.

*Study 2: Does proactive work behaviour lead to positive outcomes on quality of work life, innovative work behaviour, and job performance over time? A panel study among hospital middle managers working in a French hospital*

As the literature indicates, proactive behaviour at work can have short-term effects and long-term effects. This study hypothesises that proactive work behaviour can be a resource for hospital middle managers' QWL, as well as their job performance and innovative work behaviour. Thus, we conducted a panel study among hospital middle managers working in a French healthcare institution. Indeed, several scholars have suggested analysing the effects of proactive behaviour over time (Andersson, 2015; Claes & Van Loo, 2011; Fay & Hüttges, 2017; Spsychala & Sonnentag, 2011). For instance, Cangiano and Parker (2016) recommend the use of longitudinal studies to analyse the mechanisms by which proactive work behaviour can lead to mental health. In this study, we investigate the effects of hospital middle managers' proactive work behaviour on QWL indicators and indicators of job effectiveness after a period of six months. Findings from this study help to answer RQ1.

*Study 3: Relationship between role breadth self-efficacy, proactive work behaviour, and hospital middle managers' quality of work life*

In this study, we intend to continue to improve knowledge on the relationship between hospital middle managers' proactive work behaviour and their QWL. Indeed, because there is a gap in the literature concerning this topic, we extend our research to hospital middle managers working in different healthcare institutions and working in another context than the French context. Based on Cangiano and Parker (2016) model of proactive work behaviour outcomes for health and well-being, we propose and test a model of proactive work behaviour consequences for QWL. In this study, we investigate the role of the *can do* cognitive motivation state (i.e., role breadth self-efficacy [RBSE]), and we suggest that hospital middle

managers' feelings of *can do* enhance their proactive work behaviour, which will lead to positive effects on QWL indicators such as job satisfaction and affective organizational commitment and will be negatively related to job stress. To test these hypotheses, we conducted a cross-sectional study among Italian hospital nurse middle managers. To expand the knowledge on the outcomes of proactive work behaviour, we also propose a complementary model. Findings from this study help to answer RQ1.

### **PART 3: EMPIRICAL PART**

In this part, we describe the three studies conducted in this thesis in more detail. Each study is presented in separate articles which contain a theoretical framework, a methodology, and a result section as well as a discussion and conclusion section. Although these studies are presented as independent studies, each one contributes to building and lending knowledge to the others in order to answer to the general research questions (RQs).

**Chapter 1: Article 1: ANTECEDENTS, COGNITIVE MOTIVATIONAL STATE, PROACTIVE WORK BEHAVIOUR, AND CONSEQUENCES**

**Study 1: Relationship between job characteristics, innovative work behaviour, and job performance of hospital middle managers: Do psychological empowerment and proactive work behaviour as sequential mediators really matter?**

**Abstract**

Consistent with Bindl and Parker (2010) integrative framework, to gain deeper understanding of hospital middle managers' proactivity, we examined the role of distal antecedents, cognitive motivational state, and the individual consequences of proactive work behaviour. Specially, we hypothesized that job autonomy and job variety foster innovative work behaviour and job performance of hospital middle managers through the sequential mediation of psychological empowerment and proactive work behaviour. To test these hypotheses, a cross-sectional study was conducted with 321 hospital middle managers of a French hospital. Consistent with hypotheses, the results from structural equation modelling showed that psychological empowerment and proactive work behaviour fully sequentially mediate the relationship between job autonomy, job variety, and innovative work behaviour. Analysis of indirect effects also revealed that the hypothesis of a sequential mediation of psychological empowerment and proactive work behaviour in the relationship between job autonomy, job variety, and job performance is partially supported. The findings highlight the importance of cognitive motivational state (i.e., psychological empowerment) and proactive work behaviour of hospital middle managers in promoting innovative work behaviour and job performance. Further theoretical and practical implications are also discussed.

**Keywords:** job characteristics, psychological empowerment, proactive work behaviour, innovative work behaviour, job performance, hospital middle managers

## **1. Introduction**

Organizations (i.e., public, private, health sector, industry, service) have been marked by rapid innovations, organizational changes, new work requirements, flexible work roles, challenges aimed to limited resources, increasing decentralization, and work environment uncertainty. To remain competitive, organizations must do more with less (Fuller, Marler, & Hester, 2012) and thus require proactive solutions (Thomas, Whitman, & Viswesvaran, 2010). In this challenging and competitive work environment, the proactive behaviour of employees is now valued and considered to be a key element of organizational performance, innovation, competitiveness, and success (Crant, 2000; Fuller et al., 2012; Parker, 2000). Given the benefit of proactivity, organizations rely on employees' proactive work behaviour and encourage them to take initiative (Frese, Fay, Hilburger, Leng, & Tag, 1997), solve problems, be creative, and introduce constructive change (Frese, 2008; Grant & Parker, 2009), in order to benefit of all human resources (HR). This organizational context pushes employees to shape their work and work environment, be creative, engage in self-learning, manage their careers, and acquire new knowledge and skills (Frese & Fay, 2001; Parker & Sprigg, 1999).

As a consequence, researchers have focused on the analysis of the antecedents of proactive work behaviour in order to find ways to promote and stimulate this behaviour in the workplace (Maden, 2015). Scholars first considered the analysis of individual characteristics before adopting a contextual perspective. Studies have revealed that organizational context can be an effective driver of proactive work behaviour (Belschak & Den Hartog, 2010; Ohly & Fritz, 2010; Parker, Bindl, & Strauss, 2010; Parker, Williams, & Turner, 2006; Sonnentag & Spsychala, 2012). Literature has highlighted many distal antecedents such job characteristics, leadership, relationships, and organizational climate (Bindl & Parker, 2010; Schmitt, Den Hartog, & Belschak, 2016; Unsworth & Parker, 2003). Among the factors identified, job characteristics have been identified as key for proactivity (Ohly & Fritz, 2010;



Parker & Bindl, 2017; Parker et al., 2010; Parker et al., 2006; Sonnentag & Spychala, 2012). Previous studies have also examined the mediating influence of cognitive motivational states (e.g., *can do*, *reason to*, *energy for*) on proactivity. However, despite the extensive literature devoted to proactive behaviour, most studies have focused only on ways to promote this behaviour, while analysis of the consequences has remained neglected.

By analysing antecedents and consequences of proactivity in independent studies, scholars have partially analysed proactivity and have neglected to study proactive behaviour as a process that includes antecedents, mediators/moderators, and outcomes. Only a few scholars have integrated both antecedents and consequences in single study. Unfortunately, most of these research models remain theoretical and have not been tested (Bindl & Parker, 2010), whereas, considering the general process of proactivity is essential for both theoretical and practical implications.

One of the purposes of this study is to advance knowledge on the underlining mechanism by which contextual factors can contribute to enhance proactive work behaviour, which at turn can lead to positive behavioural outcomes. Drawing on Bindl and Parker (2010) integrative framework of proactivity, we propose that job characteristics (e.g., job autonomy, task variety) can enhance individual innovative work behaviour and job performance through the sequential mediating role of psychological empowerment and proactive work behaviour. We consider both these two factors to be sequential mediators, because studies have revealed that the relationship between antecedents and proactive work behaviour are mediated by cognitive motivational states. Indeed, an individual can work in a favourable work environment, but if he does not feel able (i.e., *can do*), does not want to (i.e., *reason to*), or does not have sufficient energy (i.e., *energy for*), he will not engage in proactivity (Bindl, Parker, Totterdell, & Hagger-Johnson, 2012; Den Hartog & Belschak, 2007; Parker et al., 2006). On the other hand, the literature indicates that proactive work behaviour leads to

positive behavioural outcomes, such as improved job performance (Belschak & Den Hartog, 2010) and innovative work behaviour (Déprez & Battistelli, 2017). Drawing on previous findings, we propose that favourable job characteristics will enhance hospital middle managers' feelings of being psychologically empowered. When they feel psychologically empowered in a *can do* state, they will be more likely to engage in proactive change, which in turn will lead to positive outcomes such as innovative work behaviour and job performance.

This study contributes to proactivity literature research in several ways. In contrast to most studies on proactivity, to our knowledge, this study is the first to examine antecedents, cognitive motivational state, proactive work behaviour, and consequences together. Drawing on Bindl and Parker (2010) theoretical integrative model of proactivity, we seek to understand how contextual factors can lead to proactive work behaviour and thus enhance hospital middle managers' efficacy at work. As stated by Wu, Wang and Mobley (2012), to have a comprehensive understanding of proactivity, one must conceptualize it as a process that leads to positive change in a sequential way. We also analyse the general structure of proactivity to help hospital administrations and top management better understand how they can enhance or facilitate hospital middle managers' proactive work behaviour (e.g., creating favourable working conditions) to benefit from the positive outcomes related to this organizational behaviour. Second, this study expands the body of knowledge on innovative work behaviour theory and job performance theory. By integrating psychological empowerment and proactive work behaviour as sequential mediators, the results of this study explain how positive job characteristics can lead to innovation or job performance. Third, a growing literature has mostly analysed the mediating role of the *can do* motivational state's role breadth self-efficacy (RBSE). By focusing on psychological empowerment – also a *can do* motivational state – we also expand the literature on the relationship between job characteristics and proactive work behaviour. In this study, we did not suggest direct relationships between job

characteristics and proactive work behaviour as it is proposed in several studies (Crant, 2000; Ohly & Fritz, 2010). Rather, we propose that feeling psychologically empowered can be a key mediator to explain the relationships between job characteristics and proactive work behaviour. Fourth, our findings also suggest that favourable job characteristics alone are not sufficient to promote behavioural outcomes, but individual psychological motivational state is an important construct to consider. Fifth and finally, in this study we focus on the proactive work behaviour of hospital middle managers. The proactive work behaviour of leaders and managers is considered to be a crucial component for organization success and competition. However, to date, most research has focused on the analysis of factors to foster employees' proactive work behaviour, while managers' and leaders' proactivity has rarely been examined (Wu & Wang, 2011). This study is the first to examine middle managers' proactivity from antecedents to individual consequences.

## **2. Theoretical background**

### **2.1 Job characteristics as key antecedents of proactive work behaviour**

The role of job characteristics as an important work resource has been theorized in many studies (Karasek, 1979). Literature on job characteristics supports the idea that employees' views of their jobs can influence their motivation at work, their well-being (Humphrey, Nahrgang, & Morgeson, 2007; Morgeson & Campion, 2003), and their work-related behaviour (Bindl & Parker, 2010; Parker & Ohly, 2008; Wu & Parker, 2011). Even if no consensus has been established concerning the determinants of proactive behaviours, the literature confirms that job design/job characteristics have a crucial role in activating or restraining all different forms of proactive behaviours (Bindl & Parker, 2010; Grant & Parker, 2009; Parker et al., 2010).

In the proactivity literature, much attention has been given to job characteristics such as job autonomy (Ohly & Schmitt, 2017) and job variety (Salanova & Schaufeli, 2008), often considered the two major job characteristics able to improve employees' satisfaction and effectiveness (Parker, 1998). Jobs with high autonomy and task variety are referred to as "enriched jobs" and include the ideas that employees being able to decide how to carry out their work effectively, with the freedom to implement new ways to achieve tasks and opportunities to exercise different work tasks; and that work provides stimulation. Specifically, job autonomy refers to "the degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out" (Hackman & Oldham, 1976, p. 258). While job variety refers to "the degree to which a job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talents of the person" (Hackman & Oldham, 1976, p. 257).

As stated by Grant and Ashford (2008) "proactive behaviour is more likely to occur in situations of autonomy, or freedom and discretion regarding what to do, when to do it, and how to do it" (p. 16). The positive relationship between job autonomy and proactive behaviour at work has been demonstrated in several studies (Fay & Frese, 2001; Frese, Garst, & Fay, 2007; Marinova, Peng, Lorinkova, Dyne, & Chiaburu, 2015; Parker & Ohly, 2008; Parker et al., 2006). Parker et al. (2006) report a significant relationship between job autonomy and proactive work behaviour ( $r = .38, p < .01$ ). Furthermore, studies have shown that job autonomy is positively related to specific forms of proactive work behaviour (Ohly & Fritz, 2010; Parker et al., 2010; Parker et al., 2006; Sonnentag & Spsychala, 2012) such as voice (Axtell et al., 2000; LePine & Van Dyne, 1998; Van Dyne & LePine, 1998), problem prevention, problem solving (Parker et al., 2006), and innovative idea implementation (Bindl & Parker, 2010; Parker et al., 2006; Zhang & Bartol, 2010). In their meta-analysis, Tornau

and Frese (2013) found that job autonomy was positively correlated to voice ( $r = .21, p < .05$ ) and taking charge ( $r = .33, p < .05$ ).

The positive relationship between job autonomy and proactivity can be explained by different arguments. At first, the literature indicates that job autonomy can enhance cognitive motivational states such as self-efficacy (Parker, 1998), RBSE (Morgeson, Delaney-Klinger, & Hemingway, 2005), feelings of responsibility (Frese, Kring, Soose, & Zempel, 1996), and control appraisal (Frese & Fay, 2001), which in turn promote proactive behaviour (Parker, 1998; Parker, Wall, & Jackson, 1997). Secondly, a job in which employees feel less constrained by formal rules, tasks, restrictions, and procedures can make it easier to come up with new and original ideas, express ideas, implement new things, and be creative (Parker et al., 2010; Wu & Parker, 2012; Wu, Parker, Wu, & Lee, 2017). Thirdly, autonomy at work provides better opportunities to acquire knowledge, skills, and responsibilities (Parker, 1998; Parker & Axtell, 2001), as well as to learn new things and make links with previous knowledge (Wu & Parker, 2012), which can help employees to be proactive and more innovative. Fourthly, being autonomous at work can encourage individuals to be independent and provide a framework in which they can take initiative. In sum, when employees feel that their organization gives them the opportunity to introduce new things, be creative, and try new work methods, they will in turn be motivated to introduce change and implement new ideas. On the other hand, as Bindl and Parker (2010) have stated, individuals working in unsafe or unsupportive environments are unlikely to take the risk to be proactive.

The literature has also shown a positive relationship between job variety and specific forms of proactive behaviour such as career initiative (Veldhoven, Dorenbosch, Breugelmans, & Van De Voorde, 2017), personal initiative (Frese et al., 1996; Salanova & Schaufeli, 2008), problem solving (Salanova & Schaufeli, 2008), and innovative work behaviour (De Jong, Parker, Wennekers, & Wu, 2015). These positive relationships can be explained by several

arguments. First, when employees are engaged in many and varied tasks, the work provides meaning and some challenge (Kanter, 1988), which can stimulate employees to engage in proactive behaviour. Second, having various tasks and control at work can encourage employees to make suggestions and improve work methods. De Jong et al. (2015) provided additional arguments to explain this positive relationship. They postulated that workers with varied tasks are more likely to discover opportunities. Having varied tasks can also help employees to position their work in an overall environment, which in turn can stimulate them to act proactively (e.g., making suggestions, developing ideas to change work methods or processes). Third, varied tasks can help workers to develop their capabilities, which can help them to be more confident, to develop new skills, to implement new things, to identify opportunities, and to overcome barriers and introduce change.

## **2.2 The mediating role of psychological empowerment in the proactivity process**

As discussed above, the literature indicates that distal antecedents such as job characteristics can enhance proactive work behaviour. However, additional studies have tried to clarify this relationship in order to understand the mechanism by which job characteristics can influence proactive work behaviour. Scholars have found that proactive work behaviour can also be enhanced by proximal antecedents (i.e., cognitive motivational states). They propose that cognitive motivational states or the psychological resources called *can do*, *reason to*, and *energy for* are important explanatory mechanisms to consider in the proactivity process of activation (Ellis, 2012). Furthermore, the literature indicates that individual cognitive motivational states can explain the relationship between distal antecedents and proactive behaviour at work (Bindl & Parker, 2010). For instance, scholars have found that psychological empowerment as a *can do* motivational state can also play an important role in the activation of proactive behaviour at work.

Seibert, Wang and Courtright (2011) defined psychological empowerment as an “intrinsic task motivation reflecting a sense of self-control in relation to one’s work and an active involvement with one’s work role” (p. 981). Psychological empowerment is manifest in four cognitions depicted in an overall construct (Spreitzer, 1995). The first cognition, *meaning*, refers to the meaningfulness of the job and to individual beliefs about work demands and personal values, and the individual’s own ideals or standards. The second cognition, *competence*, refers to individual perceptions of self-efficacy, beliefs about ability, and capability to perform tasks. The third cognition, *self-determination*, refers to individual perceptions about autonomy to choose work methods or processes or to initiate actions. The last cognition, *impact*, refers to an individual’s belief that he can introduce changes, influence strategies or processes, or have an impact in the work environment.

In the proactivity literature, notably, less attention has been given to the concept of psychological empowerment in comparison with the *can do* cognitive motivational state RBSE. However, several studies have highlighted the influence of psychological empowerment as a mediator in the relationship between distal antecedents (e.g., job characteristic, leadership style, organizational climate, job stressors) and proactive behaviour. For instance, Luth (2012) found a positive relationship between job stressors and proactive work behaviour via the mediating role of psychological empowerment, while no result was found with counterproductive behaviour. Zhang, Song, Wang and Lui (2018) found that psychological empowerment intervenes as the first mediator in the relationship between authentic leadership styles and proactive behaviour at work. The influence of psychological empowerment as a mediator in the relationship between distal antecedents and proactive behaviour has been confirmed in several studies (Arefin, Arif, & Raquib, 2015; Zhang et al., 2018). According to Arefin et al. (2015), this positive relationship between situational antecedents and proactive behaviour via psychological empowerment can be explained by the

fact that working conditions can influence an individual's sense of feeling empowered (meaning, impact, competence, self-determination). In consequence, empowered employees identify more with their jobs (i.e., feel more comfortable and less constrained by their jobs), which motivates them to help others and the organization and to act proactively. In addition, when employees evaluate their jobs as meaningful, they are more likely to share novel ideas and make special efforts to collect information in order to solve problems. Finally, Arefin et al. have postulated that feeling empowered provides the confidence to overcome problems and encourages conscientiousness.

The perspective of the mediating role of psychological empowerment between situational antecedents and proactive behaviour outcomes is consistent with additional studies suggesting that psychological empowerment intervenes as mediator between inputs such as job characteristics, leadership, and climate and behavioural outputs such as organizational commitment (Liden, Wayne, & Sparrowe, 2000), job performance (Liden, et al., 2000; Seibert, Silver, & Randolph, 2004), creativity (Zhang & Bartol, 2010), discretionary behaviours, and participation in decision-making (Pigeon, Montani, & Boudrias, 2017). For instance, Seibert et al. (2011) meta-analysis reveals a strong relationship between job characteristics (e.g., job autonomy, task significance, skill variety) and psychological empowerment ( $r = .58, p < .01$ ), and psychological empowerment was highly related to performance ( $r = .36, p < .01$ ), innovation at work ( $r = .33, p < .01$ ), and organizational citizenship behaviour (OCB) ( $r = .38, p < .01$ ).

### **2.3 Proactive behaviour as a precondition for innovative work behaviour and job performance**

Proactive work behaviour has been defined as an active behaviour initiated by an individual to bring positive change for one's self, organization, or team (Grant & Ashford,



2008; Griffin, Neal, & Parker, 2007; Parker et al., 2010). Proactive work behaviour includes speaking up behaviour, making suggestions for improvements in work methods (i.e., voice), improving work method procedures (i.e., taking charge), and acting in advance to prevent reoccurrence of work problems (i.e., problem prevention).

It is generally accepted that proactivity leads to positive outcomes (Belschak & Den Hartog, 2010; Koop, De Reu, & Frese, 2000; Thomas et al., 2010; Wu & Parker, 2012). Research has found that proactive behaviour is associated with a range of positive individual outcomes (Fuller & Marler, 2009; Thomas et al., 2010) such as organizational commitment (Belschak & Den Hartog, 2010), job satisfaction (Wanberg & Kammeyer-Mueller, 2000), and individual job performance (Belschak & Den Hartog, 2010; Crant, 1995; Thompson, 2005; Van Dyne & LePine, 1998), as well as superior ratings on job performance (Grant, Parker, & Collins, 2009; Thompson, 2005; Van Dyne & LePine, 1998). For instance, Grant et al. (2009) carried out a dyad study among 103 managers and direct supervisors. Analyses revealed that proactive behaviours rated by direct supervisors also significantly predicted supervisors performance evaluations ( $r = .63, p < .001$ ). The extant literature has also found links between proactive behaviour and creativity (Binnewies, Ohly, & Sonnentag, 2007; Rank, Pace, & Frese, 2004) and innovative work behaviour (Déprez & Battistelli, 2017; Parker & Collins, 2010; Strauss, Griffin, Parker, & Mason, 2015; Unsworth & Parker, 2003). For instance, Parker and Collins (2010) found high correlations between the two components of proactive work behaviour – taking charge and voice – and individual innovation. They found that taking charge ( $r = .58, p < .01$ ) and voice ( $r = .45, p < .01$ ) were highly correlated with individual innovation.

Drawing on previous findings, scholars have concluded that proactive behaviour is an important component in enhancing job performance (Crant, 2000) and innovation (Strauss et al., 2015). Furthermore, scholars have stated that proactive behaviour is an important

precondition or driver to enhance individual innovation (Déprez & Battistelli, 2017; Kickul & Gundy, 2002; Unsworth & Parker, 2003).

### **Study assumptions and hypothesis**

The literature seems to indicate that employees in favourable working conditions are more likely to engage in proactive behaviour, while restrictive procedures, rules, and unfavourable working conditions can inhibit proactive actions. For instance, the literature reveals that job autonomy and job variety may be especially important in helping individuals to be self-starting, to make suggestions, and to introduce changes. However, empirical studies have shown that the relationship between distal antecedents and proactive work behaviour is not necessarily direct, but can be mediated by the individual cognitive motivational states *can do*, *reason to* and *energy for*. Additionally, independent studies have found that proactive work behaviour is related to several individual outcomes such as job performance and individual innovation.

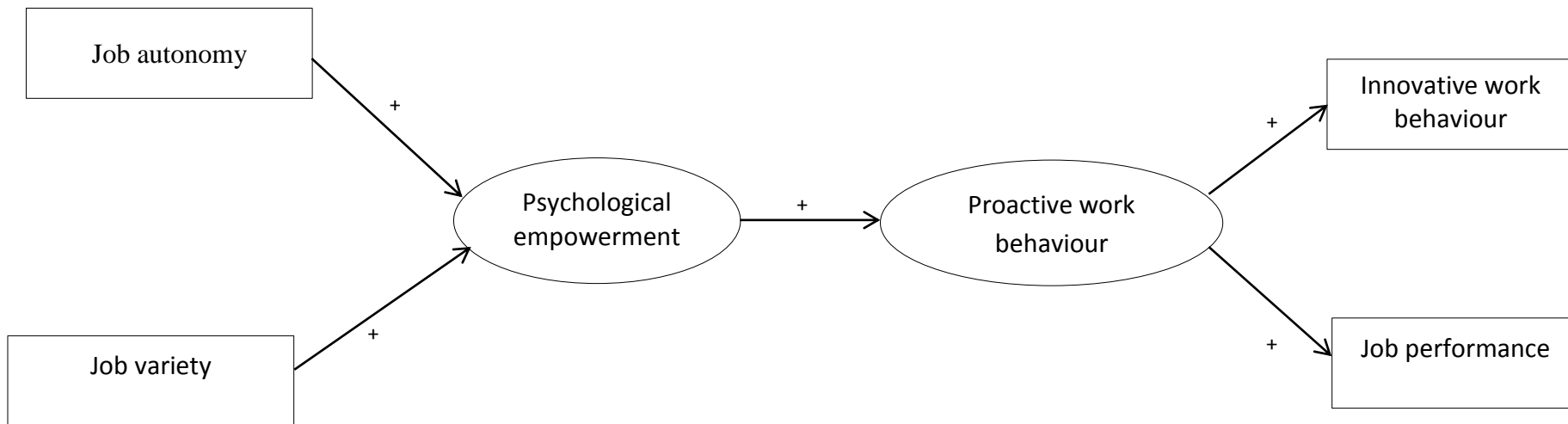
Drawing on previous findings and with the aim to develop a better understanding of hospital middle managers' proactive work behaviour from antecedents to consequences, in this study we first suggest that hospital middle managers' sense of feeling psychologically empowered may help explain why they engage in proactive work behaviour in response to favourable working conditions (autonomy, task variety). Indeed as Pieterse, Van Knippenberg, Schippers and Stam (2010) argue, "psychologically empowered individuals see themselves as competent and able to influence their jobs and work environments in meaningful ways, facilitating proactive behaviour, showing initiative, and acting independently" (p. 613). Furthermore, because analysis of consequences is often neglected or analysed in disparate studies (Unsworth & Parker, 2003), we also integrate the analysis of consequences in the research model. We posit that proactive work behaviour is not at the end

of the process but rather, because it is related to other positive behavioural outcomes, it will intervene like a second driver to enhance innovative work behaviour and job performance. Altogether, based on the literature and drawing on the above statement, we propose the following hypotheses:

*Hypothesis 1.* Psychological empowerment and proactive work behaviour will sequentially mediate the relationship between job autonomy and innovative work behaviour (a) and job performance (b).

*Hypothesis 2.* Psychological empowerment and proactive work behaviour will sequentially mediate the relationship between job variety and innovative work behaviour (a) and job performance (b).

These hypotheses are summarized in the model Figure 5.1



**Figure 5.1** Research model of proactive work behaviour from antecedents to consequences.

### **3. Method**

#### **3.1 Sample and procedure**

This study took place among hospital middle managers working in a French university hospital. We performed a cross-sectional study. Email invitations were sent via the HR department to the 479 hospital middle managers using their professional mail addresses. Each category of hospital middle managers (i.e., healthcare managers, hospital administrative managers, medical technology managers, hospital technical managers, educational managers) was invited to voluntarily participate and complete the online survey via the secure software Limesurvey. Participants were informed in a cover letter that the anonymity of their answers was guaranteed. The questionnaire was sent, followed by reminder letters in two-week intervals. After two months, a final sample of 321 hospital managers' data was collected (response rate of 67.01%). The mean age was 47.08 years ( $SD = 8.47$ ), ranging from 24 to 64 years, and 73.8% were women. The sample was mainly composed of healthcare managers (51.1%), hospital technical managers (21.6%), and hospital administrative managers (18.1%). Regarding job tenure as middle managers, 29.8% had 2–5 years of experience, 25.3% had 6–10 years of experience, and 20.5% had 11–15 years of experience (ranging from  $\leq 1$  to 36–40 years). The majority declared having equal or fewer than 10 people to manage (29.8%) (range of 1–10 to 141 and over).

#### **3.2 Measures**

##### *Job characteristics*

Job autonomy (three items, subscale decision-making autonomy) and job variety (four items) were assessed using the French version of the Work Design Questionnaire (WDQ) of Bigot et al. (2014), originally developed by Morgeson and Humphrey (2006). Items were rated on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A sample item for

job autonomy is, “The job allows me to decide on my own how to go about doing my work” ( $\alpha = .78$ ). A sample item for job variety is, “The job requires the performance of a wide range of tasks” ( $\alpha = .91$ ).

#### *Cognitive motivational state*

Psychological empowerment was measured using the 12 items of the French version of Boudrias, Rousseau, Migneault, Morin and Courcy (2010) originally developed by Spreitzer (1995). Participants were invited to respond on a five-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), to the four subscales of psychological empowerment: meaning ( $\alpha = .83$ ), competence ( $\alpha = .75$ ), self-determination ( $\alpha = .81$ ), and impact ( $\alpha = .87$ ). A sample item is, “I am confident about my ability to do my job” (global scale,  $\alpha = .86$ ).

#### *Proactive work behaviour*

To assess voice behaviour, we used the five items from the constructive voice dimension of Maynes and Podsakoff (2014). An example item is, “I frequently make suggestions about how to do things in new or more effective ways at work” ( $\alpha = .93$ ). Taking charge was measured using Morrison and Phelps (1999) scale. An example item is, “I often try to correct a faulty procedure or practice” ( $\alpha = .85$ ). Problem prevention was assessed using the three items from Parker and Collins (2010). A sample item is, “I try to find the root cause of things that go wrong” ( $\alpha = .76$ ). Items for constructive voice, taking charge, and problem prevention were rated on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). We assessed these three proactive behaviours using the French version of Déprez and Battistelli (2017).

### *Effectiveness indicators*

We measured innovative work behaviour using the nine items from Janssen (2000). The French version of Déprez and Battistelli (2017) was used. Responses were given on a five-point scale ranging from 1 (*never*) to 5 (*always*). An example of item is, “Searching out new working methods, techniques, or instruments” ( $\alpha = .92$ ). Job performance was measured using the seven items from Williams and Anderson (1991). The French version of Lapointe, Vandenberghe and Boudrias (2014) was used. A 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) was used. An example of item is, “I adequately complete assigned duties” ( $\alpha = .70$ ).

### *Control variables*

Prior research has demonstrated that age (Janssen & Van Yperen, 2004; Warr & Fay, 2001), gender (Kanfer, Wanberg, & Kantrowitz, 2001; Strauss, Parker, & O’Shea, 2017), and job tenure (Grant & Ashford, 2008) are related to proactive behaviour. Porto and Dall’Agnol (2016) also found a positive relationship between proactivity in nursing and profession category. Therefore, we included individual-level variables such as age, gender, job tenure, and professional category as control variables.

### *Ethical consideration*

Approval to conduct the study was obtained from the appropriate ethics committees. Permission was also obtained from the hospital direction before data collection. All participants were informed of the purpose of the study, and the confidentiality of their personal information was guaranteed.

### 3.3 Data analysis

We used SPSS23 to conduct descriptive analysis, correlation analysis, and reliability analysis. We then conducted confirmatory factor analysis (CFA) with maximum likelihood (ML) estimation using Mplus8 (Muthén & Muthén, 2017) to examine the factorial structure of the study constructs. We tested the proposed six-factor model: job autonomy, job variety, psychological empowerment, proactive work behaviour, innovative work behaviour, and job performance. In accordance with Parker and Collins (2010) and others researchers (Grant et al., 2009; Wu & Parker, 2017), we assessed proactive work behaviour as a higher order category of behaviour including voice, taking charge, and problem prevention. To evaluate the best model fit, we compared the proposed model to alternative models.

Additionally, we examined the hypothesized research model as displayed in Figure 5.1 using structural equation modelling (SEM). The mean score of each construct was used for analyses because the sample size-to-parameters ratio did not meet the standard requirements. The robustness of the theoretical model was evaluated using the overall model chi-square ( $\chi^2$ ), degrees-of-freedom (*df*), the comparative fit index (CFI), the Tucker–Lewis Index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) as key indicators of model fit. The literature suggests that CFI and TLI values of .90 indicate an acceptable fit, and values of RMSEA and SRMR of .08 indicate an acceptable fit (Browne & Cudeck, 1993; Hu & Bentler, 1999; Lance, Foster, Nemeth, Gentry, & Drollinger, 2007; Schreiber, Nora, Stage, Barlow, & King, 2006). Akaike information criterion (AIC) and the Bayesian information criteria (BIC) were also used. We also compared the hypothesized six-factor model (full mediation model without the direct effects from job autonomy and job variety on innovative work behaviour and job performance) with alternative models in order to find the best-fit model.



Analyses were also carried out to test the hypotheses of indirect effects of job autonomy and job variety on innovative work behaviour and job performance via psychological empowerment and proactive work behaviour. To analyse the indirect effects, we followed the four steps of Shrout and Bolger (2002) approach, an extension of Baron and Kenny (1986) method. First, we analysed the relationship between the predictors (X) and the outcomes (Y). Shrout and Bolger (2002) have stated that at this step, even if a relationship is not found, analysis can be conducted because significant effects are more likely to be found during analysis of indirect effects, also called “mediation” (Preacher & Hayes 2004; Rucker, Preacher, Tormala, & Petty, 2011). Second, we analysed the relationship between the distal predictors and the mediator. In this step, the relationship should be significant. Third, we analysed the relationship between the mediator and the outcomes. In this step, the mediator must be related to the outcomes. Fourth, we analysed the indirect effects between predictors and outcomes after introduction of mediators.

We calculated the confidential intervals for the hypothesized indirect effects using the bootstrap technique (Hayes, 2009, 2013). We used the 5,000 resamples (Hayes, 2009, 2013) to create 95% confidence intervals. Statistical research has demonstrated that using the bootstrap to analyse the indirect effects is the most valid and powerful method (Hayes, 2009; Preacher & Hayes, 2008; Williams & MacKinnon, 2008).

## **4. Results**

### **4.1 Descriptive statistics**

Table 2 presents descriptive statistics with the means, standard deviations, correlations, and reliabilities for the variables studied ( $\geq .70$ ).

**Table 2.** Means, correlations among variables and reliability coefficients

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1.Age <sup>a</sup>	-	-	-											
2.Gender <sup>a</sup>	-	-	-.10	-										
3.Tenure <sup>a</sup>	-	-	.59**	-.08	-									
4.Pc <sup>a</sup>	-	-	-.14**	.40**	-.12*	-								
5. AUT	3.26	.83	.03	.06	-.01	.14*	(.78)							
6.VT	4.33	.79	-.03	-.01	.06	-.01	.34**	(.91)						
7.PE	3.83	.59	.01	.00	.07	.10	.72**	.44**	(.86)					
8.VC	3.74	.74	-.05	-.06	.02	-.02	.26**	.28**	.36**	(.93)				
9.TC	3.58	.65	-.03	-.12*	.04	-.12*	.32**	.24**	.44**	.55**	(.85)			
10.PP	3.91	.63	-.04	-.10	-.00	-.16**	.15**	.12*	.26**	.48**	.68**	(.76)		
11.IWB	3.44	.69	-.00	-.08	.05	-.12*	.29**	.17**	.35**	.53**	.61**	.54**	(.92)	
12.PERF	3.88	.54	.01	-.00	.05	.06	.38**	.17**	.49**	.35**	.28**	.24**	.30**	(.70)

Note:  $n = 321$ . PC = Profession category; AUT = Job autonomy; VT = Job variety; PE = Psychological empowerment; VC = Voice; TC = Taking charge; PP = Problem prevention; IWB = Innovative work behaviour; PERF = Job performance.

a. Age, gender, tenure and profession category are categorical variables.

\*  $p < .05$ , \*\*  $p < .001$ . Reliability coefficients for the scales are in parentheses along the diagonal.

## 4.2 Confirmatory factor analyses

We performed CFA in order to examine the fit of the proposed model. The model included six factors: job autonomy, job variety, psychological empowerment, proactive work behaviour, innovative work behaviour, and job performance. In accordance with Parker and Collins (2010), proactive work behaviour was measured as a higher-order factor containing voice, taking charge, and problem prevention (Grant et al., 2009; Wu & Parker, 2017). The proposed model demonstrates an acceptable fit ( $\chi^2 = 1700.45$ ;  $df = 931$ ; CFI = .91; TLI = .90; RMSEA = .05; SRMR = .05) (Table 3). In order to examine whether the proposed model presented the best fit, we also conducted CFA of alternative models (i.e., with proactive work behaviour as a second-order latent construct (composed with voice, taking charge, and problem prevention) and with voice, taking charge, and problem prevention as three distinct constructs. Results of alternative models showed poorer fits to the data and did not fit the data significantly better than hypothesized model (Table 3).

## 4.3 Structural model and alternative models

We ran SEM using ML to test the hypothesized full mediation model structure. As shown in Table 4, the hypothesized full mediation model (M1) presented an acceptable fit to the data ( $\chi^2 = 398.15$ ;  $df = 174$ ; CFI = .92; TLI = .91; RMSEA = .06; SRMR = .05). Then, we compared the full mediation model with alternative models in order to find the best representation of the data (Table 4). Afterwards, we extended M1 and tested an alternative model (M2) including additional direct paths from job autonomy and job variety to proactive work behaviour. The partial mediation model (M2) also showed good fit to the data ( $\chi^2 = 396.54$ ,  $df = 172$ ; CFI = .94; TLI = .93; RMSEA = .05; SRMR = .05). The chi-squared difference test ( $\Delta\chi^2$ ) was used to determine whether there is a significant difference between these two models.

**Table 3.** Confirmatory factor analyses

Measure	AIC	BIC	X <sup>2</sup>	df	Δχ <sup>2</sup>	Δdf	RMSEA	CFI	TLI	SRMR
Hypothesized six factor model (with PWB as second-order construct)	30518.86	31258.06	1700.45*	931	-	-	.05	.91	.90	.05
Five factor model (with PWB as second-order construct)										
Combining IWB and PERF	31012.40	31649.78	2248.00*	958	547.55*	27	.06	.85	.84	.07
Combining AUT and VT	31116.79	31818.28	2318.38*	964	617.93*	33	.06	.82	.81	.07
Four factor model (with PWB as second-order construct)										
Combining AUT and VT; and IWB and PERF	31610.44	32221.41	2860.03*	965	1159.58*	34	.07	.78	.76	.08
Combining PWB, IWB and PERF	32190.35	32790.01	3445.95*	968	1745.49*	37	.08	.71	.69	.08
Three factor model (with PWB as second-order construct)										
Combining AUT, VT and PE; and IWB and PERF	32308.51	32851.60	3594.11*	983	1893.65*	52	.09	.70	.68	.09
Two factor model (with PWB as second-order construct)										
Combining AUT, VT and PE; and PWB, IWB and PERF	33489.66	34013.89	4785.26*	988	3084.82*	57	.10	.56	.54	.09
Eight factor model (with VC, TC and PP as different constructs)	30802.49	31443.64	2036.09*	957	335.64*	26	.05	.87	.86	.07
Seven factor model (with VC,TC and PP as different constructs)										
Combining IWB and PERF	31086.42	31701.17	2334.02*	964	633.57*	33	.06	.84	.83	.08
Combining AUT and VT	31363.27	31978.02	2610.87*	964	910.42*	33	.07	.81	.79	.07
Six factor model (with VC,TC and PP as different constructs)										
Combining AUT and VT; and IWB and PERF	31648.41	32240.53	2908.01*	970	1207.56*	39	.07	.77	.76	.09
Five factor model (with VC,TC and PP as different constructs)										
Combining VC, TC, and PP; and IWB and PERF	31667.47	32240.72	2937.06*	975	1236.61*	44	.07	.77	.76	.10
Combining AUT and VT; and VC, TC, and PP	31949.67	32522.93	3219.26*	975	1518.81*	44	.08	.74	.72	.08
Four factor model (with VC,TC and PP as different constructs)										
Combining VC, TC, PP, IWB and PERF	32271.97	32830.14	3549.57*	979	1849.12*	48	.09	.70	.69	.09
Combining AUT, VT and PE; and VC, TC and PP	32612.87	33155.96	3898.47*	983	2198.02*	52	.09	.66	.64	.09
Three factor model (with VC,TC and PP as different constructs)										
Combining AUT, VT and PE; and VC, TC and PP; and IWB and PERF	32889.12	33420.89	4180.71*	986	2480.26*	55	.10	.63	.61	.10
Combining AUT, VT and PE; and VC, TC, PP and IWB	33264.11	33795.88	4555.70*	986	2855.25*	55	.10	.59	.57	.09
Two factor model (with VC,TC and PP as different constructs)										
Combining AUT, VT and PE; and VC, TC, PP, IWB and PERF	33489.66	34013.89	4785.26*	988	3084.81*	57	.10	.56	.54	.09
Single factor model with all items	34583.46	35103.92	5881.06*	989	4180.61*	58	.12	.44	.41	.11

**Note :**  $N = 321$ . \* $p < .001$ . AIC = Akaike Information Criterion; BIC= Bayesian Information Criteria;  $X^2$  = Chi-square value;  $df$  = Degrees of freedom; RMSEA = Root mean square error of approximation; CFI = Comparative fit index; TLI = Tucker–Lewis Index; SRMR = Standardized root mean square residual; AUT= Autonomy; VT = Job variety; PE = Psychological empowerment; PWB = Proactive work behaviour; VC = Voice; TC = Taking charge; PP = Problem prevention; IWB = Innovative work behaviour; PERF = Job performance.

Analysis revealed that the chi-squared difference test was not significant ( $\chi^2(2) = 1.61$ ,  $p = .44$ , *ns*). The direct paths from job autonomy and job variety to proactive work behaviour were not significant. Thus, the addition of direct paths did not improve significantly the model fit. M1 lower AIC confirmed that M1 was to be preferred to M2. Afterwards, we extended M1 and tested an alternative model (M3) that included additional direct paths from psychological empowerment to innovative work behaviour and job performance. This partial mediation model (M3) also showed an acceptable fit to the data ( $\chi^2 = 347.47$ ;  $df = 170$ ; CFI = .94; TLI = .93; RMSEA = .05; SRMR = .05). The addition of direct paths significantly improved the model fit. The chi-squared difference test was significant ( $\chi^2(4) = 50.64$ ,  $p < .001$ ), hence M3 was preferred to M1. Analysis of the paths indicated a direct relationship between psychological empowerment and job performance.

We then extended M3 and tested another partial mediation model (M4) with direct paths from job autonomy and job variety to innovative work behaviour and job performance. The partial mediation model (M4) showed similar fit to the data as M3 ( $\chi^2 = 339.76$ ;  $df = 166$ ; CFI = .94; TLI = .93; RMSEA = .05; SRMR = .05). However, analysis revealed that the chi-squared difference test was not significant ( $\chi^2(4) = 7.71$ ,  $p = .10$ , *ns*), so the addition of direct paths from job autonomy and job variety to innovative work behaviour and job performance did not significantly improve the model fit. Furthermore, the direct paths from job autonomy and job variety to innovative work behaviour and job performance were not significant. If the alternative model (M4) was sufficiently distinct from M3, a significant decrease in chi-square from M3 to M4 would have been expected, while analysis revealed that the decrease in chi-square was not significant.

To confirm that M3 was the best representation of the data, we used analysis of AIC difference. However, the AIC difference of less than 2 between M3 and M4 (Burnham & Anderson, 2004; Raftery, 1995) did not provide sufficient evidence for final model selection.

Therefore, we also considered the BIC and followed Raftery (1995) recommendation. The literature indicates that a BIC difference of  $>10$  provides strong evidence against the model with the highest BIC value. In our case, the BIC difference of 15.25 provided strong evidence against M4 and further suggested that the precedent partial mediation model (M3) was to be preferred to the latter partial mediation model (M4).

In light of M3 parsimony over M1, M2 and M4, the partial mediation model M3 was preferred as the best representation of the data. The standardized path coefficients associated with this model are presented in Figure 5.1.1. As depicted in Figure 5.1.1, all the direct paths between job autonomy, job variety, and psychological empowerment as well as between psychological empowerment and proactive work behaviour and between proactive work behaviour, innovative work behaviour, job performance were significant ( $p < .001$ ). The findings also revealed the existence of direct path between psychological empowerment and job performance ( $p < .05$ ). At this step, Shrout and Bolger (2002) conditions to estimate indirect effects were fulfilled.

#### **4.4 Hypothesis testing**

To provide support to the hypotheses that psychological empowerment and proactive work behaviour intervene as sequential mediators in the relationship between job autonomy, job variety, and innovative work behaviour as well as job performance, we examined the significance of indirect effects (Cheung, 2007; Hayes, 2009; Shrout & Bolger, 2002) using bootstrap 95% confidence intervals.

**Table 4.** Indices of fit of structural model and alternative models

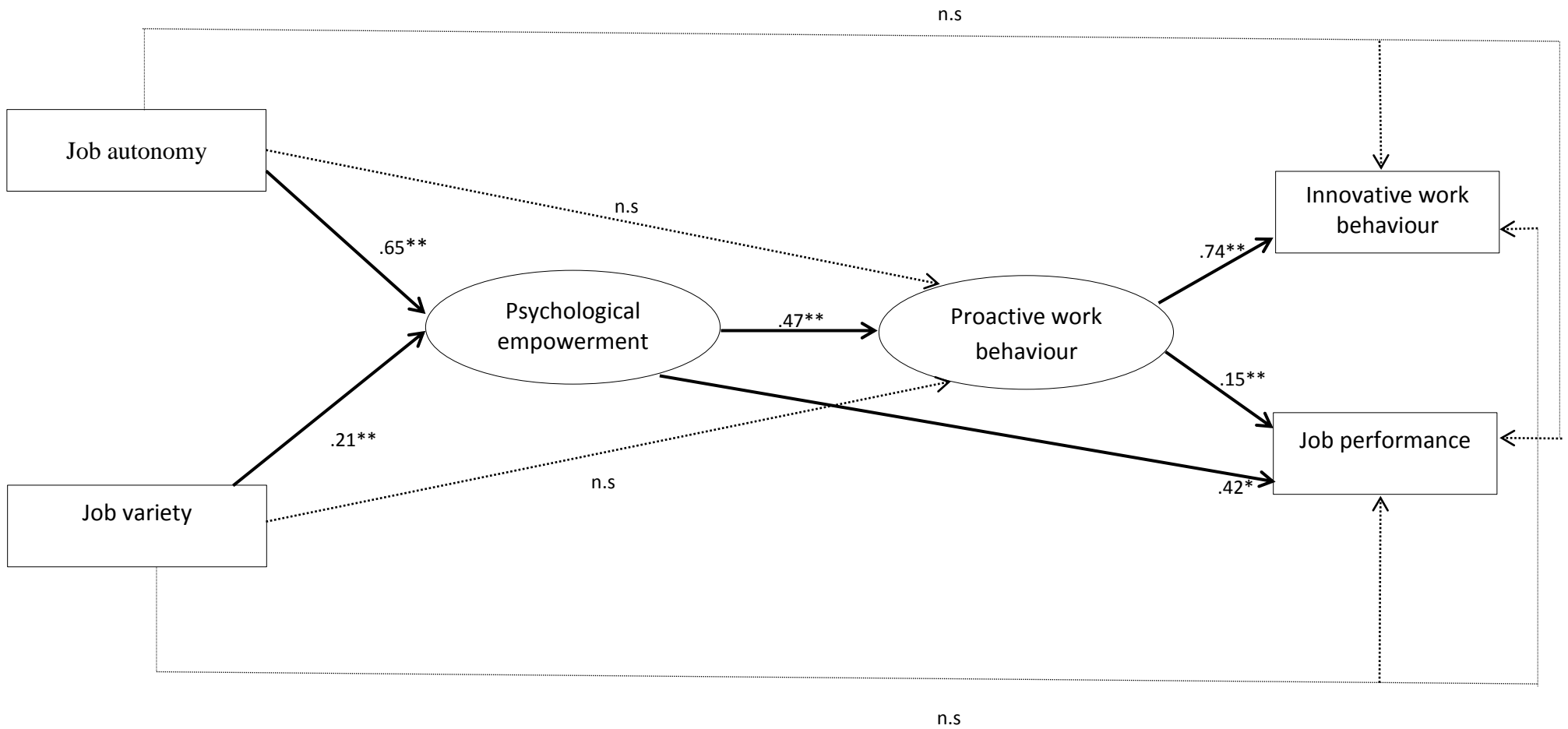
Model	AIC	BIC	$\chi^2$	<i>df</i>	$\Delta\chi^2$	$\Delta df$	RMSEA	CFI	TLI	SRMR
<b>M1 (hypothesized full mediation model)</b>	8802.00	9019.10	398.15	174	-	-	.06	.92	.91	.05
<b>M2 (alternative model)</b>	8804.40	9028.98	396.54	172	1.61	2	.06	.92	.91	.05
<b>M3 (alternative model)</b>	8759.33	8991.40	347.47	170	50.68*	4	.05	.94	.93	.05
<b>M4 (alternative model)</b>	8759.62	9006.65	339.76	166	7.71	4	.05	.94	.93	.05

Note:  $n = 321$ . \* $p < .001$ . AIC = Akaike Information Criterion; BIC = Bayesian Information Criteria;  $\chi^2$  = Chi-square value; *df* = Degrees of freedom; RMSEA = Root mean square error of approximation; CFI = Comparative fit index; TLI = Tucker–Lewis Index; SRMR = Standardized root mean square residual.

Results from the 5,000 bootstrap replications showed that all the expected indirect effects were significant and provided evidence to support the sequential mediating role of psychological empowerment and proactive work behaviour (Table 5).

Job autonomy had a significant indirect effect on innovative work behaviour via the two intermediate mediators (indirect effect = .18, 95% CI [.12, .27]). In addition, job variety had a significant indirect effect on innovative work behaviour via the two intermediate mediators (indirect effect = .06, 95% CI [.03, .10]). These findings supported hypotheses 1a and 2a. We also examined the indirect effects between job autonomy, job variety, and job performance. Results revealed a significant indirect effect between job autonomy and job performance through the sequential mediation of psychological empowerment and proactive work behaviour (indirect effect = .03, 95% CI [.00, .06]). A significant relationship was also found between job variety and job performance through the presence of the two mediators (indirect effect = .01, 95% CI [.00, .02]). However, an indirect effect was found between job autonomy and job performance through psychological empowerment as a unique mediator (indirect effect = .17, 95% CI [.11, .23]). Similarly, an indirect effect was also found between job variety and job performance through psychological empowerment as a unique mediator (indirect effect = .06, 95% CI [.03, .09]). The indirect effects between job autonomy, job variety, and job performance through psychological empowerment as a single mediator were even stronger with psychological empowerment as a unique mediator. Thus, hypotheses 1b and 2b were partially supported (Table 5).





**Figure 5.1.1** Structural model with standardized path coefficients.  
 Note.  $n = 321$ ; \*\* $p < .001$ , \* $p < .05$ .

**Table 5.** Bootstrap (5000) indirect, direct and total effects results, and 95% CI

Relation	Mediators	Point estimate and bootstrapping bias-corrected 95% CI
AUT to IWB	PE	-.01 [-.08, .05]
	PWB	.01 [-.07, .12]
	Both PE and PWB	.18** [.12, .27]
	Total indirect effect	.19** [.10, .27]
VT to IWB	PE	-.04 [-.03, .01]
	PWB	.05 [-.02, .12]
	Both PE and PWB	.06** [.03, .10]
	Total indirect effect	.11** [.02, .18]
AUT to PERF	PE	.17** [.11, .23]
	PWB	.00 [-.01, .02]
	Both PE and PWB	.03* [.00, .06]
	Total indirect effect	.21** [.15, .25]
VT to PERF	PE	.06** [.03, .09]
	PWB	.00 [-.00, .03]
	Both PE and PWB	.01* [.00, .02]
	Total indirect effect	.08** [.05, .12]

Note:  $n = 321$ ; \*\* $p < .001$ , \* $p < .05$ . Confidence intervals (CI) are in brackets;

AUT = Job autonomy; VT = Job variety; PE = Psychological empowerment; PWB = Proactive work behaviour; IWB = Innovative work behaviour; PERF = Job performance.

## **5. Discussion**

Our aim in this research was to address an important gap in the literature in order to understand how favourable working conditions can lead to proactive work behaviour, which in turn can lead to positive behavioural outcomes. Specifically, as depicted in Figure 5.1.1, we found that job characteristics (i.e., job autonomy, job variety) are related to proactive work behaviour via the mediating role of psychological empowerment. Proactive work behaviour subsequently related to innovative work behaviour and to job performance. Furthermore, the results of the sequential mediation models revealed significant indirect effects of job characteristics on innovative work behaviour as well as on job performance through psychological empowerment and proactive work behaviour.

This study makes an important contribution to the literature on proactivity by testing a model of proactivity composed of antecedents, mediators, and consequences as proposed by Bindl and Parker (2010) to (1) understand how job characteristics can exert an indirect effect to promote innovative work behaviour and job performance, (2) explain the relationship between proactive work behaviour and some positive outcomes, and (3) understand the proactive work behaviour of hospital middle managers. As stated previously, to our knowledge, this model of proactivity has not been tested in previous research or on a sample of middle managers.

### **5.1 Theoretical implications**

Proactive work behaviour is not only a set of behaviours, but also a process (Bindl & Parker, 2010; De Vos, De Clippeleer, & Dewilde, 2009; Parker et al., 2010). In this study, we extended Bindl and Parker (2010) theoretical model to the healthcare sector. We proposed a research model with two mediators to explain the relationship between job characteristics and innovative work behaviour as well as job performance. Specifically, we examined whether

hospital middle managers' job characteristics could enhance proactive work behaviour via the cognitive motivational state "feeling empowered". Afterwards, we extended research to the possible benefit of feeling empowered for proactive behaviour at work, which could in turn lead to positive individual outcomes such as innovative work behaviour and job performance. The results of this study have several theoretical implications.

As supposed, we found no direct relationship between job characteristics (i.e., job autonomy and job variety) and proactive work behaviour or between job characteristics and innovative work behaviour and job performance. However, we found that job autonomy and job variety indirectly enhance hospital middle managers' proactive work behaviour by fostering feelings of empowerment. In terms of theoretical implications, this study provides insight into how psychological state is important and can help to connect contextual factors (e.g., job characteristics) to proactive work behaviour. These findings are in line with prior studies that showed job design/characteristics (distal antecedents) increase cognitive motivational states (proximal antecedents), thus boosting proactivity (Parker, 2000). For instance, Salanova and Schaufeli (2008) found no direct relationship between job resources (job control, feedback, job variety) and proactive behaviour. However, they found that work engagement – the *reason to* motivational state – fully mediated this relationship.

In addition, results from this study highlighted the important role of the first mediator "psychological empowerment" but indicated that the second mediator "proactive work behaviour" seems to be more determinant for innovative work behaviour. In accordance with literature that demonstrated that change-oriented behaviours are important for implementing innovation (Bindl & Parker, 2010; Déprez & Battistelli, 2017; Parker & Collins, 2010; Strauss et al., 2015; Unsworth & Parker, 2003), we found that proactive work behaviour is an essential condition and a key driver to enhance hospital middle managers' innovative work

behaviour. These results suggest that in order to innovate, hospital middle managers need to engage in proactive actions, take initiative, and so on.

For job performance, the findings confirmed the sequential mediation of psychological empowerment and proactive work behaviour. However, additional results revealed that to enhance job performance, feeling psychologically empowered seems to be more crucial. Hence, we found that proactive work behaviour can contribute as a second mediator to enhancing job performance, but does not appear to be a precondition to enhancing hospital middle managers' job performance. Results suggest that hospital middle managers' perceptions of job performance are strongly related to their perceptions of feeling empowered. These results are also in line with earlier studies that highlighted the importance of psychological empowerment to improving task performance (Seibert et al., 2011) and other behavioural outcomes.

The contribution of this study is particularly significant because it examines the indirect benefit of job characteristics (i.e., autonomy and job variety) and the mediating role of psychological empowerment as well as proactive work behaviour to enhance the innovative work behaviour and job performance of hospital middle managers. Additionally, as stated, in this study we make an important contribution to the literature by focusing on hospital middle managers' proactive work behaviour, from antecedents to individual consequences. These findings provide initial knowledge of how hospital middle managers' proactive work behaviour can be enhanced and what the outcomes can be for them. Previous research on proactivity in the healthcare sector has focused on the relationship between hospital managers' leadership style and their subordinates' proactive work behaviour. To our knowledge, except for Warshawsky, Havens and Knafl (2012), there has been no study that focused on hospital managers' proactive work behaviour in order to understand how this crucial behaviour can be promoted or to investigate the consequences for this group.

## **5.2 Practical implications**

Hospitals are challenged to remain competitive and promote a high quality of care and service even while they face budget restrictions. Studies have suggested that the key to organizational success is an engaged workforce that proactively solves problems (Warshawsky et al., 2012). In healthcare institutions, hospital middle managers are the first stage to actively or proactively monitor and prevent adverse events. However, as stated, little is known about the determinants and personal consequences of their proactive work behaviour.

Although the literature states that proactive work behaviour is not easy to promote (Wu & Parker, 2017), the results of this study provide additional understanding of how proactive work behaviour can be encouraged and present initial findings on the potential benefit related to this behaviour. Furthermore, this study suggests several practical implications for healthcare institutions that intend to foster hospital middle managers' proactive and innovative work behaviour or enable job performance.

The results indicate that job autonomy and job variety do not directly contribute to behavioural outcomes such as proactive work behaviour, innovative work behaviour, or job performance, but significantly enhance hospital middle managers' feelings of empowerment. Thereafter, feeling psychologically empowered fosters proactive work behaviour, which in turn promotes innovative work behaviour and can directly enhance job performance. These findings suggest that designing favourable working conditions indirectly impact hospital managers' behaviours at work, but their psychological motivation state is important in achieving this goal. Based on these findings, hospital governance and upper hospital managers should encourage hospital middle managers' perceptions of psychological empowerment. Healthcare institutions can support the perception of empowerment of hospital middle managers (competence, meaning, impact, self-determination) by providing

empowering work environments (Laschinger, Finegan, Shamian, & Wilk, 2004; Spreitzer, 1995) and favourable working conditions to help them to feel confident. Empowering work environments and favourable working conditions include elements such as a climate of participation, availability of organizational resources, organizational support, supervisor support, coaching, access to information, and open communication (Bordin, Bartram, & Casmir, 2007; Conger & Kanungo, 1988; Ghani, Raja Hussin, & Jussef, 2009; Ongori & Shunda, 2008; Spreitzer, 1996). Hospital managers' feelings of empowerment can be also reinforced by helping them to accomplish their goals, encouraging them to be self-motivated and determined, allocating more power to them, giving them opportunities to learn, and developing trust in their abilities.

Hospital governance and top hospital managers can also encourage the psychological empowerment of hospital middle managers through training programs aimed at developing knowledge and skills and also by encouraging knowledge sharing behaviours. The literature has demonstrated that training programs (Voegtlin, Boehm, & Bruch, 2015) and knowledge sharing among employees can enhance employees' psychological empowerment (Hasani & Sheikhesmaeili, 2016; Zolfaghari, Ghorsi, & Dehestani, 2017). The literature also indicates that the promotion of psychological empowerment and development can have positive effects on affective commitment (Bhatnagar, 2005), job satisfaction, and well-being (Moura, Orgambidez-Ramos, & Jesus, 2015; Seiberg et al., 2011). More broadly, as we saw in this study, it can directly enhance both proactive work behaviour and job performance and indirectly enhance innovative work behaviour. As Zolfaghari et al. (2017) have stated, human capital empowerment is critical in organizations, and influencing employee empowerment can set the stage for improving performance and achieving a competitive advantage for organizations. Thus, healthcare institutions should identify factors that can inhibit or enhance hospital middle managers' feelings of empowerment.

In addition, analysis of direct and indirect effects also suggests that proactive work behaviour is a key component in enhancing hospital middle managers' innovative behaviour and can contribute to a lesser extent to promoting their job performance. These results support the existing literature, which stipulates that organizations should promote proactive work behaviour of employees. This stipulation is made not only because of the positive outcomes for the organization (e.g., performance, competitiveness), but also because proactive work behaviour can lead to positive outcomes for individuals. To promote hospital middle managers' proactive work behaviour, healthcare institutions should pay more attention to this behaviour and value it by (1) creating a proactive management culture and redesigning HR strategies in order to move away from a control culture orientation – traditional and restrictive, that can inhibit creativity and initiative – towards a trust orientation, where hospital middle managers are recognized as high talent potential that contribute to the healthcare organization's success and competitiveness and are able to introduce change and be creative without being hindered by restrictive policies or closely monitored; (2) providing good working conditions and support for hospital middle managers to implement ideas; (3) encouraging proactive thinking and taking initiative by valuing, encouraging, and rewarding this behaviour; (4) recognizing the creative potential of hospital middle managers; (5) creating opportunities that allow hospital middle managers to develop and implement creative ideas and develop their potential; (6) using human capital and recognizing that these self-initiated behaviours can be a key resource to both help healthcare institutions to promote quality of care and service and to achieve their goals in order to remain competitive and innovative.

### **5.3 Research limitations**

This study has some limitations. First, this study was cross-sectional, which did not allow us to infer causal relation. Second, the study took place within one healthcare



institution. The analysis of proactive behaviour was in a fixed context, which offered the advantage of examining a behaviour that can be influenced by the work context. However, findings can remain limited to the studied population and may be not representative of a larger sample of hospital middle managers.

Third, self-rated questionnaires were used. In the literature, to control method bias, certain scholars have suggested that it is preferable to obtain data from multiple sources (Ostroff, Kinicki, Clark, 2002; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, recently Podsakoff, MacKenzie and Podsakoff (2012) have argued that this procedure is not always feasible and is not necessarily appropriate when a study's intent is to assess an individual perception, belief, or judgment. Additionally, they have stated that this procedure can also be problematic when a study's intent is to measure an individual attitude or behaviour because an individual's behaviour is not necessarily observable by others. Finally, they have indicated that to obtain a valid measure would require that others accurately infer the individual's attitudes based on their observations of the individual's behaviour, which is not always possible because others may not always have the opportunity to observe individual attitudes. In line with previous statements, Wu and Wang (2011) suggest that leaders' proactive behaviours can be assessed by the leaders themselves. Even though self-rating is often associated with self-lenient effects, Wu and Wang posit that it can be more accurate to use leaders' self-ratings because sometimes proactivity – considered a discretionary behaviour – can be difficult for others to observe. Moreover, relying on supervisors, peers, or team ratings may introduce different perceptions of the same leaders' proactivity due to differing expectations, to the effectiveness of proactive actions, or due to subordinates', peers', or supervisors' observations.

In this study, in accordance with Podsakoff et al. (2012) and Wu and Wang (2011) statements, we have chosen to use self-reported data. The methodology used is also in line

with prior studies that used self-reported data to assess individuals' attitudes and behaviours at work (e.g., proactive work behaviour, innovative work behaviour, job performance) (Battistelli, Montani, & Odoardi, 2013; Battistelli, Montani, Odoardi, Vandenberghe, & Picci, 2014; Giebels, De Reuver, Rispens, & Ufkes, 2016; Montani, Battistelli, & Odoardi, 2014). The choice of self-rating was also made for practical reasons and feasibility issues. In this organization, there were a few upper hospital managers for all 479 hospital middle managers. Moreover, because the study took place in one organization, hospital middle managers might have felt evaluated by their team, upper manager, or HR, which could have decreased the participation rate.

#### **5.4 Future directions**

In conclusion, this study makes a novel contribution by focusing on the proposed model of Bindl and Parker (2010) to understand the proactive work behaviour of hospital middle managers. These findings represent a first step. As Claes and Van Loo (2011) have indicated, it remains a major challenge to empirically investigate the high number of proposed links between antecedents and proactive behaviour, as well as the favourable and unfavourable outcomes of proactive behaviour.

The literature stipulates that because of the multiple factors that can influence proactive behaviour, it is difficult to understand the general process by which organizational context and factors can stimulate proactive work behaviour (Beltrán-Martín, Bou-Llusar, Roca-Puig, & Escrig-Tena, 2017). However, additional research is necessary to understand the process by which hospital middle managers' proactive work behaviour can be activated. We therefore encourage future research to continue investigating the role of other contextual factors such as superiors' leadership style, organizational climate or culture, structural empowerment (e.g., access to information, resources, support, and opportunity), or job

stressors (e.g., workload, interruptions) to understand what can foster or restrain hospital middle managers' proactive work behaviour.

Parker et al. (2010) have suggested that proactive behaviour can be influenced by three cognitive motivational states: *can do* (e.g., RBSE), *reason to* (e.g., felt responsible, work engagement), and *energy for* (e.g., emotions, mood). In this study, we focused on the role of psychological empowerment, *can do*. Future studies should also consider the other possible motivational states as mediators to understand how distal antecedents can indirectly lead to proactive work behaviour. We also recommend additional research to integrate analysis of other proactive work behaviour outcomes, such as those on health and well-being indicators. To go further, scholars should also investigate the outcomes of proactive work behaviour at another level, such as at a work-unit level, by integrating objective data from HR (e.g., turnover, absenteeism).

To continue to improve literature and overcome previous limitations as specified, we suggest that future research should be longitudinal in order to find causal relationships and use latent constructs to reduce measurement errors. Longitudinal designs could also be interesting because, as stated in the literature (Howell & Shea, 2001), for innovation to occur, proactive individuals need to persevere until their ideas are implemented. Thus, analysis of the relationship between proactive work behaviour and behavioural outcomes over a prolonged period time could be interesting. If a study takes place within one organization, it would be also interesting to test the hypothesized model with a panel design to introduce a temporal separation between measurements and also to control common method bias (Podsakoff et al., 2012). As a final recommendation, relying on prior suggestions for future research, scholars should replicate this study on a larger sample of hospital middle managers working in different hospitals. Studies on hospital middle managers' proactive work behaviour could also be cross-cultural.

## **5.5 Conclusion**

To conclude, this study provides insights for understanding how contextual factors can enhance hospital middle managers' proactive work behaviour via their cognitive motivational state and how their proactive work behaviour in turn can enhance innovative work behaviour and job performance. Indeed, we find that job characteristics (i.e., job autonomy and job variety) had no direct effect on hospital middle managers' proactive work behaviour or on their innovative work behaviour and job performance. However, results indicate that job characteristics had indirect effect on hospital middle managers' proactive work behaviour through psychological empowerment. In addition, we find that proactive work behaviour in turn is strongly related to innovative work behaviour and less strongly to job performance. Our analysis revealed that psychological empowerment can also intervene as a unique mediator in the relationship between job characteristics and job performance. This study carries important theoretical and practical implications and paves the way for additional research to understand how hospital middle managers' proactive work behaviour can be encouraged and what the effects of these behaviours can be for them.

## **Chapter 2: Article 2: COGNITIVE MOTIVATIONAL STATES, PROACTIVE WORK BEHAVIOUR, QUALITY OF WORK LIFE, AND JOB EFFECTIVENESS**

### **Study 2: Does proactive work behaviour lead to positive outcomes on quality of work life, innovative work behaviour, and job performance over time? A panel study among hospital middle managers working in a French hospital**

#### **Abstract**

This study examines the effects of proactive work behaviour on quality of work life (QWL) indicators and indicators of job effectiveness after a period of six months. To provide support for the assumption that proactive work behaviour can be a resource, we conducted a panel study among hospital middle managers working in a French hospital at two points in time. We also analysed the role of the cognitive motivational states *can do* and *energy for* as key antecedents of proactive work behaviour. We proposed that hospital middle managers' cognitive motivational states (e.g., role breadth self-efficacy, positive emotions) enhance their proactive work behaviour, which in turn has long-term effects on their QWL (i.e., job satisfaction, job stress) and efficacy at work (i.e., innovative work behaviour, job performance). Findings from 152 hospital middle managers indicated that "role breadth self-efficacy" and "positive emotions" enhance proactive work behaviour. Furthermore, a positive association between proactive work behaviour (T1) and innovative behaviour (T2) is found. The results also indicate that proactive work behaviour mediates the relationship between hospital middle managers' cognitive motivational states and innovation. The original contribution of this research lies in the analysis of the benefits of hospital middle managers' proactive work behaviour over time on both QWL indicators and indicators of job effectiveness. Theoretical and practical implications are discussed.

**Keywords:** proactive work behaviour, quality of work life, innovative work behaviour, job performance, cognitive motivational state.

## **1. Introduction**

Scholars have often assumed that proactive work behaviour is beneficial for organizational success and team performance and carries personal benefits for employees (e.g., performance, success, satisfaction). Several cross-sectional studies have been conducted to support this statement (Belschak & Den Hartog, 2010; Crant, 2000; Déprez & Battistelli, 2017; Fuller & Marler, 2009; Fuller, Marler, & Hester, 2012; Thomas, Whitman, & Viswesvaran, 2010; Wu & Parker, 2013). Thus, the short-term effects of employees' proactive behaviour have begun to be documented. For instance, in a meta-analysis, Tornau and Frese (2013) found positive associations between proactive behaviour at work and job performance and innovation, both as self-rated and as rated by a supervisor. Recently, studies have started to integrate analysis of the consequences of proactivity on employees' health and well-being (Cangiano, Parker, & Yeo, 2018; Strauss, Parker, & O'Shea, 2017). However, the association – positive or negative – between proactive work behaviour and individual health and well-being indicators (e.g., job stress) has not yet been clearly demonstrated.

To date, although the short-term effects of proactive work behaviour have been investigated, its long-term effects have yet to be clearly demonstrated before one could postulate that proactive work behaviour is beneficial for employees. In addition, the literature indicates that proactive work behaviour is linked to the perspective of time because the introduction of change requires perseverance (Strauss, Griffin, Parker, & Mason, 2015). An employee can engage in proactive tasks, but the effects of proactive actions can become visible only after a period of time (Frese & Fay, 2001). Thus, an analysis of proactive work behaviour's short-term effects does not necessarily capture the process linking proactive work behaviour to beneficial or harmful outcomes for employees. Furthermore, cross-sectional findings are accompanied by limitations and do not allow for causality to be inferred. As a consequence, certain scholars have recommended that a longitudinal design be used to

overcome these limitations (Andersson, 2015; Claes & Van Loo, 2011; Fay & Hüttges, 2017; Spychala & Sonnentag, 2011; Strauss et al., 2013) and continue to improve knowledge on proactive work behaviour outcomes. For instance, Cangiano and Parker (2016) have suggested the use of longitudinal studies to analyse the mechanism by which proactive work behaviour can lead to health and well-being. Still more work is needed to clarify the effects of proactive work behaviour over time on both employees' health and well-being as well as on their attitudes and behaviours at work.

In this study, based on Bindl and Parker (2010) and Cangiano and Parker (2016) theoretical framework, we extend the research to the analysis of the effects of proactive work behaviour over time on both QWL indicators – which cover indicators of attitudes, behaviours, health, and well-being – and indicators of job effectiveness. As the literature indicates, proactive work behaviour can lead to positive outcomes for job performance, but not necessarily for health and well-being (Cangiano & Parker, 2006). Additionally, we examine the role of cognitive motivational states in this relationship. We propose that RBSE and positive emotions will foster hospital middle managers' proactive work behaviour, which is related in the long term to QWL indicators (e.g., increased job satisfaction, decreased job stress) as well as to indicators of efficacy at work (e.g., enhanced innovative work behaviour and job performance).

Altogether, this study expands the literature on the effects of proactive work behaviour over time. We test these hypotheses by conducting a panel study, which is a particular design of longitudinal study. Additionally, we examine in a single study the effects of proactive work behaviour on both QWL indicators and indicators of job efficacy, which has not been done previously. Furthermore, to our knowledge, we are the first to date to analyse these hypotheses among a sample of hospital middle managers.

## **2. Theoretical background**

In general, the concept of proactive work behaviour is defined as a behaviour that aims to introduce positive changes in the internal work environment (Frese & Fay, 2001; Grant & Ashford, 2008; Griffin, Neal, & Parker, 2007; Parker & Collins, 2010). Often considered a discretionary behaviour (Spychala & Sonnentag, 2011) due to its self-directed nature (Van Dyne & LePine, 1998), being proactive is a challenging goal for employees (Bindl & Parker, 2010; Frese & Fay, 2001; Wu & Parker, 2017). Parker, Bindl and Strauss (2010) speak about “making things happen”. Employees that engage in proactive work behaviour go beyond their formal roles or job demands to improve things (e.g., work methods, process, internal functioning, solve problems). Empirical studies have conceptualized voice behaviour (i.e., speaking out), taking charge (i.e., bringing about change in the work area), and problem prevention (i.e., recognizing potential problems before they occurs and to stopping them) as the main behaviours related to this construct (Parker & Collins, 2010).

### **2.1 Proximal antecedents as a powerful source of motivation to enhance proactive work behaviour**

Scholars have identified individual (e.g., personality, knowledge, and abilities) (Bateman & Crant, 1993; Fay & Frese, 2001) and situational factors (e.g., job characteristics, supportive climate) as distal antecedents of proactive work behaviour (Parker et al., 2010; Parker & Wu, 2014). However, the empirical literature tends to support the idea that cognitive motivational states also play a central role in the activation of proactive behaviour (Bindl, Parker, Totterdell, & Hagger-Johnson, 2012; Parker, Williams, & Turner, 2006). Scholars have indicated that to be proactive, individuals need to feel that they are able to engage in proactive actions (*can do*), they have to have a specific motivation to engage in proactivity (*reason to*), or they have sufficient energy to introduce proactive changes (*energy for*);



otherwise, they will not engage in proactive changes even if they work in favourable work environment (Bindl et al., 2012; Parker et al., 2006). On the other hand, scholars have indicated that individuals can work in an unfavourable context, but if they feel capable of achieving proactive tasks, be highly motivated to introduce change or have the energy, this feeling can encourage them to engage in proactive tasks.

Due to their importance in the proactivity process, literature indicates that individual cognitive motivational states are the most proximal and direct predictors of proactive behaviour at work (Bindl & Parker, 2010; Fuller et al., 2012). In this study, we focus specifically on two cognitive motivational states: *can do* (i.e., RBSE) and *energy for* (i.e., positive emotions).

### **2.1.1 *Can do* cognitive motivational state**

The *can do* motivational state refers to the belief of being capable in engaging in proactive behaviour. To a large extent, in the literature, scholars have focused on the specific form of *can do* psychological state called RBSE as a main driver of proactive actions (Axtell & Parker 2003; Fuller et al., 2012; Parker et al., 2006). Parker (1998) defines the concept of RBSE as “the extent to which people feel confident that they are able to carry out a broader and more proactive role, beyond traditional prescribed technical requirements” (p. 835). This concept is derived from Bandura’s (1997) concept of self-efficacy, but it is important to notice that these two concepts are different. The concept of self-efficacy refers to an individual’s perception of being able to achieve a task, while the concept of RBSE refers to an individual’s perception of being able to achieve a set of proactive tasks (Axtell & Parker, 2003; Bindl & Parker, 2010; Den Hartog & Belschak, 2012; Parker & Collins, 2010; Strauss, Griffin, & Rafferty, 2009), such as analysing a long-term problem to find a solution, designing efficient

new procedures for a work area, or contacting people outside their company to discuss problems and find solutions.

While several studies have demonstrated the mediating role of RBSE in the relationship between distal antecedents (e.g., job characteristics, leadership style, supportive climate) and proactive behaviour (Berdicchia, 2015; Parker et al., 2010; Parker et al., 2006; Sonnentag & Spychala, 2012), the role of RBSE as a proximal and direct powerful predictor of proactive behaviour has been theorized in several empirical studies (Griffin et al., 2007; Morrison & Phelps, 1999; Parker, 2000; Parker et al., 2006; Parker & Collins, 2010; Strauss et al., 2009). Role breadth self-efficacy has been positively related to making suggestions and implementing ideas (Axtell et al., 2000) and to proactive work behaviour (Ohly & Fritz, 2007; Parker & Collins, 2010; Parker et al., 2006) such as taking charge (Morrison & Phelps, 1999; Parker & Collins, 2010), voice (Parker & Collins, 2010; Withey & Cooper, 1989), individual innovation (Axtell et al., 2000; Parker & Collins, 2010), problem solving, and problem prevention (Parker & Collins, 2010; Parker et al., 2006). Thus, RBSE is considered relevant for predicting proactive behaviour at work. We propose the following:

*Hypothesis 1: RBSE will be positively related to proactive work behaviour.*

### **2.1.2 Energy for cognitive motivational state**

While the *can do* and *reason to* states have received a great deal of attention, the third motivational state, *energy for* – an affective state – has been less studied in literature (Bindl et al., 2012; Lam, Spreitzer, & Fritz, 2014). Literature underlines the idea that individual behaviour at work cannot be explained by only rational factors or cognitive rational factors, but emotions (e.g., positive or negative) also predict employee behaviour (Fineman, 1996; Kals, Schumacher, & Montada, 1999). For instance, studies have found that positive emotions enhance creativity (Amabile, Barsade, Mueller, & Staw, 2005; Isen, Daubman, & Nowicki,

1987) and efficiency (Brief & Weiss, 2002; Bryan & Bryan, 1991; Forgas, 2002; Grawitch, Munz, & Kramer, 2003). As Wall, Russell and Moore (2017) have argued, “positive emotions create safe workplace spaces to explore values, meaning, accomplishment, and vision where personal and organizational transformation can happen” (p. 129).

Recent literature on proactive behaviour has also confirmed previous statements and identified positive emotions as a proximal antecedent of proactive behaviour (Bindl et al., 2012; Den Hartog & Belschak, 2007; Parker & Collins, 2010). Parker and Wu (2014) have explained this relationship by the fact that when employees feel positive affects, mood, or energy, this feeling can broaden thinking and result in more flexible cognitive processes. Additionally, the literature explains that positive emotions can help individuals to focus on positive outcomes, and when they feel energized, they feel more confident to engage in proactive tasks. Thus, positive emotions have been related to proactive behaviour in several empirical studies. For instance, Sonnentag (2003) demonstrated that when individuals felt enthusiastic and recovered, they were more likely to engage in proactive actions to preserve their positive work situation and improve things at the same time.

The literature also demonstrates positive links between positive emotions and different proactive behaviours, such as self-initiative (Binnewies, Sonnentag, & Mojza, 2009) and proactive socialization (Ashford, Sluss, & Harrison, 2007). Most specifically, links were found with proactive work behaviour such as taking charge (Fritz & Sonnentag, 2009; Parker, Collins, & Grant, 2008) and voice (Grant, 2013). Additionally, Bindl and Parker (2009) demonstrated that positive emotions were also related to each level of the cognitive proactive process (envisioning, planning, enacting, and reflection). Years later, Bindl et al. (2012) confirmed these findings. They found that high positive emotions were an important predictor for all of the levels of the proactive goal process, while low positive emotions were not related to the proactivity process. Scholars also suggested that the effects of positive emotions can

remain stable over time and have beneficial effects for proactive behaviour (Binnewies et al., 2009; Fritz & Sonnentag, 2009). They proposed the existence of a retroactive loop to explain how positive emotions can lead to proactive behaviour, leading to positive emotions and so on (Cangiano & Parker, 2016). This loop can explain why certain employees remain proactive over time. However, as Wu and Parker (2012) have stated, studies are still needed to address the real impact of emotions on proactive behaviour at work. Based on the following assumptions, we propose that:

*Hypothesis 2: Positive emotions will be positive related to proactive work behaviour.*

## **2.2. Consequences of proactive work behaviour on quality of work life indicators and indicators of job effectiveness**

### **2.2.1 Proactive work behaviour and quality of work life indicators**

The concept of QWL refers to individuals' feeling about different dimensions of their jobs (Priyadarshani & Bhagat, 2014). To assess QWL, scholars have proposed that individual attitudes towards their jobs and the organizations, as well as behaviours at work, health, and well-being (i.e., mental, physical) indicators can be used as a reflection of employees' QWL.

In the literature, several studies have found a relationship between proactive work behaviour and indicators that are often considered QWL indicators. Indeed, proactive behaviour has been associated with employees' positive attitudes toward their jobs and organizations, such as job satisfaction (Kim & Liu, 2015; Wanberg & Kammeyer-Mueller, 2000) and affective organizational commitment (Den Hartog & Belschak, 2007; Kim & Liu, 2015). The positive relationship between proactive behaviours and job satisfaction can be explained by the fact that proactive employees introduce change to remove obstacles that may impact their job satisfaction (Erdogan & Bauer, 2005). Additionally, scholars have proposed that the positive relationship between proactive behaviour at work and affective commitment

can be explained by the fact that proactive employees are involved in implementing positive changes to improve their work environment (Den Hartog & Belschak, 2007) and thus to improve their organization. These findings are confirmed by Thomas et al. (2010) in their meta-analysis, conducted with 103 independent samples. They found voice behaviour to be related both to job satisfaction ( $r = .20$ ) and to affective commitment ( $r = .25$ ). In addition, scholars also have found associations between proactive work behaviour and employees' behaviours at work. For instance, it has been found that proactive work behaviour also contributes to reducing employees' intent to quit (Ashforth, Sluss, & Harrison, 2007) and absenteeism at work (Greenglass & Fiksenbaum, 2009).

Concerning the third QWL indicator "health and well-being", few studies have examined the potential benefits "bright side" or costs "dark side" of proactive work behaviour for employee's health and well-being. Some scholars have indicated that proactive work behaviour can be harmful for employees' health and well-being (Bolino, Valcea, & Harvey, 2010; Cangiano & Parker, 2016; Fay & Hüttges, 2017; Grant, Nurmohamed, Ashford, & Dekas, 2011) while others have suggested its positive effects (Greenglass & Fiksenbaum, 2009). For instance, Greenglass and Fiksenbaum (2009) found that proactivity was related to positive affects. Parker, Johnson, Collins and Nguyen (2013) proposed that proactive behaviour helps individual to gain resources and thus fosters well-being. On the other hand, Bolino and Turnley (2005) report a positive association between proactive behaviour and job stress. Recently, Strauss et al. (2017) have found proactive work behaviour to be related to job stress only under certain conditions, including high control motivation and low autonomous motivation, but they conclude that, generally, proactive work behaviour does not necessarily have an impact on job stress and employee well-being.

Because the analysis of health and well-being has received less attention than other QWL indicators such as attitudes towards jobs and organizations and behaviours at work,

there is a lack of knowledge in the literature on the real effects of proactive work behaviour for employees' health and well-being. In this study, in accordance with Parker et al. (2013), we suggest that proactive work behaviour can help employees to take control in work and gain additional resources. Thus, we suggest that proactive work behaviour can reduce job stress.

Additional research is needed to draw together previous findings and to investigate the effects of proactive work behaviour on the QWL indicators (e.g., individuals' attitudes towards their jobs and organizations as well as individuals' health and well-being). Indeed, to our knowledge, there is no study to date that investigates the relationship between proactive work behaviour and QWL. In this study, we focus specifically on job satisfaction (i.e., attitude towards the job), considered to be one of the main indicators of QWL and job stress (i.e., mental health), which has received little attention in the literature. To support our assumptions, we investigate the effects of proactive work behaviour on QWL indicators over time. Hence, we argue that:

*Hypothesis 3: Proactive work behaviour will be positively related to job satisfaction.*

*Hypothesis 4: Proactive work behaviour will be negatively related to job stress.*

### **2.2.2 Proactive work behaviour and indicators of job effectiveness**

Researchers have generally agreed that proactive work behaviour leads to positive outcomes for organizational performance, success, and profitability (Baer & Frese, 2003; Crant, 2000; Frese & Fay, 2001; Parker, 2000), as well as for team job satisfaction and effectiveness (Kirkman & Rosen, 1999). At the individual level, a growing number of studies have demonstrated that proactive work behaviour is related to indicators of employees' efficacy at work. For instance, scholars have found that proactive behaviour at work is associated with job performance (self-rated and as rated by supervisors) (Belschak & Den

Hartog, 2010; Crant, 1995; Grant, Parker, & Collins, 2009; Parker & Collins, 2010; Thompson, 2005; Van Dyne & LePine, 1998). Findings from the meta-analysis of Thomas et al. (2010) are in line with results from previous studies. They found a significant relationship between proactive work behaviour and job performance (voice  $r = .59$  and taking charge  $r = .46$ ). The extant literature has also found links between proactive behaviour and innovative work behaviour (Déprez & Battistelli, 2017; Parker & Collins, 2010; Strauss et al., 2015; Unsworth & Parker, 2003). Parker and Collins (2010) found that taking charge ( $r = .58$ ,  $p < .01$ ) and voice ( $r = .45$ ,  $p < .01$ ) were highly correlated with individual innovation. To explain this relationship, several scholars have proposed that proactive behaviour at work is an important precondition and a driver of individual innovative work behaviour (Déprez & Battistelli, 2017; Kickul & Gundy, 2002; Unsworth & Parker, 2003).

To go further, Frese and Fay (2001) have argued that proactivity can be short-term, but it can have long-term effects (e.g., job performance). Because most of the studies conducted were cross-sectional, additional research is needed to investigate the effects of proactive work behaviour on these indicators of job effectiveness over time. Based on prior findings, we propose the following:

*Hypothesis 5: Proactive work behaviour will be positively related to job performance.*

*Hypothesis 6: Proactive work behaviour will be positively related to innovative work behaviour.*

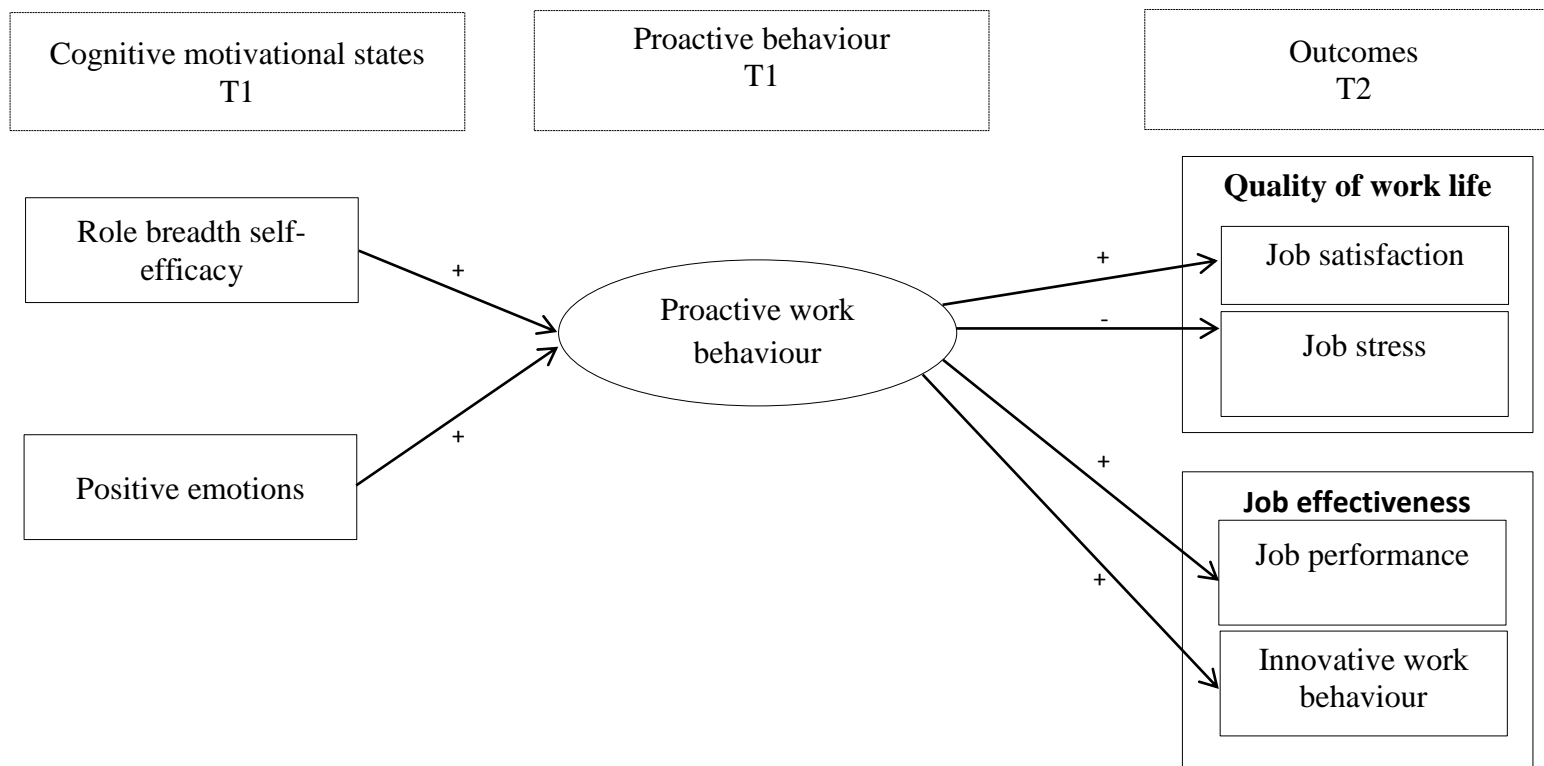
In sum, we propose that RBSE and positive emotions will enhance proactive work behaviour, which will have a long-term effect on QWL indicators as well as indicators of job effectiveness. Hence, we further postulate:

*Hypothesis 7: Proactive work behaviour will mediate the relationship between RBSE and job satisfaction (a), job stress (b), job performance (c), and innovative behaviour (d).*

*Hypothesis 8: Proactive work behaviour will mediate the relationship between positive emotions and job satisfaction (a), job stress (b), job performance (c), and innovative behaviour (d).*

These hypotheses are summarized in Figure 5.2.





*Figure 5.2* Research model of the proactive work behaviour outcomes on QWL indicators and indicators of job effectiveness over time.

### 3. Method

#### 3.1 Sample and procedure

To test these hypotheses, a panel study was conducted among 479 hospital middle managers working in a French hospital. Hospital middle managers were invited to voluntarily participate in two online surveys with a time lag of six months. In each questionnaire, participants were informed in a cover letter that the confidentiality of their answers was guaranteed and that the data collected was only for research purposes. We designed each time to allow us to gather specific data to analyse the effects of proactive work behaviour over time.

At time 1, hospital middle managers provided information on their cognitive motivational states (e.g., RBSE, positive emotions) and their proactive work behaviour. At time 2, six months later, they were invited to provide information specifically on QWL indicators as well as innovative work behaviour and job performance. We choose the time lag of six months because previous studies on proactivity have used the same time lag and found that the effects of proactive behaviours last even six months later (Ashford & Black, 1996; Déprez & Battistelli, 2017; Hirshi, Bora, Portefeli, & Vondracek, 2013; Van Dyne & LePine, 1998). Each participant had an anonymous code to allow their responses at the two time points to be matched. Thank to this process, we identified participants who responded both at time 1 and at time 2.

At time 1, the study population was 321 (response rate of 67.01%), and at time 2, there were 290 responders (response rate of 60.54%). At final, we matched 152 completed questionnaires (response rate of 31.71%). The mean age was 47.05 years ( $SD = 8.08$ ) and ranged from 21 to 61 years. 78.9% was women. The sample was mainly composed of healthcare managers (58.6%), hospital administrative managers (15.8%), and hospital technical managers (15.8%). Regarding job tenure, 24.3% had 2–5 years of experience in their

function, 23% had 6–10 years of experience, and 19.77% had 11–15 years of experience as middle managers (ranging from  $\leq 1$  to 36–40 years).

### **3.2 Measures**

The scales used were originally developed in English. For scales with no French validation, we used the standard back translation procedure (Brislin, 1980) to translate items from English language into the French language.

#### *Cognitive motivational states*

We assessed positive emotions at work by using the six items from the shortened version of the Job-Related Affective Well-Being Scale (JAWS) of Schaufeli and Van Rhenen (2006). For each item, hospital middle managers were asked to rate on a 5-point scale ranging from 1 (*never*) to 5 (*very often*) how often they have experienced each emotion in the past 30 days. A sample item is, “enthusiastic” ( $\alpha = .80$ ). Role breadth self-efficacy was assessed using the 10 items from Parker (1998) scale. For each item, hospital middle managers were invited to rate on a 5-point scale ranging from 1 (*not all confident*) to 5 (*very confident*) how confident they feel to carry out each of the 10 tasks mentioned. A sample item is, “... designing new procedures for your work area” ( $\alpha = .87$ ).

#### *Proactive work behaviour*

Constructive voice behaviour was measured using the five items of Maynes and Podsakoff (2014). A sample item is, “I regularly propose ideas for new or more effective work methods” ( $\alpha = .93$ ). Taking charge was measured using Morrison and Phelps (1999) scale. An example of item is, “I often try to change how my job is executed in order to be more effective” ( $\alpha = .84$ ). We measured problem prevention using the three items of Parker and Collins

(2010). A sample item is, “I spend time planning how to prevent reoccurring problems” ( $\alpha = .71$ ). Items for voice, taking charge, and problem prevention were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The three proactive behaviours were assessed using the French version of Déprez and Battistelli (2017).

#### *Quality of work life indicators*

Hospital middle managers' QWL was assessed using two indicators: job satisfaction and job stress. Job satisfaction was measured using the three items of Cammann, Fichman, Jenkin and Klesh (1983). Responses were given on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). An example of item is, “All in all, I am satisfied with my job” ( $\alpha = .76$ ). Perceived stress was assessed using the 10 items of Cohen and Williamson (1988). We used the French scale validated by Bellinghausen, Collange, Botella, Emery and Albert (2009). Items were rated on a 5-point scale ranging from 1 (*never*) to 5 (*very often*). An example of item is, “In the last month, how often have you felt nervous and ‘stressed’?” ( $\alpha = .82$ ).

#### *Effectiveness indicators*

Innovative work behaviour was assessed using the nine items of Janssen (2000). The French version of Déprez and Battistelli (2017) was used. Responses were given on a 5-point scale ranging from 1 (*never*) to 5 (*always*). An example of item is, “Transforming innovative ideas into useful applications” ( $\alpha = .89$ ). To evaluate job performance, we used the seven items of Williams and Anderson (1991). The French version of Lapointe, Vandenberghe and Boudrias (2014) was used. Items were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). An example of item is, “I fulfil responsibilities specified in the job description” ( $\alpha = .75$ ).

### *Control variables*

We controlled for the effects of age (Janssen & Van Yperen, 2004; Warr & Fay, 2001), gender (Kanfer, Wanberg, & Kantrowitz, 2001; Strauss et al., 2017), job tenure (Grant & Ashford, 2008), and profession category (Porto & Dall'Agnol, 2016), since they have been shown to be related to proactive behaviour.

### **3.3 Data analysis**

Preliminary analyses such as descriptive analysis, correlation analysis, and reliability analysis were conducted using SPSS23. Confirmatory factor analysis (CFA) with maximum likelihood (ML) estimation using Mplus8 (Muthén & Muthén, 2017) was conducted to test the distinctiveness among studied variables (i.e., RBSE, positive emotions, proactive work behaviour, job satisfaction, job stress, innovative work behaviour, job performance). Proactive work behaviour was assessed as a second-order factor regrouping three first-order factors: taking charge, voice, and problem prevention (Parker & Collins, 2010; Grant et al., 2009; Wu & Parker, 2017). To evaluate the best model fit, we compared the proposed model to alternative models.

Additionally, we examined the hypothesized research model using structural equation modelling (SEM). Due to the fact that the sample size-to-parameters ratio did not meet the standard requirements, mean scores were used for each construct, except for proactive work behaviour, which was measured as a latent variable. The robustness of the model was evaluated using Akaike information criterion (AIC), Bayesian information criteria (BIC), overall model chi-square ( $\chi^2$ ), degrees-of-freedom ( $df$ ), Comparative fit index (CFI), Tucker-Lewis Index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR) as key indicators of model fit. Literature suggests that CFI and TLI of .90 indicate an acceptable fit, and RMSEA and SRMR of .08 indicate an acceptable fit (Browne & Cudeck, 1993; Hu & Bentler, 1999; Schreiber, Nora, Stage, Barlow, & King,

2006). The hypothesized seven-factor model (full mediation model without direct paths from cognitive motivational states to outcomes) was also compared to an alternative model (partial mediation model with direct paths from cognitive motivation states to outcomes) in order to find best-fit model. The two models were compared via the chi-squared difference test ( $\Delta\chi^2$ ). Analysis of indirect effects was carried out by following the four steps of Shrout and Bolger (2002) procedure.

## **4. Results**

### **4.1 Descriptive statistics**

Table 6 reports the means, standard deviations, correlations of all study variables, and reliabilities of each construct. Cronbach's alpha values exceeded the acceptable limit of .70.

### **4.2 Confirmatory factor analyses**

We used CFA to assess the properties of the hypothesized seven-factor model. The proposed model showed an acceptable fit to the data ( $\chi^2 = 927.13$ ;  $df = 678$ ; CFI = .91; TLI = .90; RMSEA = .04; SRMR = .06). Additionally, we ran alternative models (i.e., six-factor model, five-factor model). The chi-square test difference indicated that the proposed model fit the data significantly better than alternative models (Table 7).

**Table 6.** Means, correlations among variables and reliability coefficients

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Age <sup>a</sup>	-	-	-												
2.Gender <sup>a</sup>	-	-	-.12	-											
3.Tenure <sup>a</sup>	-	-	.58**	-.08	-										
4.Pc <sup>a</sup>	-	-	-.18*	.35**	-.15	-									
5.RBSE (T1)	4.16	.61	-.01	-.09	.06	-.10	(.87)								
6.PE (T1)	3.61	.58	-.02	-.14	-.07	.02	.32**	(.80)							
7.VC (T1)	3.85	.74	-.14	-.08	-.07	.11	.57**	.34**	(.93)						
8.TC (T1)	3.74	.59	-.01	-.26**	-.00	-.11	.50**	.42**	.63**	(.84)					
9.PP (T1)	4.01	.57	-.05	-.21**	-.03	-.14	.45**	.24**	.47**	.61**	(.71)				
10.SAT (T2)	3.85	.73	.17**	-.11	.15	.00	.18*	.43**	.16*	.28**	.21**	(.76)			
11.STR (T2)	2.88	.58	-.19**	.02	-.17	.00	-.13	-.40**	-.16*	-.23**	-.17*	-.56**	(.82)		
12.PERF (T2)	3.76	.56	-.02	-.09	-.01	.07	.16*	.33**	.18*	.15	.22**	.49**	-.48**	(.75)	
13.IWB (T2)	3.45	.60	-.03	-.14	-.01	-.20	.36**	.38**	.32**	.44**	.35**	.30**	-.26**	.31**	(.89)

Note:  $n = 152$ . PC = Profession category; RBSE = Role breadth self-efficacy; PE = Positive emotions; VC = Voice; TC = Taking charge; PP = Problem prevention; SAT = Job satisfaction; STR = Job stress; PERF = Job performance; IWB = Innovative work behaviour.

a. Age, gender, tenure and profession category are categorical variables.

\*  $p < .05$ , \*\*  $p < .001$ .

Reliability coefficients for the scales are in parentheses along the diagonal.

**Table 7.** Confirmatory factor analyses

Model	AIC	BIC	$\chi^2$	<i>df</i>	$\Delta\chi^2$	$\Delta df$	RMSEA	CFI	TLI	SRMR
Hypothesized seven factor model	12380.00	12806.37	927.13*	678	-	-	.04	.91	.90	.06
Six factor model combining RBSE and PE	12533.80	12942.02	1092.92*	684	165.85*	6	.06	.86	.84	.08
Five factor model combining RBSE and PE; and SAT and STR	12553.11	12946.22	1122.24*	689	195.11*	11	.06	.85	.84	.08
Five factor model combining RBSE and PE; and PERF and IWB	12659.51	13052.62	1228.64*	689	301.51*	11	.07	.81	.80	.09
Four factor model combining RBSE and PE; and SAT and STR; and PERF and IWB	12676.19	13057.20	1253.31*	693	326.18*	15	.07	.80	.79	.09
Three factor model combining RBSE and PE; and SAT, STR, PERF and IWB	12948.06	13320.00	1531.19*	696	604.06*	18	.08	.71	.69	.10
Two factor model combining RBSE, PE and PWB; and SAT, STR, PERF and IWB	13232.65	13589.46	1825.77*	701	898.64*	23	.10	.61	.59	.11
Two factor model combining RBSE and PE; and PWB, SAT, STR, PERF and IWB	13640.78	13997.59	2233.90*	701	1306.77*	23	.12	.47	.44	.13
Single factor model with all items	13735.37	14089.16	2330.49*	702	1403.36*	24	.12	.44	.41	.13

Note:  $n = 152$ ; \*  $p < .001$ .

AIC = Akaike Information Criterion. BIC = Bayesian Information Criteria.  $\chi^2$  = Chi-square value; *df* = Degrees of freedom; RMSEA = Root mean square error of approximation; CFI = Comparative fit index; TLI = Tucker–Lewis Index; SRMR = Standardized root mean square residual; RBSE = Role breadth self-efficacy; PE = Positive emotions; PWB = Proactive work behaviour; SAT = Job satisfaction; STR = Job stress, PERF = Job performance; IWB = Innovative work behaviour.



### 4.3 Structural model, alternative models and hypothesis testing

To test the hypotheses, we used SEM using Mplus software (Muthén & Muthén, 2017). We compared the proposed model (full mediation model) with an alternative model. As shown in Table 8, the hypothesized full mediation model (M1) presented an acceptable fit to the data ( $\chi^2 = 324.29$ ;  $df = 206$ ; CFI = .91; TLI = .90; RMSEA = .06; SRMR = .06). We then tested a partial mediation model (M2) that included direct paths from RBSE and positive emotions (T1) to QWL indicators, job performance, and innovative behaviour (T2). The partial mediation model (M2) also showed an acceptable fit to the data ( $\chi^2 = 286.38$ ;  $df = 198$ ; CFI = .93; TLI = .92; RMSEA = .05; SRMR = .05). However, analysis of the chi-square difference revealed that the partial mediation model (M2) yielded a significantly better fit to the data than the hypothesized full mediation model (M1) ( $\chi^2(8) = 37.91$ ,  $p < .01$ ). M2 lower AIC also confirmed that M2 was the best representation of the data. Thus, the addition of direct paths from RBSE and positive emotions (T1) to QWL indicators, job performance, and innovative behaviour (T2) significantly improved the model fit. In light of M2 parsimony over M1, we retained the partial mediation model (M2) as the best representation of the data. The significant standardized path coefficients are summarized in Figure 5.2.1.

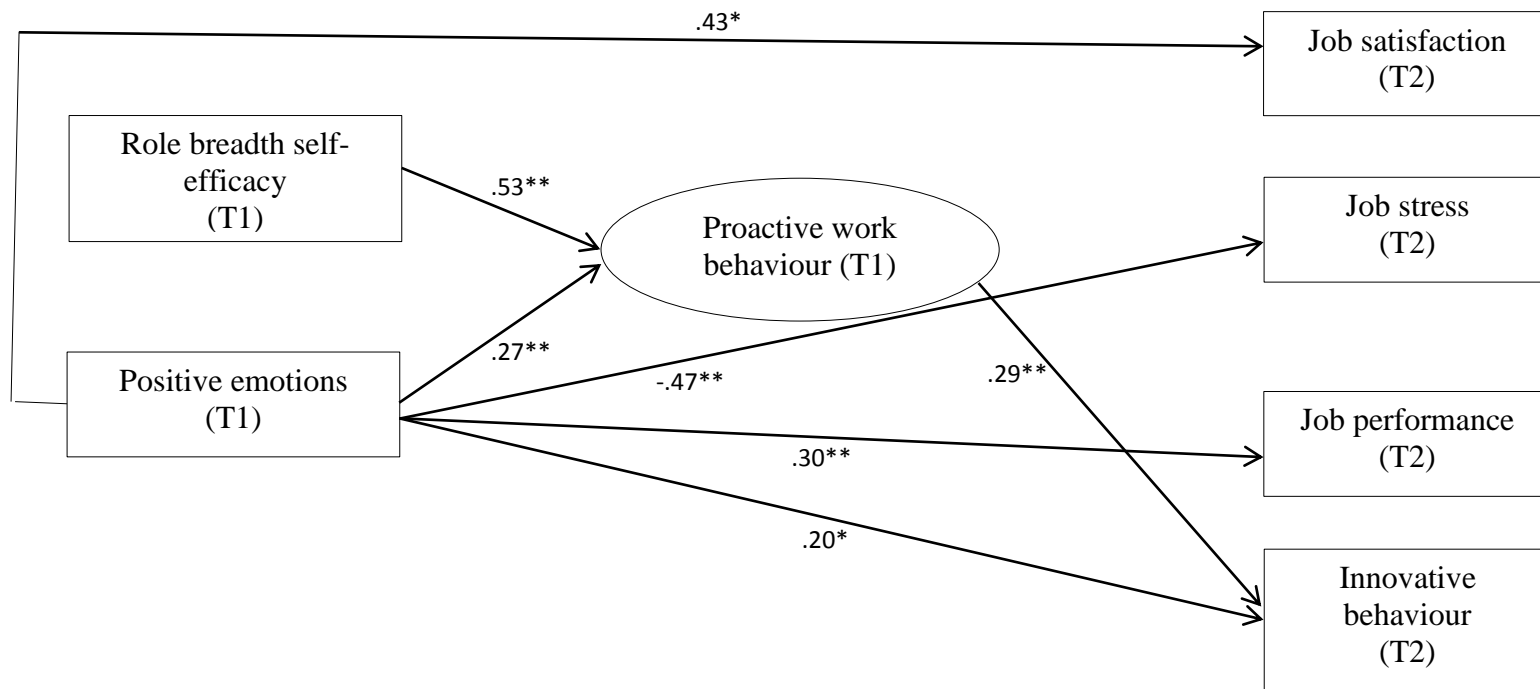
Significant direct paths were found among several studied variables, as hypothesized. The findings indicate that RBSE and positive emotions are related to proactive work behaviour. Likewise, a significant relationship was found between proactive work behaviour and innovative work behaviour after six months. Therefore, Hypotheses 1, 2, and 6 were supported, while Hypotheses 3, 4, and 5 were not supported. In addition, significant direct paths were found between positive emotions and QWL indicators, job performance, and innovative work behaviour after a time lag of six months.

**Table 8.** Indices of fit of structural model and alternative model

	<b>Model</b>	<b>AIC</b>	<b>BIC</b>	$\chi^2$	<b>df</b>	$\Delta\chi^2$	$\Delta df$	<b>RMSEA</b>	<b>CFI</b>	<b>TLI</b>	<b>SRMR</b>
M1	<b>Full mediation model</b>	4601.50	4800.64	324.29	206	-	-	.06	.91	.90	.06
M2	<b>Partial mediation</b>	4579.60	4802.87	286.38	198	37.91*	8	.05	.93	.92	.05

Note:  $n = 152$ ; \*  $p < .001$ .

AIC = Akaike Information Criterion; BIC = Bayesian Information Criteria;  $\chi^2$  = Chi-square value;  $df$  = Degrees of freedom; RMSEA = Root mean square error of approximation; CFI = Comparative fit index; TLI = Tucker–Lewis Index; SRMR = Standardized root mean square residual.



**Figure 5.2.1** Structural model with standardized path coefficients.

Note.  $n = 152$ ;  $^{**}p < .001$ .

In accordance with the Shrout and Bolger (2002) procedure, we assessed the indirect effects, as the path from the independent variables “IV” (i.e., RBSE, positive emotions) to the mediator “M” (i.e., proactive work behaviour) and the path from M to the dependent variables “DV” (i.e., innovative work behaviour) were significant (Cheung, 2007; Hayes, 2009; Shrout & Bolger, 2002) using bootstrap 95% confidence intervals.

Results from the 5,000 bootstrap replications showed that the hypothesized indirect effects were significant ( $p < .05$ ) (Table 9). Role breadth self-efficacy had a significant indirect effect on innovative behaviour (indirect effect = .21, 95% CI [.08, .44]) via proactive work behaviour, also positive emotions had a significant indirect effect on innovative behaviour (indirect effect = .10, 95% CI [.03, .24]) via proactive work behaviour. In addition, analysis of the direct effects revealed that the relationship between positive emotions and innovative behaviour was also significant. Taken together, these findings indicate that the hypothesis regarding the mediating role of proactive work behaviour in the relationship between RBSE and innovative behaviour is fully supported (H7d), while other hypothesized indirect effects (H7a, b, c) are not supported. The findings also indicate that the hypothesis regarding the mediating role of proactive work behaviour in the relationship between positive emotions and innovative behaviour is partially supported (H8d), while other hypothesized indirect effects (H8a, b, c) are not supported.

**Table 9.** Bootstrap (5000) analyses of indirect, direct and total effects results, and 95% CI

Relation		Point estimate	Point estimate and bootstrapping bias-corrected 95% CI
RBSE →PWB→ IWB	Indirect effect	.21*	[.08, .44]
	Direct effect	.06	[-.20, .30]
	Total effect	.27*	[.08, .44]
PE →PWB→ IWB	Indirect effect	.10*	[.03, .24]
	Direct effect	.18*	[.02, .33]
	Total effect	.28**	[.15, .44]

Note:  $n = 152$ ; \*\* $p < .001$ , \* $p < .05$ , Confidence intervals (CIs) are in brackets;

RBSE = Role breadth self-efficacy; PE = Positive emotions; PWB = Proactive work behaviour; IWB = Innovative work behaviour.

## 5. Discussion

As the literature indicates, introducing proactive change (e.g., making suggestions, implementing ideas) can lead to positive outcomes. As Frese and Fay (2001) suggest, proactive behaviour can be short-term, but it can have long-term effects (e.g., enhancing job performance). Because proactive work behaviour is a long-term focused behaviour, the positive outcomes can sometime be visible only after a certain period of time.

Thus, to overcome limitations of cross-sectional designs and to provide support to the hypothesis that proactive work behaviour leads to positive outcomes for QWL indicators and efficacy at work, we conducted a panel study among hospital middle managers. In this study, we suggested that the positive effects of proactive work behaviour last over time. Therefore, we investigated the effects of proactive work behaviour on both QWL indicators as well as indicators of job effectiveness after six months. We also intended to understand how hospital middle managers' proactive work behaviour can be activated and in turn lead to positive outcomes over time. We proposed that hospital middle managers' cognitive motivational states RBSE and positive emotions play a key role in the activation of their proactive work behaviour, which in turn leads to QWL (e.g., increased job satisfaction, decreased job stress) and efficacy at work (e.g., enhanced innovative work behaviour and job performance). Thus, we proposed that proactive work behaviour mediates the relationship between proximal antecedents (i.e., RBSE and positive outcomes) and outcomes (i.e., job satisfaction, job stress, job performance, and innovative work behaviour).

As a key contribution from this study, we find that both RBSE and positive emotions enhance proactive work behaviour. Furthermore, we find a positive association between proactive work behaviour (T1) and innovative work behaviour (T2), while no effect is found on QWL indicators or on job performance (T2). The findings also indicate that proactive work behaviour fully mediates the relationship between RBSE and innovative behaviour, and it

intervenes as a partial mediator in the relationship between positive emotions and innovative behaviour. Overall, this study sheds light on the role of each motivational state in the activation of proactive work behaviour. Furthermore, results from this study indicate that positive emotions, such as an *energy for* motivational state, can also have significant and direct effects on both QWL indicators as well as indicators of job effectiveness even after a period of six months. Thus, results from this study have both theoretical and practical implications.

### **5.1 Theoretical implications**

To a large extent, the literature assumes that proactive work behaviour is beneficial for the individual (e.g., job performance, innovation, success). However, the outcomes of proactivity for individual health and well-being remain unclear. Moreover, as Cangiano and Parker (2016) have stated, it cannot simply be assumed that proactive behaviour is beneficial for well-being because the literature demonstrates positive outcomes for job performance. Thus, our goal was to extend Cangiano and Parker (2016) model of proactivity outcomes for health and well-being by analysing the potential long-term effects of proactive work behaviour. We proposed that hospital middle managers' proactive work behaviour can be a resource to protect their QWL (i.e., enhance job satisfaction, decrease job stress) and can foster their efficacy at work (i.e., innovative work behaviour and job performance) over time.

To our knowledge, this proposed model has not been tested in prior studies. By analysing the effects of proactivity over time on QWL indicators as well as indicators of job effectiveness in a single study rather than in independent studies, this study offers the advantage of investigating in parallel the effects of proactive work behaviour on the two sides: QWL and effectiveness at work, which is a novel contribution to proactivity literature.

The results indicate that proactive work behaviour has a significant positive effect on innovative work behaviour after six months. This finding is in line with previous findings in the literature. Indeed, previous studies have demonstrated that proactive behaviour is relevant to the entire innovation process (Frese & Fay, 2001; Tornau & Frese, 2013). For instance, Déprez and Battistelli (2017) conducted a study among 310 French workers working in different organizations. They found that proactive behaviour (i.e., voice behaviour and taking charge) assessed at time 1 was strongly associated with innovative work behaviour assessed at time 2, six months later ( $\beta = .68, p < .05$ ). Secondly, contrary to studies which found that proactive work behaviour enhances job performance over the long term (Frese & Fay, 2001), in this study, no association was found between proactive behaviour and job performance six months later. In addition, no association was found between proactive work behaviour and job satisfaction or job stress. Therefore, the findings indicate that proactive work behaviour does not have a long-term effect (either positive or negative) on QWL indicators and job performance. While most scholars have argued in cross-sectional studies that proactive work behaviour leads to beneficial outcomes, we demonstrate that it is also important to investigate the long-term effects of proactive work behaviour.

Another important theoretical implication is that findings from this study provide evidence to confirm that cognitive motivational states are important antecedents to enhancing proactive work behaviour. In accordance with literature, we found that feeling capable *can do* (Morrison & Phelps, 1999; Ohly & Fritz, 2007; Parker & Collins, 2010; Parker et al., 2006), and feeling positive emotions *energy for* (Fritz & Sonnentag, 2009; Grant, 2013; Parker et al., 2008) were positively related to proactive work behaviour. In addition, to better understand the role of motivational states, we investigated the role of both *can do* (i.e., RBSE) and *energy for* (i.e., positive emotions) as proximal antecedents of proactive work behaviour in a single study. Scholars have generally analysed the role of each cognitive motivational state



separately in independent studies. Integrating these two proximal motivational states allowed us to identify that RBSE has a stronger effect on enhancing hospital middle managers' proactive work behaviour than positive emotions do. By analysing the two cognitive motivational states *can do* and *energy for* in a single study, we also answer scholars' call for research that integrates proactive motivational constructs rather than studying them separately (Fuller et al., 2012; Parker et al., 2010).

In sum, the findings from the present study extend prior research on proactive work behaviour by showing that feeling capable (i.e., RBSE) and feeling energy (i.e., positive emotions) enhance proactive work behaviour, which is positively associated with innovative work behaviour six months later. Thus, these results improve the current state of knowledge and provide understanding of how hospital middle managers' proactive work behaviour can be enhanced and how, in turn, its positive effects on innovative work behaviour can hold over time.

## **5.2 Practical implications**

As mentioned previously, individuals' personal resources such as psychological states (e.g., emotions, self-efficacy, self-esteem) are often neglected or underestimated in organizations, while contextual resources (e.g., job autonomy, supervisor support) are often considered to be the main predictors leading to employees' positive attitudes, behaviours, or well-being. However, literature indicates that individual personal resources such as psychological state can contribute to positive work-related outcomes (Hobfoll, 1989; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007) and well-being (Hobfoll, 1989; Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995).

Results from this study support the importance of considering hospital middle managers' cognitive psychological states. Indeed, the direct and indirect effects found in this

study of hospital middle managers' motivational states RBSE and positive emotions have several practical implications.

Support for hospital middle managers' training – to gain additional resources, improve their working conditions, or to reduce psychosocial risks by creating healthier and more stimulating work – can be beneficial in enhancing their proactive work behaviour. However, as the literature indicates, an employee can work in a favourable working environment, but if the employee does not feel able to (can do), does not have specific motivation to (reason to) or does not feel the energy (energy for), he or she will not engage in proactive change (Bindl et al., 2012; Parker et al., 2006). For hospital administrations and top management that intend to foster proactive work behaviour of hospital middle managers, these findings shed light on ways to achieve these outcomes. Indeed, we found that hospital middle managers' cognitive psychological states RBSE and positive emotions are important antecedents able to enhance hospital middle managers' proactive work behaviour in the short-run, which is associated with innovative work behaviour after a period of six months.

As Parker (2000) has stated, individual feelings of self-efficacy are malleable. For instance, hospital governance and upper hospital managers can work to enhance hospital middle managers' feelings of capability by providing secure-base support (e.g., support, encouragement, non-interference, availability). Wu and Parker (2017) indicate that leaders' secure-base support “can cultivate employees' self-efficacy by persuading employees to believe that they have the competence to achieve their goals. Secure-base support also helps employees believe that they are able to face obstacles and that their efforts to bring about change will be appreciated, without unnecessary interference that can send signals of incompetence” (p. 10).

We also notice that positive emotions – such as an *energy for* motivational state – were related not only to proactive work behaviour in the short-run, but also to the QWL

indicators (i.e., increased job satisfaction and decreased job stress) and indicators of job effectiveness (i.e., increased job performance and innovative behaviour) even after six months. The effects over time of positive emotions found in this study are in line with Herzberg, Mausner and Synderman (1959) statement that good feelings about a job tend to persist long after the specific events that surround it have passed. Cohn (2008) has explained the long-term effects of positive emotions by the fact that when an individual feels positive emotions, he does better in daily tasks, leading to long-term positive effects on behavioural responses and mental health.

Because positive emotions can also be temporarily (Cohn, 2008), to benefit from their positive effects (i.e., short-run effects on proactive work behaviour or long-term effects on QWL indicators and indicators of job effectiveness), hospital governance and upper hospital managers can work to create favourable work environments or create opportunities to enhance hospital middle managers' feelings of positive emotions. Because emotions can be malleable (Tamir, John, Srivastava, & Gross, 2007), to promote hospital middle managers' positive emotions, hospital governance can, for instance, establish free time for informal discussions where hospital middle managers can meet their peer group and speak without hierarchical relations about difficulties, experiences, and expertise. As Codo (2012) has indicated, general managers, due to their hierarchical positions, have little interaction with others and rarely seek help when they encounter difficult or stressful situations at work. Codo has argued that they are convinced that by managing tensions alone without the help of their superiors, peers, or others, they demonstrate their capacity to manage and will benefit from the confidence of their immediate supervisors. Allowing hospital middle managers to freely communicate with their peers and speak up about their difficulties, innovative solutions, management mistakes, and managerial good practices could also be beneficial in bringing out a collective intelligence and reinforcing feelings of belonging to a group. Storhaye and Bouvard (2013)

have indicated that people need to feel they belong to a group. As a consequence, the feeling of collective belonging and having close friends and positive interactions at work can significantly enhance employees' well-being at work and positive feelings towards their jobs, which should be also beneficial for the healthcare institutions. Storhaye and Bouvard (2013) affirm that for the organization, benefits will not be long in coming, because these actions will allow a concrete operational renewal of the management.

### **5.3 Limitations**

This study has a few limitations that should be mentioned. First, this study was conducted among hospital middle managers working in one hospital. Therefore, findings may not be representative of the larger sample of French hospital middle managers. Secondly, the small sample size may have enhanced the probability of type II error (Banerjee, Chitnis, Jadhav, Bhawalkar, & Chaudhury, 2009). Thirdly, data in this study was self-reported, which could have led to inflated correlation results between the variables. However, to provide control for method bias, we introduced a temporal separation between the measurement of predictors and outcomes by conducting a panel study (Podsakoff, MacKenzie, & Podsakoff, 2012).

### **5.4 Future directions**

The specified limitations point to avenues for future research. The present findings represent a first step in knowledge on the effects of hospital middle managers' proactive work behaviour over time. However, to improve knowledge on the effects of proactive work behaviour over time on QWL indicators (i.e., job satisfaction, job stress) as well as indicators of job effectiveness (i.e., job performance, innovative work behaviour), scholars should replicate this study with samples from multiple healthcare institutions as well as on a larger

samples of hospital middle managers. Replicating this study on a larger sample using latent variables could also decrease type II error and measurement errors.

In addition, because the literature has not yet explored the association between proactive work behaviour and QWL, scholars should continue to expand the body of knowledge on relationships between proactive work behaviour and QWL indicators. It would be beneficial for scholars to investigate the potential benefit or cost of proactive work behaviour on additional indicators of QWL, such as affective organizational commitment, intent to remain or intent to quit, emotional exhaustion, general health, and so on. Scholars should also investigate the potential effects of proactive work behaviour over time on positive emotions. As Cangiano and Parker (2016) have argued, a feedback loop may explain why employees engage in proactive tasks over time. For instance, in their model proposed that positive emotions as cognitive motivation states can enhance proactive work behaviour, which in turn can lead to positive emotions, and so on.

In this study, we have examined the potential benefit of positive emotions as an *energy for* motivational state and find that in the short-run, positive emotions are related to proactive work behaviour, while in the long-term, they are related to all indicators of QWL (e.g., enhanced job satisfaction, decreased job stress) as well as job performance and innovation. However, because positive emotions seem to be beneficial in both the short-run and the long-term, scholars should also investigate the effects of negative emotions using a similar research model.

This study was conducted in two waves due to the small sample size. However, to better understand the proactivity process, scholars should conduct similar research in three waves: antecedents (T1), proactive work behaviour (T2), and outcomes (T3). In addition, to adopt a macroscopic view of the process linking proactive work behaviour to QWL and job

effectiveness, scholars should also investigate the role of distal antecedents (e.g., job characteristics, structural empowerment, job stressors).

In accordance with prior studies, we used a time lag of six months between the measures of proactive work behaviour and the outcomes. Findings from this study showed no association between proactive work behaviour and QWL indicators after six months, while an association was found with innovative behaviour. However, it is possible that proactive work behaviour effects on QWL indicators may operate with a shorter time lag. As another direction for future research, scholars should replicate this study on a larger sample, first with a shorter time lag (e.g., one week, one month, three months), then with a similar time lag of six months, and finally with a larger time lag (e.g., nine months, 12 months, 18 months) to continue to investigate the potential effects of proactive work behaviour over time on several QWL indicators as well on indicators of job effectiveness. Bindl and Parker (2010) have stated that proactive individuals are proactive in various contexts and remain proactive over time regardless of opportunities. Furthermore, it would be also interesting to investigate in cross-lagged studies whether hospital middle managers' proactive work behaviour remains stable over time and whether the related outcomes remain the same or differ over time.

## **5.5 Conclusion**

In conclusion, this study has extended the research on the outcomes of proactive work behaviour in various ways. First, we found evidence to support that proactive work behaviour leads to innovative behaviour over time. Second, our findings suggest that cognitive motivational processes are useful in enhancing proactive work behaviour, which is related to innovation. Thus, the mediating role of proactive work behaviour in the relationship between RBSE, positive emotions and innovative work behaviour emerges. Third, the panel longitudinal design reinforces and gives greater weight to these findings than would a cross-

sectional study. Finally, the results suggest that positive emotions can be beneficial in the short term (e.g., proactive work behaviour) as well as in the long term (e.g., decreased job stress and enhanced job satisfaction, performance, innovative behaviour). This study has important theoretical and practical implications and makes way for additional research to understand the effects of proactive work behaviour over time.

## **Chapter 3: Article 3: ROLE BREADTH SELF-EFFICACY, PROACTIVE WORK BEHAVIOUR, AND QUALITY OF WORK LIFE**

### **Study 3: Relationship between role breadth self-efficacy, proactive work behaviour, and hospital middle managers' quality of work life**

#### **Abstract**

This research examines the relationship between proactive work behaviour and quality of work life (QWL). We conducted two studies among 340 Italian hospital nurse middle managers working in different healthcare institutions. In Study 1, we analyse the relationship between proactive work behaviour and the QWL indicators. Furthermore, we investigate the role of role breadth self-efficacy (RBSE) as a proximal antecedent of proactive work behaviour. We suggest that RBSE enhances proactive work behaviour, which is associated with QWL indicators (i.e., job satisfaction, affective organizational commitment, job stress). We also examine the mediating role of proactive work behaviour in the relationship between RBSE and the QWL indicators. In Study 2, we extend findings from Study 1 and analyse the moderation of leader–member exchange (LMX) in the relationship between RBSE, proactive work behaviour, and affective organizational commitment. Hypotheses from Study 1 are supported. We find that proactive work behaviour fully mediates the relationship between RBSE and affective organizational commitment and partially mediates the relationship between RBSE and job satisfaction and job stress. In Study 2, all hypotheses are confirmed. The results indicate that proactive work behaviour and LMX interact to enhance affective organizational commitment. Theoretical and practical implications are discussed.

**Keywords:** proactive work behaviour, quality of work life, job satisfaction, affective organizational commitment, job stress, role breadth self-efficacy, leader–member exchange.



# **1. Study 1: Relationship between proactive work behaviour and quality of work life indicators: Key role of cognitive motivational state as a proximal antecedent of proactive work behaviour.**

## **1.1 Introduction**

Proactive work behaviour represents a major issue for organizations (Crant, 2000; Grant & Ashford, 2008; Fuller, Marler, & Hester, 2012; Parker, 2000) since the scientific literature has associated this behaviour with positive outcomes for individuals, teams, and more widely, for organizations (Belschak & Den Hartog, 2010; Fuller & Marler, 2009; Thomas, Whitman, & Viswesvaran, 2010, Wu & Parker, 2012).

Due to the positive effects associated with proactive work behaviour, for many years scholars focused their attention only on the analysis of ways to promote this behaviour while the analysis of the consequences or the benefits and costs for individuals has been largely neglected (Unsworth & Parker, 2003). Recently, scholars have begun to admit that proactive behaviour does not necessarily have only benefits, but it can also have costs (Belschak, Den Hartog, & Fay, 2010; Bolino, Valcea, & Harvey, 2010; De Stobbeleir, Ashford, & De Luque, 2010; Frese & Fay, 2001; Strauss, Parker, & O'Shea, 2017). Scholars have underlined that in certain cases, proactive work behaviour may not always be positive for the individual who engages in change, but could also lead to negative outcomes (Grant, Nurmohamed, Ashford, & Dekas, 2011). For instance, the literature has begun to demonstrate that the proactive work behaviour of employees is not always rewarded by superiors but at the opposite may be punished (Chan, 2006; Grant & Ashford, 2008). Additionally, scholars have suggested that proactive work behaviour could be related to job stress (Bolino et al., 2010). Some scholars have expanded upon this research and even suggested that proactive work behaviour could have potential negative effects on employees' health and well-being. Recent calls for more research on the consequences of proactivity for health and well-being at work (Cangiano &

Parker, 2016; Liu, Lee, Tangirala, & Parker, 2016) have been made in the scientific community. In response to these calls, some scholars have begun to investigate the potential effects of the “dark side” versus the “bright side” of proactive work behaviour on employee health and well-being (Cangiano, Parker, & Yeo, 2018; Strauss et al., 2017). However, to date, too little attention has been devoted to this topic. In parallel, it is important to notice the extant literature contains no consensus on its benefits or drawbacks for health or well-being. While certain scholars argue for the dark side of proactive work behaviour (Bolino et al., 2010), others claim for its bright side (Greenglass & Fiksenbaum, 2009). As a result, the body of research remains limited and does not offer sufficient perspective to understand how proactive work behaviour can lead to positive or negative outcomes on an individual’s health and well-being. Moreover, it is important to note that the majority of research models that have been proposed to understand the process by which proactive work behaviour can lead to well-being or negative mental health remain theoretical (Cangiano & Parker, 2016) are based on scholars’ assumptions.

In this regard, in this study, we focus on the analysis of the consequences of proactive work behaviour. Specifically, we analyse the relationship between proactive work behaviour and quality of work life (QWL) indicators. Drawing on Cangiano and Parker (2016) proactive work behaviour model of well-being, we examine the role of the *can do* motivational state (e.g., RBSE) as a proximal antecedent of proactive work behaviour. This research proposes that hospital middle managers’ feelings of RBSE will enhance their proactive work behaviour, which will in turn lead to QWL (e.g., increase job satisfaction and affective organizational commitment and decrease job stress).

This study improves the literature on proactive work behaviour outcomes in several ways. To our knowledge, the hypothesis of a relationship between proactive work behaviour and QWL has not yet been tested. Furthermore, we focus on few indicators of QWL (e.g., job

satisfaction, affective commitment, job stress) in a single study rather than in independent studies. Hence, findings from this study help explain the relationship between proactive work behaviour and different indicators of QWL (e.g., mental health, attitudes towards the job and organization). In addition, most research to date has focused on the proactive work behaviour of employees, while managers' and leaders' proactivity is rarely examined (Wu & Wang, 2011). This study is the first to propose that hospital middle managers' proactive work behaviour can be a resource that can enhance their QWL.

## **1.2 Theoretical background**

### **1.2.1 *Can do* cognitive motivational state as a proximal antecedent of proactive work behaviour**

Among the different proximal antecedents relevant for predicting proactive work behaviour, the *can do* cognitive motivational state RBSE has received the most attention in the literature (Fuller et al., 2012). This concept refers to employees' perceptions of capability to perform a set of proactive tasks that goes beyond their prescribed requirements (Parker, 1998). Kelloway and Barling (2000) have indicated that RBSE refers to the self-confidence of an employee to assume responsibilities, make decisions, and find solutions when difficulties occur. Parker and Wang (2015) state that "proactive behaviour at work is a special type of motivated behaviour, which goes hand in hand with perceptions of control and capability" (p. 28).

The literature indicates that employees are more likely to be motivated to engage in proactive tasks when their perceptions of capability and control are highly associated with perceptions of low costs (Lam, Spreitzer, & Fritz, 2013; Parker, 1998; Parker, Bindl, & Strauss, 2010). Supporting this statement, RBSE has been related to proactive work behaviour in several studies. For instance, Parker, Williams and Turner (2006) found a positive

association between RBSE and proactive work behaviour ( $r = .37, p < .01$ ). Specific associations were also found between RBSE and voice (Parker & Collins, 2010; Withey & Cooper, 1989), taking charge (Morrison & Phelps, 1999; Parker & Collins, 2010), and problem prevention (Parker & Collins, 2010). Results from these studies indicate that proactive work behaviour is more likely to occur when employees feel capable and are self-confident about their abilities to carry out proactive tasks. Drawing on these findings, we formulate the following hypothesis:

*Hypothesis 1: RBSE will be positively related to proactive work behaviour.*

### **1.2.2 Proactive work behaviour and quality of work life indicators**

Priyadarshani and Bhagat (2014) defined the concept of QWL as “a generic expression that covers a person's feelings about all the different dimensions of his work (e.g., rewards and economic benefits, safety, working conditions, interpersonal relationship at work and its personal meaning in the person's life” (p. 2). The literature points out several indicators that can help reflect an employee's QWL: for instance, employee attitudes towards their job (e.g., job satisfaction), attitudes towards their organization (e.g., affective organizational commitment), behaviours at work (e.g., absenteeism, retention), and health and well-being indicators are often used as indicators of QWL (Efraty & Sirgy, 1990; Rathi, 2009). In this study, we focus on three indicators of QWL – job satisfaction, affective organizational commitment, and job stress – that have been previously related to proactive behaviour.

#### **1.2.2.1 Job satisfaction and affective organizational commitment**

Job satisfaction refers to employees' general attitudes toward their jobs or specific aspects of their jobs (Weiss, 2002). Job satisfaction or dissatisfaction is the result of the judgment that an employee has concerning his working conditions (Weiss, 2002). Affective

organizational commitment refers to employees' attitudes towards their organizations (Allen & Meyer, 1990; Solinger, Van Olffen, & Roe, 2008). Allen and Meyer (1990) define affective organizational commitment as an "employee's emotional attachment to, identification with, and involvement in the organization" (p. 1).

As stated, in the proactivity literature, the concepts of job satisfaction (Wanberg & Kammeyer-Mueller, 2000) and affective organizational commitment (Den Hartog & Belschak, 2007) are often related to proactive behaviour at work. For instance, Kim and Liu (2015) have found that proactive work behaviour such as taking charge is positively related to job satisfaction ( $\beta = .21, p < .05$ ) and affective organizational commitment ( $\beta = .19, p < .05$ ). In literature, scholars have indicated that when an employee engages in proactive tasks, it can stimulate employees, removing obstacles, enhancing positive impressions, and creating favourable situations, which can produce positive attitudes towards a job or organization, such as satisfaction or affective commitment (Den Hartog & Belschak, 2007; Erdogan & Bauer, 2005). Spychala (2009) has proposed that the positive link between proactive behaviour and affective organizational commitment may arise from the fact that when employees engage in proactive change, they make efforts (e.g., improving work methods, finding solutions to problem) for organization success that make them feel emotionally attached to their organization and want to stay in that organization. Based on prior studies, we propose that:

*Hypothesis 2: Proactive work behaviour will be positively related to job satisfaction.*

*Hypothesis 3: Proactive work behaviour will be positively related to affective organizational commitment.*

### **1.2.2.2 Job stress**

Additionally, to go further in the analysis of the relationship between proactive work behaviour and QWL, we also focused on job stress as the third indicator of QWL reflecting

mental health and well-being. In studies, job stress is often used as an indicator of QWL (Huda, 2017; Killian, 2004). Job stress refers to an individual's psychological or physical symptoms in responding to situations where he evaluates that job demands exceed the resources available (Bakker & Demerouti, 2007).

In the proactivity literature, findings on the effects of proactive work behaviour on health and well-being indicators contrast. Some scholars have found a positive association between proactive behaviour and positive affects (Greenglass & Fiksenbaum, 2009), while other scholars found a positive association between proactive behaviour and job stress (Bolino & Turnley, 2005). Recently, Strauss et al. (2017) found that proactive work behaviour is related to job stress only under certain conditions, including high control motivation and low autonomous motivation. However, they conclude that, generally, proactive work behaviour does not necessarily have an impact on job stress and employee well-being.

As a result, to date, the association between proactive work behaviour and health and well-being has still not been clearly demonstrated. Parker, Johnson, Collins and Nguyen (2013) proposed that proactive behaviour helps individuals to gain resources and thus fosters well-being.

In line with this statement, we suggest that proactive work behaviour (e.g., finding solutions to problems, improving work methods to work better, finding more effective procedures) decreases job stress. Hence, we propose the following:

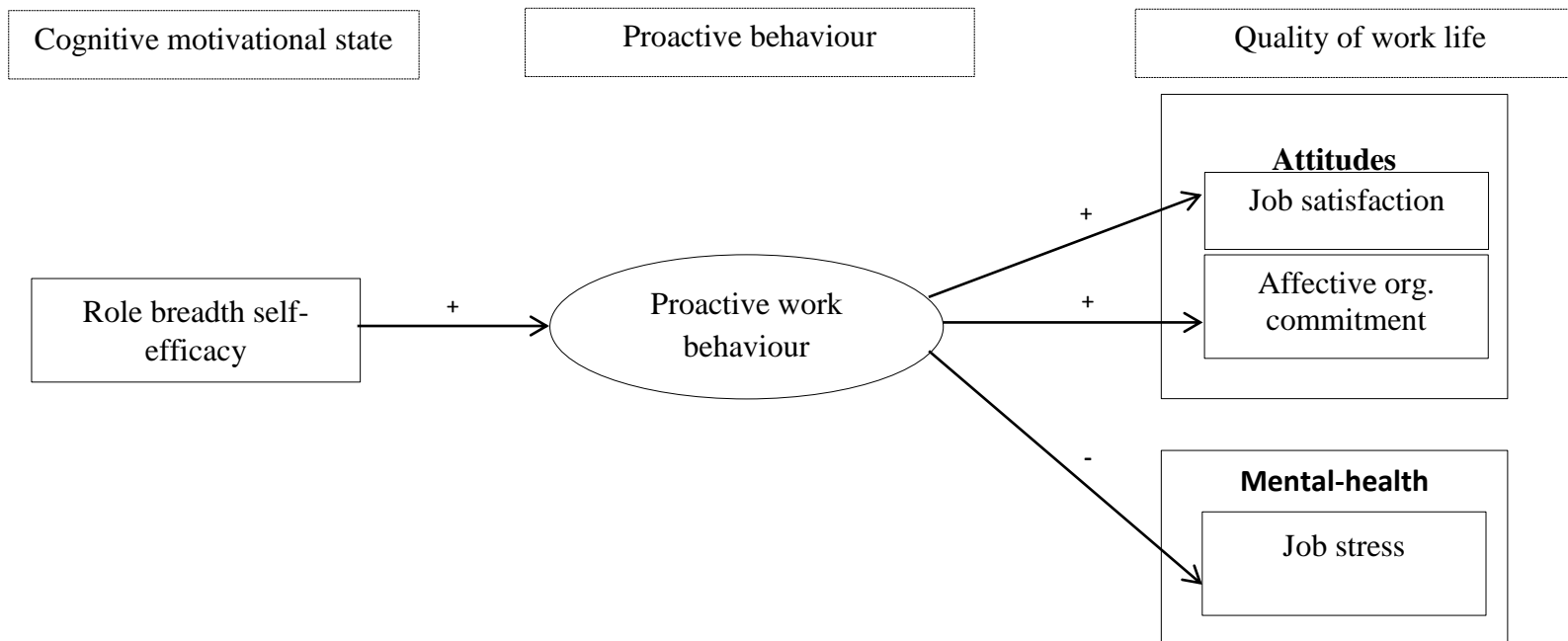
*Hypothesis 4: Proactive work behaviour will be negatively related to job stress.*

To further the understanding of the relationship between proactive work behaviour and QWL, we propose that RBSE, as a strong and direct antecedent of proactivity, will enhance hospital middle managers' proactive work behaviour. We then suggest that hospital middle managers' proactive work behaviour (e.g., making suggestions to improve things, introducing

efficient work methods, preventing the reoccurrence of problems, scanning the work environment to identify solutions) will promote their QWL (i.e., increase their job satisfaction and affective commitment and decrease job stress). Thus, we suggest that feeling capable (i.e., RBSE) has no direct effect on QWL, but proactive work behaviour is necessary to enhance QWL. Therefore, we formulate the following assumptions:

*Hypothesis 5: Proactive work behaviour mediates the relation between RBSE and job satisfaction (a), affective organizational commitment (b), and job stress (c).*

The hypotheses are summarized in the model described in Figure 5.3.



*Figure 5.3* Research model of proactive work behaviour outcomes on QWL indicators.



## **1.3 Method**

### **1.3.1 Sample and procedure**

We conducted a cross-sectional study among hospital nurse middle managers working in Italian university hospitals. Hospital nurse middle managers were invited by the nurses' national research and professional association to voluntarily participate and complete the online survey. The questionnaire was sent to their professional mail addresses with an access code to enter in the online survey to complete questionnaire. Participants were informed in a cover letter that the anonymity of their answers was guaranteed. Reminder letters to complete questionnaire were sent to participants. After one month, a final sample of 340 hospital nurse middle managers' complete data was collected.

The mean age was 49.61 years ( $SD = 7.09$ ), ranging from 31 to 63 years, and 80.3% of the sample were women. The sample of hospital nurse middle managers that participated in the study worked in various units such as the acute medical unit (34%), surgical unit (22.3%), services unit (15%), intensive care unit (10.7%), and other units (18%). Regarding job tenure as nurse middle managers, most respondents declared having 2–5 years of experience (24.1%) or 6–10 years (19.8%) of experience, with a range of experience from  $\leq 1$  to 36–40 years. The majority declared having 11–20 people to manage (41.8%),  $\leq 10$  people to manage (29.9%), and between 21 and 40 people to manage (18%) (range from 1–10 to 141 and over).

### **1.3.2 Measures**

The scales used were originally developed in English. For scales with no Italian validation, we used standard back translation procedure (Brislin, 1980) to translate items from the English language into the Italian language.

### *Cognitive motivational state*

Role breadth self-efficacy was measured using the 10 items from Parker (1998) scale. Hospital middle managers were invited to rate on a 5-point scale ranging from 1 (*not at all confident*) to 5 (*very confident*) how confident they feel to carry out each of the 10 tasks mentioned. A sample item is, "... designing new procedures for your work area" ( $\alpha = .91$ ).

### *Proactive work behaviour*

To assess constructive voice behaviour, we used the five items from Maynes and Podsakoff (2014) scale. An example question is, "I speak up with recommendations about how to fix work-related problems" ( $\alpha = .91$ ). Taking charge was measured using Morrison and Phelps (1999) scale. An example item is, "I try to bring about improved procedures for the work unit or department" ( $\alpha = .86$ ). Problem prevention was assessed using the three items of Parker and Collins (2010). A sample item is, "I try to find the root cause of things that go wrong" ( $\alpha = .72$ ). Items for voice, taking charge, and problem prevention were rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

### *Quality of work life indicators*

We measured job satisfaction using the three items of Cammann, Fichman, Jenkins and Klesh (1983). Responses were given on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). An example of item is, "In general, I like working here" ( $\alpha = .76$ ). Affective organizational commitment was measured using the six items of Meyer, Allen and Smith (1993). In this study, we used the Italian version of Battistelli, Mariani and Bellò (2006). Responses were given on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). A sample item is, "This organization has a great deal of personal meaning for me" ( $\alpha = .92$ ). Perceived stress was measured using the 10 items from Cohen and Williamson (1988) scale. The Italian version of Cohen and Williamson (1988) was used. Items were rated on a 5-point scale ranging from 1

(*never*) to 5 (*very often*). A sample item is, “In the last month, how often have you felt nervous and ‘stressed’?” ( $\alpha = .82$ ).

#### *Control variables*

We controlled for the effects of age (Janssen & Van Yperen, 2004; Warr & Fay, 2001), gender (Kanfer, Wanberg, & Kantrowitz, 2001; Strauss et al., 2017), and job tenure (Grant & Ashford, 2008), since the literature has shown that they are all related to proactive work behaviour.

### **1.3.3 Data analysis**

The software SPSS23 was used to conduct preliminary analyses (e.g., descriptive analysis, correlation, reliability analysis). Confirmatory factor analysis (CFA) with maximum likelihood (ML) estimation using Mplus8 (Muthén & Muthén, 2017) was conducted to test discriminant validity among study constructs. Proactive work behaviour was assessed as a second-order factor regrouping of three first-order factors: taking charge, voice, and problem prevention (Grant et al., 2009; Parker & Collins, 2010; Wu & Parker, 2017). To find the best model fit, we compared the proposed five-factor model with alternative models.

Afterwards, we tested the hypothesized model as displayed in Figure 5.3 using structural equation modelling. We used the mean score of each construct because the sample size-to-parameters ratio did not meet the standard requirements, except for proactive work behaviour, which was modelled as a latent variable (with voice, taking charge, and problem prevention). We evaluated the robustness of the theoretical model by using the Akaike information criterion (AIC), the Bayesian information criteria (BIC), the overall model chi-square ( $\chi^2$ ), degrees-of-freedom (*df*), the Comparative fit index (CFI), the Tucker-Lewis Index (TLI), the Root mean square error of approximation (RMSEA), and the standardized root mean square residual (SRMR) as key indicators of model fit. In the literature, CFI and TLI of

.90 are considered to be an acceptable fit, and RMSEA and SRMR of .08 indicate an acceptable fit (Browne & Cudeck, 1993; Hu & Bentler, 1999; Lance, Foster, Nemeth, Gentry, & Drollinger, 2007; Schreiber, Nora, Stage, Barlow, & King, 2006). We also compared the hypothesized model (M1) with an alternative model (M2) in order to find the best-fit model. The two models were compared via the chi-squared difference test ( $\Delta\chi^2$ ).

We followed the four steps of Shrout and Bolger (2002) to analyse indirect effects. We calculated confidential intervals for the indirect effects by using bootstrap analysis (Hayes, 2009, 2013), considered the most valid and powerful method to test intermediate effects (Hayes, 2009; Preacher & Hayes, 2008; Williams & MacKinnon, 2008). We used the 5,000 resamples with 95% confidence intervals (Hayes, 2009, 2013).

## **1.4 Results**

### **1.4.1 Descriptive statistics**

Table 10 presents descriptive statistics with the means, standard deviations, correlations, and reliabilities for the variables studied. Cronbach's alpha for all the scales is  $\geq .70$ .

### **1.4.2 Confirmatory factor analyses**

The results indicate that the proposed five-factor model (i.e., RBSE, proactive work behaviour, job satisfaction, affective organizational commitment, and job stress) shows an acceptable fit to the data ( $\chi^2 = 1310.86$ ;  $df = 650$ ; CFI = .91; TLI = .90; RMSEA = .05; SRMR = .06) (Table 11). We also conducted CFA of alternative models. The results show that the proposed five-factor model fits the data significantly better than alternative models (Table 11). Thus, the proposed five-factor model is supported.

**Table 10.** Means, correlations among variables and reliability coefficients

	M	SD	1	2	3	4	5	6	7	8	9	10
1.Age <sup>a</sup>	-	-	-									
2.Gender <sup>a</sup>	-	-	.12	-								
3.Tenure <sup>a</sup>	-	-	.57**	.14*	-							
4.RBSE	3.89	.75	.10	-.03	.05	(.91)						
5.VC	3.84	.66	.07	-.06	.14**	.51**	(.91)					
6.TC	3.94	.55	-.03	.11*	.12*	.48**	.52**	(.86)				
7.PP	4.15	.55	-.07	.05	.02	.50**	.53**	.70**	(.72)			
8.SAT	3.75	.79	.11*	.04	.10	.28**	.19**	.28**	.26**	(.76)		
9.AOC	3.66	.97	-.01	.08	.02	.22**	.16**	.29**	.25**	.43**	(.92)	
10.STR	2.73	.55	-.11	.03	-.12*	.04	-.19**	-.25**	-.27**	-.53**	-.22**	(.82)

Note:  $n = 340$ . RBSE = Role breadth self-efficacy; VC= Voice; TC= Taking charge; PP = Problem prevention; SAT = Job satisfaction; AOC = Affective organizational commitment; STR = Job stress.

a. Age, gender and tenure are categorical variables.

\*  $p < .05$ , \*\*  $p < .001$ .

Reliability coefficients for the scales are in parentheses along the diagonal.

### 1.4.3 Structural model and alternative models

We compared the hypothesized full mediation model fit (M1, without the direct paths from RBSE to job satisfaction, affective organizational commitment, and job stress) with an alternative model (M2, including direct paths from RBSE to job satisfaction, affective organizational commitment and job stress). As shown in Table 12, the hypothesized full mediation model (M1) showed a good fit to the data ( $\chi^2 = 417.69$ ;  $df = 196$ ; CFI = .93; TLI = .92; RMSEA = .05; SRMR = .05). Results also indicated that the partial mediation model (M2) showed a good fit to the data ( $\chi^2 = 404.50$ ;  $df = 193$ ; CFI = .93; TLI = .92; RMSEA = .05; SRMR = .04). The chi-squared difference test was significant, ( $\chi^2(3) = 13.19$ ,  $p < .01$ ). Analysis revealed that the addition of direct paths (i.e., from RBSE to QWL indicators) in the partial mediation model (M2) significantly improved the model fit.

We analysed the AIC difference to confirm that M2 was the best representation of the data. M2 had the lowest AIC value, suggesting that M2 fit the data better. In light of M2 parsimony over M1, therefore, we retained the partial mediation model (M2) as the best representation of the data.

### 1.4.4 Hypothesis testing

Significant standardized path coefficients are summarized in Figure 5.3.1. Significant relationships among the studied variables were found, as hypothesized. Thus, Hypothesis 1, which suggested that RBSE is an important driver of proactive work behaviour, is supported. The hypotheses suggesting that proactive work behaviour was positively related to job satisfaction (H2) and affective organizational commitment (H3) and was negatively correlated with job stress (H4) are also supported.

**Table 11.** Confirmatory factor analyses

Model	AIC	BIC	$\chi^2$	<i>df</i>	$\Delta\chi^2$	$\Delta df$	RMSEA	CFI	TLI	SRMR
Hypothesized five factor model	26746.22	27240.15	1310.86	650	-	-	.05	.91	.90	.06
Four model factor combining SAT and AOC	28581.44	29083.03	1789.99	729	479.13*	79	.06	.86	.85	.08
Three factor model combining RBSE and PWB; and SAT and AOC	29890.45	30369.06	3111.00	735	1800.14*	85	.09	.70	.68	.10
Two factor model combining RBSE and PWB; and SAT, AOC and STR	30626.72	31090.02	3855.28	739	2544.42*	89	.11	.61	.58	.12
<i>Single factor model with all items</i>	32035.59	32495.06	5266.14	740	3955.28*	90	.13	.43	.40	.13

Note:  $n = 340$ ; \*  $p < .001$ . AIC= Akaike Information Criterion; BIC= Bayesian Information Criteria;  $\chi^2$  = Chi-square value; *df* = Degrees of freedom; RMSEA = Root mean square error of approximation; CFI = Comparative fit index; TLI = Tucker–Lewis Index; SRMR = Standardized root mean square residual; RBSE = Role breadth self-efficacy; PWB = Proactive work behaviour; SAT = Job satisfaction; AOC = Affective organizational commitment; STR = Job stress.

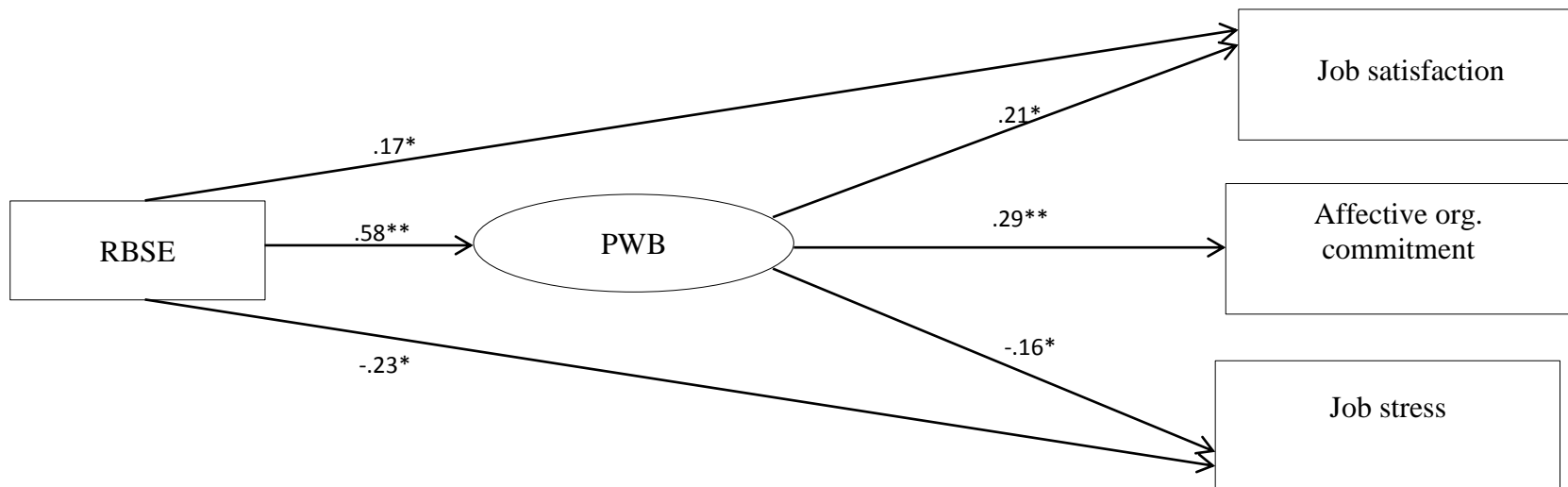
**Table 12.** Indices of fit of structural model and alternative model

Model	AIC	BIC	$\chi^2$	<i>df</i>	$\Delta\chi^2$	$\Delta df$	RMSEA	CFI	TLI	SRMR
M1 <b>Full mediation model</b>	10173.8	10419.5	417.69	196	-	-	.05	.93	.92	.05
M2 <b>Partial mediation</b>	10166.63	10423.7	404.50	193	13.19*	3	.05	.93	.92	.05

Note:  $n = 340$ ; \*  $p < .01$ . AIC = Akaike Information Criterion; BIC = Bayesian Information Criteria;  $\chi^2$  = Chi-square value; *df* = Degrees of freedom; RMSEA = Root mean square error of approximation; CFI = Comparative fit index; TLI = Tucker–Lewis Index; SRMR = Standardized root mean square residual.

To investigate the hypotheses that proactive work behaviour mediates the relationship between RBSE and the three QWL indicators, we examined the significance of indirect effects (Cheung, 2007; Hayes, 2009; Shrout & Bolger, 2002) using a bootstrap 95% confidence interval. Results from the 5,000 bootstrap replications show that all of the hypothesized indirect effects are significant ( $p < .05$ ) (Table 13). Role breadth self-efficacy has a significant indirect effect on job satisfaction (indirect effect = .13, 95% CI [.03, .22]), affective organizational commitment (indirect effect = .21, 95% CI [.10, .34]), and job stress (indirect effect = -.06, 95% CI [-.13, -.00]) via the mediating role of proactive work behaviour. Additionally, analysis of the direct effects reveals that the relationships between RBSE and job satisfaction as well as job stress are also significant. Taking these findings together, the results indicate that the hypotheses regarding the mediating role of proactive work behaviour in the relationship between RBSE and job satisfaction as well as job stress are partially supported (H5a and H5c), while the hypothesis regarding the mediating role of proactive work behaviour in the relationship between RBSE and affective organizational commitment is fully supported (H5b).





**Figure 5.3.1** Structural model with standardized path coefficients.

Note.  $n = 340$ ;  $**p < .001$ ,  $*p < .05$ .

**Table 13.** Bootstrap (5000) analyses of indirect, direct and total effects results, and 95% CI

Relation		Point estimate	Point estimate and bootstrapping bias-corrected 95% CI
RBSE →PWB→ SAT	Indirect effect	.13*	[.03, .22]
	Direct effect	.18*	[.05, .31]
	Total effect	.31**	[.20, .42]
RBSE →PWB→ AOC	Indirect effect	.21**	[.10, .34]
	Direct effect	.10	[-.06, .27]
	Total effect	.31**	[.18, .45]
RBSE →PWB→ STR	Indirect effect	-.06*	[-.13, -.00]
	Direct effect	-.17*	[-.28, -.06]
	Total effect	-.24**	[-.32, -.15]

Note:  $n = 340$ ; \*\* $p < .001$ , \* $p < .05$ , Confidence intervals (CI) are in brackets;

RBSE = Role breadth self-efficacy; PWB = Proactive work behaviour; SAT = Job satisfaction; AOC = Affective organizational commitment; STR = Job stress.

### **1.5 Study 1 summary and discussion**

Cangiano and Parker (2016) have proposed a research model to investigate the mechanism by which proactive work behaviour can lead to health and well-being. Drawing on their theoretical framework, we analysed the relationship between proactive work behaviour and QWL, which encompass indicators such as individual attitudes, behaviours towards one's job and organization, and health and well-being. We also considered RBSE as a proximal antecedent of proactive work behaviour.

The strong association between RBSE and proactive work behaviour provides support for considering RBSE as a key antecedent to enhancing proactive work behaviour. As we hypothesized, these findings reveal the existence of significant direct relationships between proactive work behaviour and all QWL indicators (e.g., enhanced job satisfaction as well as affective organizational commitment and decreased job stress). These findings provide initial support for considering proactive work behaviour to be a resource for protecting QWL. We do recognize that additional studies are needed to confirm these findings and expand the current knowledge on the consequences of proactive work behaviour on additional QWL indicators. However, it should be noted that this study also offers promising approach for understanding how proactive work behaviour can be activates and in turn lead to positive outcomes on QWL indicators. For instance, the full mediation found between RBSE and affective organizational commitment and proactive work behaviour is a promising perspective for future research. Future analysis is needed to investigate the extent to which contextual variables could intervene to strengthen this relationship.

Thus, we propose extending the findings from Study 1 in a complementary model (Study 2) to investigate this assumption.

## **2. Study 2: Role breadth self-efficacy, proactive work behaviour, leader–member exchange, and affective organizational commitment: a moderated mediation model**

### **2.1 Introduction**

Despite the abundant research on proactive work behaviour, and particularly research on its antecedents, there is still a need for knowledge on its outcomes. Wu and Parker (2012) have stated that the extent of benefits of proactive behaviour at work should be further examined. Therefore, we answer this call for future research on proactive work behaviour outcomes, we extend findings from Study 1, and propose a complementary model. The purpose of this study is to improve current knowledge on the outcomes of proactive work behaviour on the quality of work life (QWL) indicator affective organizational commitment. Indeed, Study 1 reveals that role breadth self-efficacy (RBSE) was related to proactive work behaviour, in turn related to affective organizational commitment and other QWL indicators. As a main finding, the analyses also indicate that proactive work behaviour fully mediates the relationship between RBSE and affective organizational commitment. In the present study, we focus specifically on this relationship. First, we investigate the moderating role of leader–member exchange (LMX) in the relationship between proactive work behaviour and affective organizational commitment. We propose that proactive work behaviour and LMX interact to enhance affective organizational commitment. Furthermore, we examine the moderated mediation effects between RBSE and affective organizational commitment through proactive work behaviour at different levels of LMX.

Bindl and Parker (2010) state that the link between proactive behaviour and individual outcomes can also depend on individual and situational moderators, called “appropriateness of proactive behaviour” in their model. However, the role of moderators has been underestimated in understanding when proactive work behaviour is likely to lead to better

outcomes. To date, only a few scholars have integrated the analysis of moderators to analyse proactivity outcomes (Chan, 2006; Fuller et al., 2012; Grant, Parker, & Collins, 2009; Kim, Cable, Kim, & Wang, 2009; Kim & Lu, 2015; Erdogan & Bauer, 2005). Therefore, Bindl and Parker (2010), along with other scholars, have invited future research to further investigate the role of moderators in the analysis of proactivity outcomes.

Furthermore, as Joo and Bennett (2018) have indicated, the relationship between employees' level of proactivity and their level of organizational commitment is unclear. By investigating the moderating role of LMX, this study intends to expand literature on proactive work behaviour outcomes and deepen knowledge in this field by gaining a better understanding of the influence of contextual factors (i.e., LMX) in the relationship between proactive work behaviour and affective organizational commitment. Indeed, the introduction of LMX as a moderator between proactive work behaviour and affective organizational commitment can help explain the conditions under which affective organizational commitment can be enhanced. Additionally, we analysed the conditional indirect effects between RBSE and affective organizational commitment through proactive work behaviour at three levels of LMX.

## **2.2 Theoretical framework and development of hypotheses**

In literature, the concept of LMX has been proposed as the quality of exchange between leaders and subordinates (Dockery & Steiner, 1990; Erdogan, Kraimer, & Liden, 2004; Graen & Dansereau, 1974; Liden, Sparrowe, & Wayne, 1997; Scandura, Graen, & Novak, 1986; Schriesheim, Castro, & Cogliser, 1999). Scandura et al. (1986) propose that LMX refers to “(a) a system of components and their relationships (b) involving both members of a dyad (c) in interdependent patterns of behaviour and (d) sharing mutual outcomes instrumentalities and (e) producing conceptions of environments, cause, maps and

value” (p. 580). Graen and Uhl-Bien (1995) state that LMX is both a transactional (i.e., material exchange) and transformational (i.e., social exchange) leadership.

As literature indicates, supervisors cannot devote time to all subordinates. Therefore, “they develop close relationships with only few subordinates because it is more efficient for them” (Steiner, 1988, p. 612). Scholars have proposed that high LMX “in group” is characterized by social exchange, while low LMX “out group” is characterized by transactional exchange (Scandura & Graen, 1984; Graen & Uhl-Bien, 1995). For instance, they indicate that in high LMX (i.e., leadership exchanges), the relationship between a leader and their subordinates is characterized by trust, support, encouragement, attention, communication, greater responsibility (Dockery & Steiner, 1990; Graen & Scandura, 1987; Liden et al., 1997), mutual affection, loyalty, and professional respect (Liden & Maslyn, 1998). In contrast, as Lunenburg (2010) has suggested, in low LMX, “out-group members are outside the leader’s inner circle, receive less attention and fewer rewards, and are managed by formal rules and policies” (p. 1).

Thus, the concept of LMX has been related to several outcomes, including job performance and turnover intentions (Bauer, Erdogan, Liden, & Wayne, 2006). Epitropaki and Martin (2005) found in their longitudinal study that LMX influences employees’ attitudes and well-being. They report positive associations between LMX and employees’ job satisfaction ( $r = .60, p < .001$ ), job well-being ( $r = .50, p < .001$ ) and organizational commitment ( $r = .38, p < .001$ ).

In the literature, leadership style – specifically LMX – is considered to be the most powerful predictor of organizational commitment (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012; Gerstner & Day, 1997; Kónya, Grubić-Nešić, & Matić, 2015) and in particular for affective organizational commitment (Dulebon et al., 2012; Son, 2015). For instance, Eisenberger et al. (2010) indicate that “one of the most frequently studied outcomes of LMX

involves employees' affective commitment" (p. 1085). The positive relationship found between LMX and affective organizational commitment can be explained in several ways. Eisenberger et al. (2010) have claimed that employees often see supervisors as organizational agents. Thus, because they consider their supervisors to be representative of their organizations, they extend their quality exchange relationship with their supervisor to their organization. Eisenberger et al. state, "employees are particularly aware that the directive, evaluative, and coaching functions of the supervisor are carried out on behalf of the organization, leading employees to generalize their views concerning the favourableness of their exchange relationship from supervisor to organization" (p. 1087). In addition, the literature indicates that when leaders offer high quality exchange to subordinates, this enhances subordinates' attachment and loyalty to their superiors. Employees are motivated and feel obliged to contribute to their superior's success and likewise to their organization's success (Son, 2015). For these reasons, Son (2015) proposes that high levels of LMX produce high levels of affective organizational commitment.

While LMX is considered to be a strong and direct predictor of affective organizational commitment, additional studies have also demonstrated that because of its importance, LMX can moderate the relationship between antecedents and affective organizational commitment (Buch, 2015; Hu & Zao, 2007; Hung, Ansari, & Aafaqi, 2004). For instance, Hung et al. (2004) analysed the association between human resource management (HRM) practices and organizational commitment among a sample of 224 managers. They found that the interaction between HRM perception and organizational commitment was stronger with high LMX instead of with low LMX. Hu and Zuo (2007) examined the moderating effect of LMX in the relationship between job insecurity and affective organizational commitment. They found that the interaction between qualitative job insecurity and LMX on affective commitment was significant. Therefore, LMX contributed to

attenuating the adverse effects of job insecurity. Similarly to our study, Joo and Bennett (2018) have investigated the interaction effect of proactivity and LMX on organizational commitment among a sample of 293 employees (mostly managers and assistant managers). They found that proactivity interacted with LMX to influence organizational commitment. Their findings also suggest that high LMX is beneficial for employees with low proactivity as well as high proactivity.

Previous studies have indicated that LMX can be a strong predictor of employees' behaviours, attitudes, and well-being. In addition, several studies have demonstrated that the moderating effect of LMX as a contextual factor is relevant to understanding employees' affective organizational commitment. Therefore, drawing on prior studies, in the present study, we propose that:

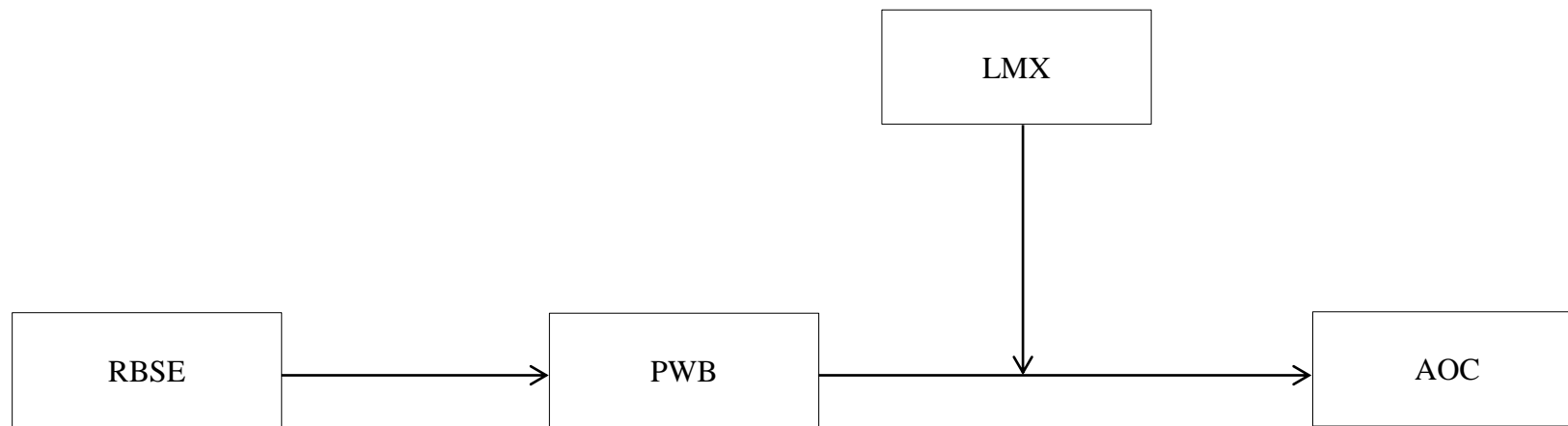
*Hypothesis 1: LMX will moderate the direct relationship between proactive work behaviour and affective organizational commitment so that high level of LMX will strengthen this relationship, compared to low level of LMX.*

We propose a second hypothesis as well:

*Hypothesis 2: LMX will moderate the indirect relationship between RBSE and affective organizational commitment through proactive work behaviour so that high level of LMX will strengthen this relationship, compared to low level of LMX.*

Hypotheses are summarized in Figure 5.4.





**Figure 5.4** Research model of moderated mediation.

## **2.3 Method**

We tested the hypotheses using baseline data from Study 1. All of the scales used in the preceding study were used. Leader–member exchange (LMX) was assessed using seven items from Graen and Uhl-Bien (1995). The Italian version of Portoghese, Galletta, Battistelli and Leiter (2015) was used. A sample item is, “How would you characterize your working relationship with your supervisor?” Items were rated on a 5-point scale ranging from 1 (*extremely ineffective*) to 5 (*strongly effective*) ( $\alpha = .95$ ).

## **2.4 Results**

### **2.4.1 Confirmatory factor analyses**

To examine whether RBSE, proactive work behaviour, LMX, and affective organizational commitment captured different constructs, we conducted a series of confirmatory factor analyses (CFAs) and compared the proposed model to alternative models using Mplus8 (Muthén & Muthén, 2017) (Table 14). As seen from model fit indices and the  $\chi$  difference tests, the proposed model fit the data significantly better than the alternative models ( $\chi^2 = 1149.18$ ;  $df = 487$ ; CFI = .92; TLI = .91; RMSEA = .06; SRMR = .05).

### **2.4.2 Descriptive statistics**

Table 15 presents descriptive statistics with the means, standard deviations, and correlations among the studied variables.

**Table 14.** Confirmatory factor analyses

Model	AIC	BIC	X <sup>2</sup>	df	Δχ <sup>2</sup>	Δdf	RMSEA	CFI	TLI	SRMR
Hypothesized four factor model	22406.08	22815.77	1149.18	487	-	-	.06	.92	.91	.05
Three factor model combining RBSE and PWB	23124.19	23522.40	1873.29	490	724.11*	3	.09	.83	.82	.08
Three factor model combining LMX and AOC	24527.97	24926.18	3277.07	490	2124.89*	3	.12	.66	.4	.13
Two factor model combining RBSE and PWB; and LMX and AOC	25247.08	25637.63	4000.18	492	2851.00*	5	.14	.58	.55	.14
Single factor model with all items	26752.26	27138.98	5507.36	493	4358.18*	6	.17	.40	.36	.17

Note:  $n = 340$ ; \*  $p < .001$ . AIC = Akaike Information Criterion; BIC = Bayesian Information Criteria; X<sup>2</sup> = Chi-square value;  $df$  = Degrees of freedom; RMSEA = Root mean square error of approximation; CFI = Comparative fit index; TLI = Tucker–Lewis Index; SRMR = Standardized root mean square residual; RBSE = Role breadth self-efficacy; PWB = Proactive work behaviour; LMX = Leader–member exchange; AOC = Affective organizational commitment.

**Table 15.** Means and correlations

	M	SD	1	2	3	4	5	6	7	8	9
1.Age <sup>a</sup>	-	-	-								
2.Gender <sup>a</sup>	-	-	.12	-							
3.Tenure <sup>a</sup>	-	-	.57**	.14*	-						
4.RBSE	3.89	.75	.10	-.03	.05						
5.VC	3.84	.66	.07	-.06	.14**	.51**					
6.TC	3.94	.55	-.03	.11*	.12*	.48**	.52**				
7.PP	4.15	.55	-.07	.05	.02	.50**	.53**	.70**			
8.LMX	3.28	1.01	-.19**	.02	-.05	.13*	.12*	.20**	.17**		
9.AOC	3.66	.97	-.01	.08	.02	.22**	.16**	.29**	.25**	.29**	

Note:  $n = 340$ . a. Age, gender and tenure are categorical variables. \*  $p < .05$ , \*\*  $p < .001$ .

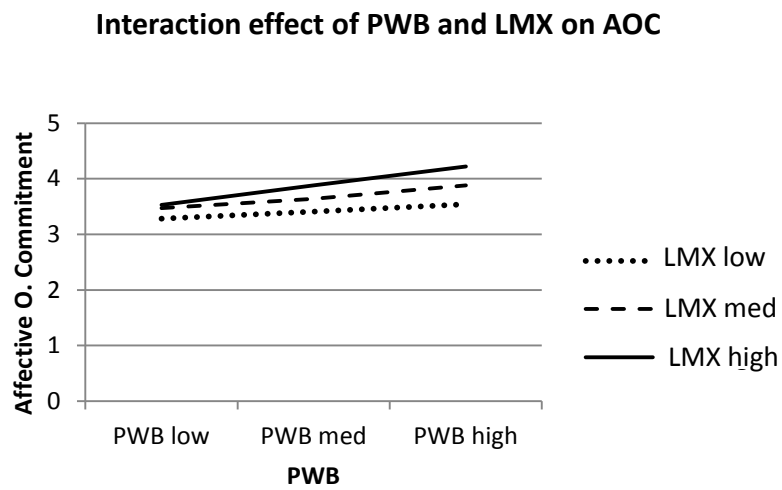
RBSE = Role breadth self-efficacy; VC = Voice; TC = Taking charge; PP = Problem prevention; LMX = Leader–member exchange; AOC = Affective organizational commitment.

### 2.4.3 Hypothesis testing

We examined the moderating role of LMX using SPSS23 and PROCESS macro v2.16.3 software (model 14) developed by Hayes (2013). Analyses were conducted using 5,000 bootstrapped samples to create a 95% confidence intervals.

To investigate Hypothesis 1, we first analysed whether LMX interacts with proactive work behaviour (PWB×LMX) to enhance affective organizational commitment. The findings in Table 16 show that the integration of LMX significantly influenced the association between proactive work behaviour and affective organizational commitment ( $\beta = .21, p < .05$ ). To illustrate this interaction, we plotted at  $-1SD$ , mean, and  $+1SD$  (Figure 5.5). Simple slopes analyses indicated that proactive work behaviour was significantly related to affective organizational commitment at low level of LMX ( $.26; p < .05$ ), at mean level of LMX ( $.47; p < .001$ ), and at high level of LMX ( $.68; p < .001$ ). Therefore, Hypothesis 1 was supported.

Furthermore, to investigate the moderated mediation as hypothesized in Hypothesis 2, we analysed the indirect effects between RBSE and affective organizational commitment through proactive work behaviour at three levels of LMX ( $-1SD$ , mean, and  $+1SD$ ). As depicted in Table 16, the indirect effect of RBSE on affective organizational commitment through proactive work behaviour was not significant at a low level of LMX ( $\beta = .06, 95\% \text{ CI} = [-.06, .19]$ ). However, it was significant at an average level ( $\beta = .14, 95\% \text{ CI} = [.05, .24]$ ), and at a high level ( $\beta = .22, 95\% \text{ CI} = [.12, .35]$ ) of LMX. These results indicated that the indirect effect of RBSE on affective organizational commitment via proactive work behaviour was stronger with a high level of LMX in comparison with an average level of LMX. Thus, Hypothesis 2 was supported.



**Figure 5.5** Simple slopes for the interaction effect of proactive work behaviour and LMX at three levels on affective organizational commitment

**Table 16.** Results of direct effects, indirect effects and moderated mediation analyses

<b>Direct effects</b>									
Predictors	PWB				Affective O. Commitment				
	$\beta$	<i>SE</i>	<i>LLCI</i>	<i>ULCI</i>	$\beta$	<i>SE</i>	<i>LLCI</i>	<i>ULCI</i>	
RBSE	.38	.02	.33	.44	.11	.08	-.03	.27	
PWB					.37*	.12	.13	.61	
LMX					.22**	.04	.13	.32	
PWB×LMX					.21*	.09	.02	.39	
$R^2$	58**				39**				
<b>Indirect effects</b>									
Indirect effects at different level of LMX (M ± 1SD)	Bootstrapped indirect effect	Boot SE	Boot LLCI	Boot ULCI					
-1SD	.06	.06	-.06	.19					
M	.14	.04	.05	.24					
+1SD	.22	.05	.12	.35					
<b>Index of moderated mediation</b>									
Mediator	Index	Boot SE	Boot LLCI	Boot ULCI					
PWB	.08	.03	.00	.15					

Note:  $n = 340$ . \*\*  $p < .001$ , \* $p < .05$ , Standardized coefficients are reported.

RBSE = Role breadth self-efficacy; PWB = Proactive work behaviour; LMX = Leader–member exchange; AOC = Affective organizational commitment.

LLCI = Lower level confidence interval; ULCI = Upper level confidence interval.

### 3. Discussion

Despite recent interest in the analysis of proactive work behaviour outcomes on health and well-being, it is important to note that to date, there have been contrasting findings concerning proactivity's benefits and drawbacks for individual health and well-being. Furthermore, as we mentioned previously, most of the research models to date that have integrated the effects of proactivity on health and well-being have remained theoretical and have not been tested.

One of our purposes was to advance knowledge on the potential "bright side" of proactive work behaviour for QWL. We conducted a first study to address this gap. We proposed and tested a research model in order to understand the mechanism by which proactivity could lead to QWL. We suggested that RBSE enhances proactive work behaviour, which in turn leads to QWL (i.e., increasing job satisfaction and affective commitment while decreasing job-related stress). In addition, we extended findings from Study 1 in a complementary model to examine the moderating role of LMX in the direct effect between proactive work behaviour and affective organizational commitment. Furthermore, we examined the moderating role of LMX in the indirect effect between RBSE and affective organizational commitment through proactive work behaviour.

The present findings contribute in several ways to understand the relationship between proactive work behaviour and few QWL indicators. First, the findings from Study 1 show that proactive work behaviour is related to each of the three QWL indicators. These results also improve the proactivity literature by showing that proactive work behaviour intervenes as a mediator in the relationship between the psychological motivational state RBSE and the QWL indicators (partial mediation for job satisfaction and job stress and full mediation for affective organizational commitment). Drawing on these findings, we focused specifically on the full mediation between RBSE and affective organizational commitment via proactive work

behaviour. The main contribution of this article is the results of the moderated mediation model, which examined the moderating effect of LMX at three levels in the relationship linking proactive work behaviour to affective organizational commitment. Crucially, we found that the interaction between proactive work behaviour and LMX contribute to enhancing affective organizational commitment and that the conditional indirect effect of RBSE on affective organizational commitment via proactive work behaviour was stronger at a higher level of LMX compared with the average level of LMX. In general terms, this research sheds light on the influence of proactive work behaviour on QWL indicators. The results of these studies have both theoretical and practical implications.

### **3.1 Theoretical implications**

Proactive work behaviour not only impacts an organization, team, or employee's performance and innovative work behaviour (Belschak & Den Hartog, 2010; Fuller & Marler, 2009; Thomas et al., 2010, Wu & Parker, 2012); it may also impact employees' health and well-being (Cangiano & Parker, 2016; Liu et al., 2016). In this study, we extended Cangiano and Parker (2016) theoretical model to analyse the relationship between hospital middle managers' proactive work behaviour and their QWL. The results of this research propose several theoretical implications.

First, findings provide evidence to support the idea that an individual's cognitive motivational state is an important predictor of proactive work behaviour. In accordance with the literature, we found that RBSE *can do* was significantly associated with proactive work behaviour. Additionally, in the research model, we investigated RBSE as a proximal determinant of proactive work behaviour that in turn led to QWL. Except for the theoretical model proposed by Cangiano and Parker (2016), to our knowledge, we are the first study to date to analyse the proactivity process in this way.



Like another contribution to the current body of literature, we focused on the relationship between proactive work behaviour and QWL, which encompass indicators of individual attitudes towards job and organization and health and well-being, rather than focusing only on the single effects on health and well-being. As we stated previously, to the best of our knowledge, this research is the first to propose that proactive work behaviour can promote QWL. In the existing literature, only two studies have analysed the relationship between these two concepts (Kanten, 2014; Ling, Bandar, Alil, & Muda, 2017). However, in these studies, scholars suggested the reverse hypothesis. They analysed whether QWL led to proactive behaviour. Here, we examined the direct associations between proactive work behaviour and QWL indicators such as job satisfaction, affective organizational commitment, and job stress. The findings of this study confirmed all of our hypotheses, suggesting that proactive work behaviour can enhance QWL (i.e., enhance job satisfaction and affective organizational commitment and decrease job stress). Indeed, we found that proactive work behaviour was positively associated with hospital middle managers' job satisfaction (Wanberg & Kammeyer-Mueller, 2000) and affective commitment (Den Hartog & Belschak, 2007), and a significant negative association was found with job stress.

Furthermore, this study provides a good starting point to resolve the conflict between the merits (bright side) and demerits (dark side) of proactive work behaviour for individuals. As Cangiano and Parker (2016) indicate, proactive work behaviour can lead to positive outcomes (e.g. performance), but it can also have negative outcomes for individual health and well-being. By focusing jointly on three indicators – attitude towards job, organization with positive valence, and mental health with negative valence – rather than analysing these outcomes in independent studies, this research overcomes a gap identified in the literature and investigates in one framework the “bright side” (e.g., job satisfaction, affective organizational commitment) and the “dark side” (e.g., job stress) of proactive work behaviour.

By doing so, we also expand knowledge of the relationship between proactive work behaviour and job stress. Indeed, as stated previously, literature on the effects of proactive behaviour on job stress has come to contrasting conclusions. Certain scholars claim that proactive work behaviour increases job stress (Bolino & Turnley, 2005), while others argue that proactive behaviour at work is not necessarily related to job stress (Strauss et al., 2017). Here, we found that the proactive work behaviour decreases hospital middle managers' job stress.

Finally, based on Cangiano and Parker (2016) theoretical model, we proposed and tested hypotheses never tested before. We suggested that proactive work behaviour mediates the relationship between RBSE and all QWL indicators. The findings support the mediating role of proactive work behaviour, thus providing a better understanding of how psychological motivational state can have a positive indirect effect on QWL indicators.

In Study 2, by integrating the moderating role of LMX, the findings allowed a better understanding of the conditions under which the positive effect of proactive work behaviour on affective organizational commitment can be reinforced. Indeed, the present study demonstrates that the interaction between proactive work behaviour and LMX enhances affective organizational commitment and that the indirect effect of RBSE on affective organizational commitment via proactive work behaviour is strengthened with a high level of LMX. This can be explained by the fact that employees often associate their supervisors with their organizations. Thus, proactive hospital middle managers that have high quality exchanges with top managers – rather than average LMX – tend to be strongly affectively committed to their organizations. Findings from these studies have practical implications.

### **3.2 Practical implications**

Hospitals are challenged to find new ways to promote the QWL of their personnel, as previous studies conducted in the healthcare sector have demonstrated the link between hospital personnel QWL, performance, patient quality of care, and hospital personnel retention. Thus, the promotion of QWL has become a strategic goal in healthcare institutions. This study provides several practical implications for healthcare institutions that can help them to find new ways to enhance the proactive work behaviour and QWL of hospital middle managers.

First, the findings reveal that RBSE – as a *can do* cognitive motivational state – has a strong association with hospital middle managers' proactive work behaviour. For hospital administrations and top management that intend to enhance the proactive work behaviour of hospital middle managers, these results indicate that it is important to consider hospital middle managers' psychological motivational state.

Furthermore, findings from Study 1 reveal that the beneficial effects of feeling capable (i.e., RBSE) were also directly and positively associated with job satisfaction and negatively associated with job stress. These findings suggest that hospital middle managers' feelings of capability run further than the activation of proactive work behaviour, and can also be beneficial for their QWL – enhancing their feelings of job satisfaction and decreasing their feelings of job stress. Thus, these results suggest that hospital middle managers' psychological motivational state can be a resource for directly improving certain QWL indicators. Drawing on these findings, hospital governance and upper hospital managers can work to enhance hospital middle managers' feelings of capability. Indeed, as Parker (2000) indicates, RBSE is a dynamic construct that can change in response to the environment. For instance, prior studies have indicated that organizational practices (e.g., training, job

enrichment, job redesigning, clear communication, participating in decisions, receiving feedback on performance, secure base support) can enhance RBSE (Parker, 2000).

For instance, scholars have explained that (1) *training* can help to enhance technical mastery while in turn fostering feelings of capability to achieve proactive tasks; (2) *job enrichment* can provide feelings of job control and increase feelings of responsibility (e.g., autonomy in making decisions), which can enhance employees' motivation and feelings of self-efficacy; and (3) *redesigning the job* by simplifying difficult tasks or deleting unnecessary tasks can enhance feelings of capability. Job redesigning can provide opportunities to open communication between members of a group such as in improvement groups (where members of groups meet to work on problems or to improve processes), which can enhance the perception of being capable to perform different tasks. In addition, (4) *clear communication* about expectations of directions or supervisors and participating in decision can enhance employees' feelings of capability to act proactively due to clear information on goals to be achieved; (5) *feedback on performance* can reinforce employees' sense of competence, fostering optimistic beliefs regarding their capability; and (6) *secure-base support* (e.g., support, encouragement, non-interference, availability) can enhance employees' feelings of efficacy. As Wu and Parker (2017) indicate, leaders' secure-base support "can cultivate employees' self-efficacy by persuading employees to believe that they have the competence to achieve their goals can help employees believe that they are able to face obstacles and that their efforts to bring about change will be appreciated, without unnecessary interference that can send signals of incompetence" (p. 10).

Prior findings have helped to demonstrate that it is possible to enhance employees' feelings of capability to achieve proactive tasks. Drawing on these previous findings, hospital governance and upper hospital managers can strive to create work environments that enhance hospital middle managers' feeling of RBSE.

Second, findings from Study 1 offer another approach to understanding the role of proactive work behaviour as a determinant that can be beneficial for hospital middle managers' QWL. Indeed, we found that hospital middle managers' proactive work behaviour has positive effects on all QWL indicators. For hospital administrations and top management who intend to enhance hospital middle managers' QWL, these results suggest that hospital middle managers' proactive work behaviour can be beneficial to enhancing their feelings of job satisfaction as well as their affective commitment to their organizations while decreasing job stress. These findings suggest that it is important for hospital governance and upper hospital managers to recognize the relevance of implementing management practices to encourage hospital middle managers to engage in proactive tasks. This can be done in several ways: (1) by creating a proactive management culture and redesigning HR strategies so that hospital middle managers can work and be proactive and innovative without being hindered by restrictive policies and clauses or too closely monitored; (2) by recognizing the creative potential of hospital managers and that they are high potential talent who contribute to health care organization success and competitiveness; (3) by encouraging managers' proactive thinking and initiative by valuing, encouraging, and rewarding these behaviours; (4) by providing good working conditions and support for hospital managers to implement ideas; (5) by creating opportunities for hospital middle managers to develop and implement creative ideas and develop their potential; and (6) by recognizing that these self-initiated behaviours can also be a resource for healthcare institutions' efficiency (i.e., to promote quality of care, achieve goals, and remain innovative).

Finally, as the results from Study 2 indicate, high LMX – as a moderator – enhances the effects of proactive work behaviour on affective organizational commitment. Likewise, these findings reveal that the indirect effect of RBSE on affective organizational commitment through proactive work behaviour is strengthened under the condition of high LMX. Thus,

high LMX should be considered as a context variable able to reinforce the positive effects of proactive work behaviour. The literature indicates that LMX can have important consequences. In Study 2, we focused on one specific QWL indicator, but the effects of high LMX could reach even further. In the light of these results, hospital top management can work to improve the quality of exchange with hospital middle managers. For instance, top managers can establish regular face-to-face meeting with hospital middle managers in order to give them more attention and respond to their needs and questions when needed. As Lunenburg (2010) indicates, exchange relationships with supervisors can develop mutual trust and mutual commitment to the objectives of the work unit, and as a consequence can increase “in-group members” while decreasing “out-group members”.

### **3.3 Research limitations**

This research had several limitations. First, the study was cross-sectional, which does not allow us to infer causal relationships. Second, we conducted this study among a sample of hospital nurse middle managers working in different hospitals in Italy. Although the results confirmed all of the hypotheses (i.e., proactive work behaviour related to QWL indicators, indirect effect of RBSE on QWL indicators through proactive work behaviour, moderated role of LMX), this study took place in another country and among a specific category of hospital nurse middle managers. Thus, the results are confined to the context of Italy. Results may be not representative of all hospital middle managers due to difference in healthcare systems across countries. In addition, these findings may be due to a culture-dependent effect. Third, data was self-reported, which could have inflated correlation results between the variables. However, Wu and Wang (2011) have suggested that leaders’ proactive behaviours can be assessed by themselves to reduce potentially different perceptions on the same proactive behaviour from peers, top supervisors, or subordinates. Recently, Podsakoff, MacKenzie and

Podsakoff (2012) argued that obtaining information from different sources is not necessarily appropriate when a study's intent is to assess individual perceptions and beliefs, which was the case in this study.

### **3.4 Future directions**

The limitations of this research can be also considered opportunities for future research. These findings represent a first step in knowledge on the consequences of proactive work behaviour on hospital middle managers' QWL. As Cangiano and Parker (2016) state, analysis of the consequences of proactive work behaviour on health and well-being needs more attention. As an extension, because the outcomes on QWL have not yet been investigated, we also suggest that additional research linking proactive work behaviour to additional QWL indicators is needed. We recommend the use of QWL indicators with a positive valence as well as a negative valence (e.g., intent to stay, intent quit, absenteeism, exhaustion, physical health) to further knowledge on both the "bright side" and the "dark side" of proactive work behaviour.

In this research, one of our primary aims was to investigate the relationship between proactive work behaviour and QWL in different samples (i.e., a sample of French hospital nurse middle managers working in different French hospitals and a sample of hospital nurse middle managers working in another country) to compare findings. For this purpose, we contacted a French association of hospital nurse middle managers. Unfortunately, due to the small sample size of French hospital nurse middle managers (101 participants and 63 completed questionnaires returned), the objective of conducting research including different samples from different countries could not be met. However, the findings from the Italian sample provided support to pursue research on this topic. From this perspective, scholars should conduct additional research on different samples from different countries in order to

fill the gap in the literature and improve knowledge on the relationship between proactive work behaviour and QWL.

Cangiano and Parker (2016) indicated that whether proactive behaviour is beneficial or detrimental can depend on the presence of moderators. Findings from Study 2 provide encouraging results and demonstrate that a moderator (e.g., LMX) can enhance the effects of proactive work behaviour on QWL indicator (e.g., affective organizational commitment). Thus, scholars should extend this research by investigating the role of contextual factors (e.g., job characteristics, perceived organizational support, team-member exchange, team support for innovation, structural empowerment) as moderators (high versus low) in order to better understand the conditions under which proactive work behaviour can strongly enhance QWL.

In this study, we focused on the cognitive motivational state *can do* as a proximal antecedent of proactive work behaviour, since previous studies have identified that cognitive motivational states (e.g., RBSE) are the most powerful and direct antecedents of proactive work behaviour (Griffin et al., 2007; Morrison & Phelps, 1999; Parker, 2000; Parker et al., 2006; Parker & Collins, 2010; Strauss et al., 2009). However, it would also be interesting to integrate distal antecedents of proactive work behaviour in order to obtain a general overview of the processes leading to proactive work behaviour. We encourage future research to continue analysing the role of cognitive motivation states such control appraisal, feelings of responsibility (reason to), and the role of positive and negative emotions (energy for). The literature has begun to demonstrate that positive emotions are a fuel to enhance proactive behaviour at work (Fritz & Sonnentag, 2009; Sonnentag, 2003), but very little is known about the effects of negative emotions (Bindl et al., 2012; Den Hartog & Belschak, 2007; Fritz & Sonnentag; 2009; Grant et al., 2009). Thus, scholars should also analyze the effects of negative emotions. Another suggestion for future research is that scholars should integrate the



analysis of a few cognitive motivational states in a single study rather than in independent studies (Fuller et al., 2012; Parker et al., 2010).

Overall, to continue to overcome the limitations from this research, we suggest future research to be conducted on larger samples and use latent constructs to reduce measurement errors or type II errors. Future research should also be longitudinal in order to analyse the causal relationships between proactive work behaviour and QWL indicators. To overcome previous limitations, it could be interesting to conduct a cross-lagged study to measure proactive work behaviour and QWL indicators at an initial time and then at later times. This could allow researchers to investigate causality and analyse whether proactive work behaviour and QWL indicators remain stable or change over time.

### **3.5 Conclusion**

In this research, we have found that RBSE plays an interesting role in the promotion of hospital middle managers' proactive work behaviour, which is related to each QWL indicator. Thus, the mediating role of proactive work behaviour in the relationship between RBSE and QWL indicators was found. Specifically, we found that proactive work behaviour fully mediated the relationship between RBSE and affective organizational commitment. Furthermore, in the second study conducted, we investigated a moderated mediation model. We proposed that the interaction between proactive work behaviour and LMX would enhance affective organizational commitment and that the conditional indirect effect of RBSE on affective organizational commitment through proactive work behaviour would be stronger at high level of LMX. Both hypotheses were confirmed. Findings from this research demonstrate that the proactive work behaviour of hospital middle managers can be beneficial to enhancing their QWL, which has never been studied before. Additionally, these results also suggest that these positive outcomes can be stronger in the presence of moderators. Findings

from Study 1 and Study 2 have important implications, both theoretical and practical, and pave the way for additional research to understand how and under what conditions the proactive work behaviour of hospital middle managers can enhance their QWL.

## **PART 4: GENERAL DISCUSSION AND CONCLUSION**

In this part, we discuss findings from the studies conducted and try to answer research question RQ1 and RQ2, as proposed in the research framework. In addition, the theoretical implications, practical implications, limitations, and strengths of the research are discussed, as well as future directions for research and conclusions.

## GENERAL DISCUSSION AND CONCLUSION

The concept of proactive work behaviour has been the subject of increasing attention due to the positive outcomes associated with it (Baer & Frese, 2003; Den Hartog & Belschak, 2010; Frese & Fay, 2001; Kirkman & Rosen, 1999; Wu & Parker, 2012). For instance, the literature positions proactive work behaviour as a new resource for employee success and performance (Seibert et al., 2001). Prior studies have also found a positive relationship between proactive work behaviour and several indicators of QWL. However, as mentioned in the theoretical framework, these studies have been conducted separately. Furthermore, to our knowledge, the assumption that proactive work behaviour can promote employees QWL has, to date, not been tested. Therefore, in this doctoral research, one of our aims was to investigate whether proactive work behaviour could be a resource for promoting QWL as well as innovative work behaviour and job performance of hospital middle managers.

Two main RQs have driven this thesis: *“Does the proactive work behaviour of hospital middle managers enhance their QWL and promote their innovative work behaviour and job performance?”* (RQ1) and *“How can organizational factors enhance hospital middle managers’ proactive work behaviour, and in turn lead to positive outcomes such as innovative work behaviour or job performance?”* (RQ2).

To obtain a clear understanding of the concept of proactivity and clarify how it may lead to these outcomes (i.e., QWL, performance, innovation), we first conducted a review of recent literature on this concept. We examined the related consequences of proactive work behaviour as well as the antecedents (distal and proximal) leading to its activation. In addition, we reviewed several major models of proactivity that provide a framework to analyse proactive behaviour at work. The review of this concept was also an occasion to identify gaps in the literature. Once a review of the literature was completed, we conducted studies to investigate the assumptions and provide support to answer the RQs.

## **1. Theoretical implications and main findings**

To test the general research model as proposed in Figure 5, three studies were conducted. Theoretical implications were developed at the end of each study. However, we will discuss the main findings of all the studies in the following section and provide a brief summary of significant results from the research (Table 17).

### **1.1 Sequential mediating role of psychological empowerment and proactive work behaviour**

In Study 1 (Part 3, Chapter 1), we proposed and tested a model of proactive work behaviour from antecedents to consequences (Bindl & Parker, 2010) to gain a better understanding of how hospital middle managers' proactive behaviour at work can be activated and in turn lead to positive outcomes. This study was particularly important because none have tested the general structure of proactive behaviour as proposed by Bindl and Parker (2010), including antecedents, cognitive motivational state, proactive behaviour, and consequences. By studying proactive work behaviour in its general structure, this study expands upon prior knowledge of the concept and provides support to answer RQ2. Indeed, we found no direct relationship between job characteristics and proactive work behaviour, but findings reveal that psychological empowerment – as a *can do* motivational state – fully mediates this relationship. Results from this study are in line with prior research that found no direct link between contextual factors and proactive work behaviour, but identified employees' cognitive motivational state as a mediator in this relationship (Salanova & Schaufeli, 2008).

This study also advances knowledge on the consequences of proactive work behaviour. In accordance with the literature, we found that proactive work behaviour was strongly related to innovative work behaviour (Parker & Collins, 2010; Strauss et al., 2015; Unsworth & Parker, 2003). A positive relationship was also found between proactive work

behaviour and job performance (Grant et al., 2009; Thompson, 2005). However, contrary to literature that found that proactive work behaviour (e.g., making suggestions, preventing problems, introducing new work methods) strongly contributes to enhanced job performance (Belschak & Den Hartog, 2010; Thompson, 2005), the results of this study indicate that feeling psychologically empowered is more important for job performance than is proactive work behaviour. This result is in line with Seibert et al. (2011) findings, in their meta-analysis, they found that psychological empowerment is related to a set of attitudinal and behavioural outcomes including job performance. Scholars explain this relationship by the fact that when employees feel psychologically empowered (i.e., feel good at work, perceive work as meaningful, believe that they are self-competent), they have fewer doubts about their work and themselves and are motivated to perform well, which contributes to enhancing their job performance (Chiang & Hsieh, 2012; Liden et al., 2000; Tetik, 2016). Thus, as an important finding, we report that feeling psychologically empowered as a cognitive motivational state is a psychological resource that can strongly and directly contribute to behavioural outcomes (e.g., proactive work behaviour and job performance). These findings underline the importance of considering cognitive motivational states. For this reason, we focused on cognitive motivational states as proximal antecedents of proactive work behaviour rather than focusing on distal antecedents in the following studies (Cangiano & Parker, 2016).

Furthermore, we proposed and examined how contextual factors such as job characteristics (i.e., job autonomy, job variety) can enhance hospital middle managers' innovative work behaviour and job performance through the sequential mediation of psychological empowerment and proactive work behaviour. The results from this study are particularly interesting. A main finding is that the hypothesis of sequential mediation – full sequential mediation for innovative behaviour and partial sequential mediation for job performance – was supported. These findings extend the literature on proactivity by revealing

for the first time the existence of a sequential full mediation between contextual factors (i.e., job characteristics) and proactive work behaviour outcomes (i.e., innovative work behaviour) through the presence of two mediators (psychological empowerment and proactive work behaviour). The existence of a sequential mediation is consistent with Bindl and Parker (2010) general structure of proactive behaviour and provides empirical support for the integration of antecedents, proactive work behaviour, and outcomes in single research models.

### **1.2 The long-term effect of proactive work behaviour on hospital middle managers' innovative work behaviour**

In Part 3, Chapter 2, in order to overcome one of the limitations of Study 1 (i.e., cross-sectional study), we conducted a panel study among French hospital middle managers working in one hospital. We proposed that the cognitive motivational states *can do* (i.e., RBSE) and *energy for* (i.e., positive emotions) enhance proactive work behaviour, which in turn has long-term effects on QWL indicators (i.e., job satisfaction, job stress) as well as on indicators of job effectiveness (i.e., innovative work behaviour, job performance). Hence, in accordance with prior studies, we found that RBSE (Fuller et al., 2012; Parker et al., 2006) and positive emotions (Bindl et al., 2012; Parker & Collins, 2010) both enhance proactive work behaviour. The findings reveal that RBSE has a stronger effect on proactive work behaviour than do positive emotions. These findings provide additional support to existing literature that considers RBSE as the main proximal driver of proactive behaviour at work (Axtell & Parker 2003; Fuller et al., 2012; Parker et al., 2006).

In addition, these findings allow us to answer RQ1. We found that proactive work behaviour has no long-term effect on QWL indicators (i.e., job satisfaction and job stress). Contrary to Frese and Fay (2001) theory, we found that proactive work behaviour has no long-term effect on job performance. However, a positive association was found between

proactive work behaviour and innovative work behaviour after a period of six months (Déprez & Battistelli, 2017).

In literature, most studies that have assumed proactive work behaviour is beneficial for employees (e.g., satisfaction, performance, innovation) have been conducted in cross-sectional studies (Belschak & Den Hartog, 2010; Fuller & Marler, 2009; Kirkman & Rosen, 1999; Wu & Parker, 2012). By conducting a panel study, results from this study improve knowledge of the outcomes of proactive work behaviour. Indeed, the results indicate that the positive effects of proactive work behaviour can linger over time to enhance innovative work behaviour, but they do not necessarily affect other behavioural outcomes over time, such as job performance or QWL indicators. These findings provide support to proactive behaviour theorists who invite scholars to further improve knowledge of the consequences of proactive behaviour by analysing its effects not only in cross-sectional studies, but also with longitudinal study designs (Andersson, 2015; Cangiano & Parker, 2016; Claes & Van Loo, 2011; Fay & Hüttges, 2017; Spsychala & Sonnentag, 2011).

### **1.3 Positive relationship between proactive work behaviour and all quality of work life indicators and leader–member exchange as a moderator that strengthens the effects of proactive work behaviour on affective organizational commitment**

Despite findings from Study 2 that revealed that proactive work behaviour does not have a long-term effect on QWL indicators, we decided to expand our research (Part 3, Chapter 3). To overcome the limitations from Study 1 and Study 2 (i.e., conducted in one organization), we conducted a study among hospital nurse middle managers working in different hospitals and in another country. This research advances knowledge on proactive work behaviour outcomes by showing for the first time, as hypothesized, that proactive work behaviour contributes to promoting QWL (i.e., increases job satisfaction and affective



organizational commitment, decreases job stress). Interestingly, the significant negative relationship found between proactive work behaviour and job stress also goes against findings of prior studies which found that proactive work behaviour has a “dark side”, depletes resources, and increases job stress (Bolino & Turnley, 2005). These results, on the other hand, support the “bright side” of proactivity and demonstrate that proactive work behaviour contributes to decreasing nurse middle managers’ job stress.

In addition, we analysed the role of RBSE as a proximal antecedent of proactive work behaviour. We suggested that RBSE fosters proactive work behaviour, which leads to QWL. Another interesting finding is that analysis of indirect effects reveals that the relationship between RBSE and affective organizational commitment was fully mediated by proactive work behaviour. Drawing on these results, to improve knowledge on the outcomes of proactive work behaviour, we analysed the moderating role of leader–member exchange (LMX) in the relationship between proactive work behaviour and affective organizational commitment in a complementary model. The findings confirm that under conditions of high LMX, the direct effect of proactive work behaviour on affective organizational commitment is strengthened. In addition, the indirect effect of RBSE on affective organizational behaviour via proactive work behaviour is also stronger with high LMX. These findings are in line with prior studies that also demonstrated that LMX is strongly associated with affective organizational commitment (Dulebon et al., 2012; Eisenberger et al., 2010; Son, 2015) and that high LMX contributes to strengthening the relationship between proactive behaviour and affective organizational commitment (Joo & Benett, 2018). These results further suggest that additional moderators could also strengthen the effects of proactive work behaviour. In this regard, several scholars have integrated moderators in analysis of proactive behaviour outcomes (Chan, 2006; Fuller et al., 2012; Grant et al., 2009; Kim et al., 2009; Kim & Lu,

2015; Erdogan & Bauer, 2005) and invited additional studies to do the same (Bindl & Parker, 2010).

#### **1.4. General findings**

In sum, as we mentioned, the studies conducted further expand the proactivity literature. Generally, scholars examine proactive work behaviour antecedents and consequences in separate studies. In this research, we examined several antecedents and proactive work behaviour outcomes together and used different approaches (cross-sectional study, panel study, mediation model, sequential double mediation, and moderated mediation). We used these different methodologies and research model structures to gain a better understanding of how proactive work behaviour can be activated and to analyse whether it can lead to positive outcomes on QWL indicators or indicators of job effectiveness, and to understand the conditions under which the effects of proactive work behaviour can be strengthened.

Contrary to scholars who consider only the role of distal antecedents (e.g., job characteristics, support, organizational climate) in the activation of proactive behaviour (Crant, 2000), we investigated the role of cognitive motivational states as direct and proximal antecedents of proactive work behaviour. In accordance with the literature, results from the studies highlight the role of cognitive motivational states as important psychological resources able to strongly foster hospital middle managers' proactive work behaviour (Bindl & Parker, 2010; Bindl et al., 2012; Den Hartog & Belschak, 2012; Parker et al., 2010; Parker et al., 2006). We found that contextual factors can contribute indirectly to enhancing proactive work behaviour, but psychological motivational state is highly important. Hence, as scholars have proposed, favourable work environment can enhance employees' proactive work behaviour, but ultimately what is determining the activation of proactive behaviour is their perceptions of *can do*, *reason to*, or *energy for* (Bindl et al., 2012; Parker et al., 2006). Thus, these results

encourage continued examination of the role of additional motivational states. In a practical way, these findings can also help to explain why certain hospital middle managers may engage more in proactive actions than others. In addition, by integrating the analysis of proactive work behaviour outcomes, findings from this research expand current knowledge on the role of cognitive motivational states. We found that hospital middle managers' cognitive motivational states are also directly related to additional behavioural outcomes (e.g., job performance) and QWL indicators (e.g., job satisfaction, job stress), and they can even have long-term effects on both QWL indicators and indicators of job effectiveness.

As another interesting finding, the fact that we used different methodologies allowed us to highlight that proactive work behaviour can lead to different results. For instance, in Study 1, positive relationships were found between proactive work behaviour and both innovative work behaviour and job performance, while in Study 2, when we analysed the same sample for long-term effects, the findings were significant only for innovative work behaviour. These analyses confirm the utility of using different approaches to better understand proactive work behaviour (Wu et al., 2017). Likewise, regarding the relationship between proactive work behaviour and QWL (panel), we found no relationship between proactive work behaviour and QWL indicators over time in Study 2, while in Study 3 (cross-sectional), proactive work behaviour was related to all QWL indicators. We are aware that the samples were different, that results from Study 2 could depend on the organization, and that findings from Study 3 could be culture-dependent, but the use of different approaches to investigate these assumptions offers interesting perspectives for future research on this topic.

As a final important finding, over the years, scholars have categorized the outcomes of proactivity to only indicators such as performance and innovation, which has limited knowledge on outcomes such as those on individual health and well-being (Cangiano & Parker, 2016). In this research we investigate proactive work behaviour outcomes on

indicators of QWL (i.e., mental health and attitudes towards job and organization) as well as indicators of job efficacy and use different methodologies to provide evidence to extend the theoretical underpinnings of proactive work behaviour to additional outcomes. However, further research is needed to confirm and extend findings from this research.

## **2. Practical implications**

This research contributes to add additional knowledge for understanding how hospital middle managers' proactive work behaviour can be enhanced and provides initial findings on several outcomes related to this behaviour. Drawing on these findings, we describe several practical implications at the end of each article. Here, we briefly re-examine a few of them.

First, this research underlines that hospital middle managers' cognitive motivational states (i.e., psychological empowerment, positive emotions, RBSE) are strong psychological resources that enhance their proactive work behaviour. Analyses of direct paths also indicate that their psychological states have strong and direct effects on other behavioural outcomes, and even on QWL indicators. Therefore, we suggest that hospital governance and upper hospital managers give more consideration to hospital middle managers' psychological states, and we formulate a few recommendations in this regard. For instance, we propose that hospital governance and upper hospital managers should work to enhance hospital middle managers' perceptions of feeling empowered. Some examples of how this could be done include providing empowering work structures, helping middle managers to achieve their objectives, enabling them to participate in training programs to reinforce their feelings of empowerment, and allocating more power to them.

**Table 17.** Summary of significant research results

	<b>Hypotheses</b>	<b>Results</b>
Study 1 (sequential med.)	Hypothesis 1. Psychological empowerment and proactive work behaviour will sequentially mediate the relationship between job autonomy and innovative work behaviour (a) and job performance (b).	1a: Fully sup. 1b: Partially sup.
	Hypothesis 2. Psychological empowerment and proactive work behaviour will sequentially mediate the relationship between job variety and innovative work behaviour (a) and job performance (b).	2a: Fully sup. 2b: Partially sup.
Study 2 (panel)	Hypothesis 1: RBSE will be positively related to proactive work behaviour.	Supported
	Hypothesis 2: Positive emotions will be positively related to proactive work behaviour.	Supported
	Hypothesis 6: Proactive work behaviour will be positively related to innovative work behaviour.	Supported
	Hypothesis 7: Proactive work behaviour will mediate the relationship between RBSE and innovative behaviour (d).	Supported
Study 3 (cross-sectional)	Hypothesis 8: Proactive work behaviour will mediate the relationship between positive emotions and innovative behaviour (d).	Partially sup.
	Hypothesis 1: RBSE will be positively related to proactive work behaviour.	Supported
	Hypothesis 2: Proactive work behaviour will be positively related to job satisfaction.	Supported
	Hypothesis 3: Proactive work behaviour will be positively related to affective organizational commitment.	Supported
	Hypothesis 4: Proactive work behaviour will be negatively related to job stress.	Supported
Hypothesis 5: Proactive work behaviour mediates the relation between RBSE and job satisfaction (a), affective organizational commitment (b) and job stress (c).	5a, c: Partially sup. 5b: Fully sup.	
Complementary model (moderated med.)	Hypothesis 1: LMX will moderate the direct relationship between proactive work behaviour and affective organizational commitment so that high level of LMX will strengthen this relationship, compared to low level of LMX.	Supported
	Hypothesis 2: LMX will moderate the indirect relationship between RBSE and affective organizational commitment through proactive work behaviour so that high level of LMX will strengthen this relationship, compared to low level of LMX	Supported

We also suggest that hospital governance and upper hospital managers could work to create favourable work environments to foster hospital middle managers positive emotions at work. These might include allowing frequent interactions with peers where they can speak up about difficulties and good practices, and reinforce the feeling of belonging to a group. Hospital governance and upper hospital managers might also foster hospital middle managers' feelings of capability, for instance by providing training programs to enable them to acquire new skills and knowledge, simplifying difficult tasks, providing clear communication on goals and expectations, giving them feedback on their performance, provide encouragement, supporting them, and been available when needed.

Second, we found that hospital middle managers' proactive work behaviour can have positive associations with job effectiveness, and in some cases, with QWL indicators. For hospital administrations and top management that intend to benefit from the positive outcomes related to hospital middle managers' proactive work behaviour, we suggest implementing management practices to encourage hospital middle managers' proactivity (such as redesigning HR strategies to enable proactive hospital middle managers not to be hindered, encouraging and valuing their proactive initiatives, providing good working conditions and support for them to implement ideas, and creating opportunities that allow them to be creative).

### **3. Research limitations, strengths, and future directions for research**

The studies conducted had both limitations and strengths. Here, we provide a brief summary of the main limitations and strengths and propose main future directions for research.

*Limitations.* The first limitation is related to the context of the research. Study 1 and Study 2 were conducted in one hospital. Although this methodology can help to control

context-dependent effects, future research should replicate these studies among larger samples of hospital middle managers working in different hospitals to confirm these results.

The second limitation is that Study 1 and Study 3 were cross-sectional, which makes it difficult to conclude causal links. Thus, future research should use a longitudinal design (e.g., panel, cross-lagged) to infer causal relationships between proactive work behaviour and QWL indicators as well as indicators of job effectiveness.

The third limitation concerns the nature of the sample in Study 3. To improve knowledge on the outcomes of proactive work behaviour on QWL, we conducted a study among hospital nurse middle managers working in different hospitals in Italy. Results from this study offer interesting avenues for future research on the link between proactive work behaviour and QWL, but future research should replicate this study among French hospital nurse middle managers to compare findings also by analysing measurement invariance between samples.

Another limitation of these studies concerns the fact that data was self-reported. In the literature, scholars suggest the use of multi-source data to control method bias (Podsakoff et al., 2003). However, Podsakoff et al. (2012) indicated that when scholars intend to measure individual perceptions, beliefs, or judgments, which was the case in this research, the use of multi-source data is not necessarily appropriate. We also justify the use of this methodology because the use of multi-source data to assess hospital middle managers' proactive work behaviour – considered a discretionary behaviour (Grant & Ashford, 2008; Morrison & Phelps, 1999; Sychala & Sonnentag, 2011) – or innovative work behaviour could be have been problematic. Indeed, as Podsakoff et al. (2012) stated, individual attitudes and behaviour are not always visible, and others do not necessarily have the opportunity to observe individual attitudes and behaviours. For this reason, Wu and Wang (2011) have suggested that leaders' proactive behaviours be assessed by themselves to provide a more valid assessment

and avoid different perceptions of the same leaders' proactive behaviour, or to avoid others' expectations and perceptions of the effectiveness of the proactive actions. Thus, the use of self-reported data was decided to be the best way to assess hospital middle managers' proactive work behaviour, QWL indicators, and indicators of job effectiveness.

The last main limitation concerns the sample size in each study. It would be useful to replicate these studies on larger samples to test more complex models and reduce type II errors (Banerjee et al., 2009).

*Strengths.* The studies conducted also have strengths that should be emphasized. First, in Study 1, we proposed and tested a model of proactivity from antecedents to consequences adapted from Bindl and Parker (2010) theoretical model. As we mentioned, to our knowledge, there is no study that investigates proactive work behaviour by integrating distal antecedents, proximal motivational state, proactive work behaviour, and consequences in a single research model. To expand upon current knowledge on proactive work behaviour antecedents and outcomes, scholars need to replicate this study analysing the effects of additional distal antecedents (e.g., supportive climate, job stressors) and proximal antecedents (e.g., control appraisal, change orientation, flexible role orientation) and additional consequences (e.g., creativity, team performance).

Second, in Study 2, we conducted a panel study to investigate the outcomes of proactive work behaviour on indicators of both QWL and job effectiveness over a period of time of six months, which had never be done before. The use of a panel design gives more power to the findings than a cross-sectional design would have (e.g., reduces bias) and allowed us to investigate the duration of the effect of proactive work behaviour on these indicators. Future research should continue to investigate the effects over time of proactive work behaviour on QWL indicators as well as on indicators of job effectiveness, maybe using a shorter time lag (e.g., one week, one month, three months).



Another strength of this research is that in Study 3, we proposed and tested a research model adapted from Cangiano and Parker (2016) theoretical model of proactivity outcomes on health and well-being. We extended it to the effects on QWL indicators. To overcome limitations underlined in the studies conducted among the French sample (i.e., conducted in one organization), here we investigated hypotheses among Italian hospital nurse middle managers working in different organizations. Although the findings cannot be considered representative of French hospital nurse middle managers, these results pave the way for future research to continue to investigate the relationship between proactive work behaviour and QWL. Therefore, scholars should also integrate additional indicators of QWL (e.g., with negative valence and positive valence).

Finally, by investigating the role of LMX as a moderator in a complementary model, we extended prior research on the outcomes of proactive work behaviour by showing that the positive effects of proactive work behaviour can be strengthened when we introduce a context factor as a moderator. Thus, scholars should examine the interaction of proactive work behaviour and other moderator variables (e.g., contextual or individual) when they investigate proactive work behaviour outcomes in future research.

Overall, the general strength of this research lies in the fact that we focused specifically on hospital middle managers, which has not been done previously. Furthermore, we used different methodologies (e.g., cross-sectional, panel study, sample working in one organization, sample working in different hospitals and country, hospital middle managers, and nurse middle managers) to investigate assumptions and to begin to provide knowledge on the relationship between hospital middle managers' proactive work behaviour and their QWL as well as their effectiveness at work. Therefore, we are aware that much work is still needed to fill the gap identified in the literature.

#### **4. Conclusion**

In this doctoral research, the overarching RQ was, “*Does the proactive work behaviour of hospital middle managers enhance their QWL and promote their innovative work behaviour and job performance?*” The studies conducted allowed us to provide initial answers to this question. Indeed, findings reveal that proactive work behaviour is a key component in promoting hospital middle managers’ innovative work behaviour in the short term and after a period of six months. The findings suggest that proactive work behaviour is perhaps less essential in enhancing hospital middle managers’ job performance (e.g., small direct effect in Study 1 and no long-term effect in Study 2). In addition, findings from this research indicate that proactive work behaviour has no long-term effects on quality of work indicators, which also can suggest that the effect of proactive work behaviour on QWL could occur for a shorter period of time. The positive relationships between proactive work behaviour and all QWL indicators found in Study 3 invite additional research in order to delimit the conditions under which proactive work behaviour can lead to QWL (e.g., in the short term? according to the country? under a specific work context?). Therefore, we hope that this research will open the way to the production of future research on this topic.

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# **Annexes**

- 1. Analysis of variance (ANOVA) and Tests post-hoc HSD Tukey, comparing means for profession category (STUDY 1)**
- 2. Analysis of variance (ANOVA) and Tests post-hoc HSD Tukey, comparing means for profession category (STUDY 2)**

**1. Analysis of variance (ANOVA) and Tests post-hoc HSD Tukey, comparing means for profession category (STUDY 1)**

		<b>AUT</b>	<b>VT</b>	<b>PE</b>	<b>VC</b>	<b>TC</b>	<b>PP</b>	<b>PERF</b>	<b>IWB</b>
	Healthcare ( <i>n</i> = 161)	<b>3.16</b>	4.34	3.80	3.73	3.66	<b>4.00</b>	3.86	3.51
<b>Profession category</b>	Administrative ( <i>n</i> = 57)	3.21	4.29	<b>3.70</b>	3.84	3.54	3.84	3.83	3.33
	Medico-techn. ( <i>n</i> = 27)	3.13	4.41	3.75	3.68	3.56	3.88	3.76	3.32
	Technical ( <i>n</i> = 68)	<b>3.56</b>	4.28	<b>4.00</b>	3.67	3.46	<b>3.74</b>	4.00	3.33
	Socio-educ. ( <i>n</i> = 2)	3.33	4.83	4.16	3.70	3.35	4.00	3.91	3.36
	Sig.	.02*	.82	.03*	.76	.26	.05*	.22	.20
	<i>F</i>	2.971	.380	2.662	.462	1.302	2.342	1.414	1.489

AUT = Job autonomy; VT = Job variety; PE = Psychological empowerment; VC = Voice; TC = Taking charge; PP = Problem prevention; PERF = Job performance.  
IWB = Innovative work behavior.

\*  $p < .05$ , \*\*  $p < .001$ .

**2. Analysis of variance (ANOVA) and Tests post-hoc HSD Tukey, comparing means for profession category (STUDY 2)**

		<b>RBSE</b>	<b>PE</b>	<b>VC</b>	<b>TC</b>	<b>PP</b>	<b>SAT</b>	<b>STR</b>	<b>PERF</b>	<b>IWB</b>
<b>Profession category</b>	Healthcare ( <i>n</i> = 92)	4.21	3.59	3.76	3.78	4.05	3.86	2.86	3.74	<b>3.52</b>
	Administrative ( <i>n</i> = 23)	3.99	3.75	4.00	3.67	4.08	3.82	2.91	3.71	3.48
	Medico-techn. ( <i>n</i> = 9)	4.06	3.59	4.00	3.76	4.14	3.85	2.85	3.83	3.48
	Technical ( <i>n</i> = 27)	4.12	3.60	3.96	3.62	3.77	3.87	2.86	3.87	<b>3.15</b>
	<b>Sig.</b>	.42	.69	.39	.58	.11	.99	.98	.66	.05*
	<b>F</b>	.930	.488	.994	.644	1.985	.023	.048	.526	2.661

RBSE = Role breadth self-efficacy; PE = Positive emotions; VC = Voice; TC = Taking charge; PP = Problem prevention; SAT = Job satisfaction; STR = Job stress; PERF = Job performance; IWB = Innovative work behavior.

\*  $p < .05$ , \*\*  $p < .001$ .