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Le bien-être psychologique en relation d'aide : vers un modèle empirique intégrateur

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Résumé

La santé mentale des professionnels en relation d'aide est sous la loupe depuis plus d'une cinquantaine d'années grâce entre autres aux travaux de Freudenberger sur le sujet. En effet, exposés dans le cadre de leur travail aux expériences et vécus traumatiques des personnes et, à la nécessité d'y apporter une réponse, les professionnels de la santé et des services sociaux sont plus à risque de troubles tant physiques que psychologiques reliés au travail. Cet enjeu entraine une vulnérabilité des organisations à travers l'absentéisme et la perte du personnel qualifié, et affecte ainsi la fourniture et la qualité de service. Des avancées ont été faites et plusieurs concepts proposés pour tenter de mieux cerner le bien-être psychologique des professionnels en relation d'aide ont émergé. Ces avancées majoritairement en silo ne permettent cependant pas d'avoir une idée globale de la problématique.

La présente thèse en utilisant un échantillon d'intervenants impliqués auprès de la protection de la jeunesse propose et teste un modèle intégrant les principaux concepts sur le sujet notamment l'épuisement professionnel, la qualité de vie professionnelle (incluant la fatigue et la satisfaction de compassion), le stress traumatique secondaire, le traumatisme vicariant ainsi que des troubles apparentés ou comorbides tels que le stress posttraumatique, la dépression et l'anxiété. Le modèle inclut les caractéristiques de l'environnement de travail et l'empathie comme facteurs reliés au bien-être psychologique en relation d'aide et explore le stress perçu comme modérateur potentiel dans ce cadre.

L'objectif a été poursuivi par une démarche en trois étapes dont 1) la réduction et la validation de l'échelle ProQOL-5 servant à évaluer la qualité de vie professionnelle,

principal concept utilisé dans les études de bien-être psychologique en relation d'aide 2) l'exploration d'une variable intégratrice empirique représentant le bien-être psychologique en relation d'aide à partir des principaux concepts y étant reliés (épuisement professionnel, qualité de vie professionnelle, stress traumatique secondaire, traumatisme vicariant, stess posttraumatique, dépression et anxiété), et enfin 3) l'exploitation de ces résultats pour définir et tester un modèle incluant l'environnement de travail et l'empathie comme facteurs reliés au bien-être psychologique, avec le stress perçu comme modérateur potentiel.

Les analyses ont permis de proposer et valider une version réduite à 16 items de l'échelle de ProQOL-5 (contre 30) avec un alpha de Cronbach de 0,87. Il en ressort également que le bien-être psychologique des professionnels en relation d'aide semble bien, tel que défini par Stamm à travers le concept de qualité de vie professionnelle, être constitué d'une composante positive, le sens d'efficacité et de satisfaction, et de deux composantes négatives à savoir l'épuisement psychologique et le traumatisme. Par ailleurs, l'environnement de travail s'est révélé un facteur important en ayant un lien significatif avec chacune des trois composantes du bien-être psychologique. En ce qui concerne l'empathie, le souci empathique s'est révélé avoir un lien positif avec le sens d'efficacité et de satisfaction, et négatif avec l'épuisement psychologique et le traumatisme. Par contre, la détresse personnelle reliée à l'engagement empathique s'est révélée avoir un lien positif avec l'épuisement psychologique et le traumatisme. Le rôle du stress perçu comme modérateur a aussi pu être validé notamment sur les liens entre l'environnement de travail et l'épuisement psychologique, l'environnement de travail et le trauma, le souci empathique et l'épuisement psychologique et finalement la détresse personnelle liée à

l'empathie et le trauma. Ces résultats permettent ainsi d'avoir en un portrait, une idée globale sur le bien-être psychologique des professionnels en relation d'aide et ses liens avec l'environnement de travail et l'empathie.
Mots-clés : Épuisement psychologique, fatigue de compassion, satisfaction de compassion, épuisement émotionnel, dépression, anxiété, stress traumatique secondaire, traumatisme vicariant, stress posttraumatique, caractéristiques du travail, empathie, charge de travail, bien-être psychologique, intervenants jeunesse.

Abstract

The occupational mental health of child protection workers is of great concern since they are exposed directly and indirectly to traumatic experiences and involved people with special needs**.** In order to tailor efficient intervention programs to address this issue, one has to know the essence of the problem and which factors should be tackled.

The present thesis proposed to use the major findings on studies on burnout, compassion fatigue, vicarious trauma, secondary traumatic stress, with the aim to propose and test a model that integrates these main concepts and well-documented factors (work environment, empathy, perceived stress) in the development of child protection workers' occupational mental health.

The objective was pursued by a three-step approach including 1) the reduction and validation of the ProQOL-5, the main scale used to assess the quality of professional life of social and healthcare professionals, 2) the exploration of an empirical variable representing the social and healthcare professionals'mental health based on the main concepts related to it (burnout, compassion and satisfaction fatigue, secondary traumatic stress, vicarious trauma, posttraumatic stress, anxiety, depression), and finally 3) the use

of these results to define and test a model including environment characteristics and empathy as related factors, and perceived stress as a potential moderator. A sample of child protection workers was used for this purpose.

A reduced version of ProQOL-5 with 16 items (compared to 30) was reached. This scale showed good psychometrics with a global Cronbach's alpha of .87 and more precisely .86 for Compassion satisfaction, .82 for Burnout, and .74 for Secondary Traumatic Stress. Results also suggested that child protection workers' mental health seems to consist of a positive component, the sense of efficacy and satisfaction, and two negative components, namely psychological exhaustion and trauma as proposed by Stamm (through the professional quality of life concept).

Work environment characteristics and empathic concern appeared to have positive links with sense of satisfaction and efficacy in child protection workers and negative links with psychological exhaustion and trauma. Conversely, personal distress empathy was found to have positive links with psychological exhaustion and trauma, and negative link with the sense of satisfaction and efficacy of child protection workers. The results also showed that these relations were moderated by the level of perceived stress.

These results gave an integrated portrait of what could be the child protection workers'mental health reality and the differentiated contribution of work environment and empathy. This can help to improve interventions targeting child protection workers' mental health.

Keywords: Burnout, secondary traumatic stress, professional quality of life, compassion fatigue, compassion satisfaction, vicarious trauma, depression, anxiety, posttraumatic stress, work characteristics, psychological exhaustion, empathy, psychological wellbeing, work overload, child protection worker, emotional exhaustion, healthcare professional.

Table des matières

Liste des tableaux

Chapitre II- Article 1

Chapitre III - Article 2

Chapitre IV- Article 3

Liste des figures

Chapitre III - Article 2

Chapitre IV - Article 3

Liste des sigles et des abréviations

AIC: Akaike's Information Criterion

BDI: Beck Depression Inventory

BIC: Bayesian Information Criterion

BLRT : Bootstrap Likelihood Ratio Test

CF: Compassion Fatigue

CFA: Confirmatory Factorial Analysis

CFI : Comparative Fit Index

CPW: Child Protection Worker

CS: Compassion Satisfaction

DSM: Diagnostic and Statistical Manual of Mental Disorders

ECV : Explained Common Variance

EFA: Exploratory Factorial Analysis

HADS: Hospital Anxiety Depression Scale

IRI: Interpersonal Reactivity Index

LPA: Latent Profile Analysis

MBI: Malasch Burnout Inventory

MLR: Maximum Likelihood

PCL-5: Posttraumatic Stress Disorder Checklist

PROQOL: Professionnal Quality of Life

PTSD: Posttraumatic stress disorder

RMSEA: and root mean square error of approximation

SEM: Structural Equation Modeling

STS: Secondary Traumatic Stress

TICS: Trier Inventory of Chronic Stress

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A ma famille et mes amis

« Travaillez, prenez de la peine : C'est le fonds qui manque le moins ». Cette phrase tirée d'une des populaires fables de Lafontaine (1621-1695) intitulée *Le laboureur et ses enfants*, m'a maintes et maintes fois été répétée par mon grand père Jacques qui, avec ma grand-mère Scholastique m'ont appris la valeur du travail bien fait, de l'effort, et de la persévérance : trois vertus sans lesquelles je n'aurais pu venir à bout de cette thèse. Mes premiers remerciements leur vont donc tout naturellement, ainsi qu'à ma mère Marie-Madeleine qui a toujours été un excellent support à tous les points de vue dans mon évolution tant personnelle que professionnelle, et à mon père Joseph.

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Contribution des auteurs aux articles

Yannick Fouda : Auteur de cette thèse, Yannick Fouda est aussi l'auteur principal des trois articles de la thèse et a contribué activement à toutes les étapes de ces articles. Il s'agit notamment de la participation à la rédaction du protocole du projet Iso-Stress et à la collecte de données en tant que coordonnateur de ce projet durant 2 ans. Il a ensuite compilé les différentes données pour la création de la base de données principale. Yannick Fouda a également été le principal acteur dans l'élaboration des hypothèses de recherche, de la méthodologie, ainsi que dans l'analyse des données et la rédaction de la présente thèse.

Pierrich Plusquellec : Directeur principal de la thèse, il a encadré Yannick Fouda durant toutes les étapes de la thèse; de l'idée de recherche à la rédaction des articles en passant par la collecte de données. En tant qu'encadreur, il a veillé à l'orientation des articles, participé à l'élaboration des hypothèses de recherche, à la méthodologie, ainsi qu'à une relecture et correction de tous les articles.

Steve Geoffrion : Co-directeur, il a encadré Yannick Fouda durant toutes les étapes de la thèse; de l'idée de recherche à la rédaction des articles. En tant qu'encadreur, il a veillé à l'orientation des articles, participé à l'élaboration des hypothèses de recherche, à la méthodologie, ainsi qu'à une relecture et correction de tous les articles.

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Sophie Massé : En tant qu'agente de planification et de programmation de la recherche au sein du Centre intégré universitaire de santé et de services sociaux du Centre-Sud-de-l'Île-de-Montréal, Sophie Massé a contribué sur le terrain à la coordination de la collecte de données et à la qualité de ces données auprès des équipes de ladite organisation.

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Présentation de la thèse

Cette thèse est une thèse par articles composée de 5 sections principales. La forme par articles a été privilégiée pour permettre une meilleure diffusion des connaissances dans les milieux scientifiques et académiques. Cette forme permet de répondre à des questions scientifiques précises dans chaque article et de stimuler ainsi la recherche.

La thèse est divisée en 5 chapitres dont le premier constitue une introduction générale. Les chapitres 2 à 4 sont essentiellement les 3 articles soumis ou en cours de soumission et le dernier chapitre est une discussion générale.

L'introduction générale, aborde le contexte théorique de cette thèse, notamment l'enjeu très actuel de l'épuisement des professionnels en relation d'aide. Elle présente ensuite les principales avancées dans ce domaine de recherche en lien avec le bien-être psychologique des professionnels de santé et services sociaux, ainsi que les concepts y ayant trait. Ceci permet de voir les connaissances acquises au fil des années mais aussi le flou conceptuel sur lequel la thèse se penche pour y apporter quelques éléments de réponse. Pour ce faire trois objectifs sont déclinés à savoir l'amélioration d'une échelle de mesure de la qualité de vie professionnelle, la proposition d'une variable empirique rendant compte du bien-être psychologique en relation d'aide selon l'état des connaissances actuelles, et enfin la proposition et la validation d'un modèle explicatif.

Le chapitre 2, consacré au premier article de la thèse se penche sur la réduction et l'amélioration d'une des principales échelles de mesure utilisée pour l'évaluation de la qualité de vie professionnelle, un des concepts phares actuellement utilisé pour l'évaluation du bien-être psychologique en relation d'aide. Il s'agit de l'échelle du ProQOL dans sa 5ème version. L'article propose à travers une démarche scientifique en plusieurs étapes, la réduction de cette échelle de 30 à 16 items, et une validation de la version réduite obtenue. L'article discute ensuite des principaux résultats obtenus et de leur implication pour la recherche scientifique et clinique.

Le chapitre 3, consacré au deuxième article rentre un peu plus dans le vif du sujet en faisant un arrêt sur la définition de l'épuisement en relation d'aide et plus largement du bien-être psychologique des professionnels en relation d'aide. Les principaux concepts y ayant traits sont développés et mis en relation. Ceci permet à la fois de relever leurs différences mais aussi leurs points communs. L'article ressort ainsi les débats scientifiques actuels entre différents chercheurs qui, soit soutiennent la différentiation de ces concepts ou la contestent. Une fois ces enjeux définis, l'article explore la possibilité d'une variable empirique intégratrice permettant de rendre compte du bien-être psychologique au travail en relation d'aide, à partir des concepts y étant reliés notamment l'épuisement professionnel, le traumatisme vicariant, les stress traumatique secondaire, la fatigue de compassion, la satisfaction de compassion, le stress posttraumatique, la dépression et l'anxiété. Les résultats de ces analyses sont enfin discutés en lien avec leur apport au niveau scientifique et clinique.

Tout naturellement, le chapitre 4, consacré au dernier article se penche plus particulièrement sur les facteurs impliqués dans le développement du bien-être psychologique des professionnels en relation d'aide. Pour ce faire, cet article s'appuie sur les facteurs prédictifs mis en lumière dans les études portant sur les différents concepts reliés au bien-être psychologique en relation d'aide. La variable tridimentionnelle de bien-être psychologique utilisée dans cet article est directement tirée des résultats de l'article 2. L'article propose donc un modèle explicatif intégrateur du développement du bien-être psychologique en relation d'aide incorporant les facteurs tant organisationnels que l'empathie. Le modèle est ensuite testé avec l'exploration d'une modération du stress perçu sur les liens entre les facteurs et les différentes dimensions du bien-être psychologique en relation d'aide. Les résultats y sont discutés en lien avec leur impact scientifique et clinique.

Le dernier chapitre fait office de discussion générale qui reprend les objectifs de la présente thèse et explore plus en détail la manière dont les articles y ont répondu. Plus précisément, il expose les principaux résultats empiriques, les implications pour la recherche, les implications pour la pratique, les implications pour la psychoéducation, les forces et limites de l'étude doctorale et enfin la généralisation des résultats obtenus.

Chapitre 1 : Introduction générale

1.1 Introduction

« Travaillez, prenez de la peine : C'est le fonds qui manque le moins ». Cette phrase tirée d'une des populaires fables de Lafontaine (1621-1695), intitulée *Le laboureur et ses enfants* (Grandville, 1838), illustre bien la considération que le travail a toujours eu dans nos sociétés depuis plusieurs siècles. La fable se termine d'ailleurs par « Le père fut sage de leur montrer, avant sa mort, que le travail est un trésor ».

Le travail occupe une place centrale dans la vie humaine. En Occident par exemple, il est valorisé comme base de l'organisation sociétale à travers le système économique (Casey, 1995; MÉDA, 1998), et comme élément central dans le développement, l'expression et la maintenance de la santé psychologique (Blustein, 2008; Garner & Méda, 2006). Le travail n'est cependant pas toujours source de développement et de santé pour la personne et la société. Comme toute médaille, il a aussi son revers, notamment par le stress qu'il peut générer et les conséquences pour la santé qui y sont associées (Evans et al., 2006; Felton, 1998; Lloyd et al., 2002). Parmi ces conséquences on retrouve des troubles d'ordre physique tels que les accidents cardio-vasculaires (Kivimaki et al., 2012), l'hypertension, les douleurs musculaires, les maux de tête, l'insomnie, les troubles respiratoires et gastro-intestinaux (Felton, 1998), alors qu'au niveau psychologique il s'agira plus de dépression, d'anxiété et d'autres problématiques dont l'épuisement professionnel (Felton, 1998; Maslach et al., 2001). Au Québec par exemple, de 2012 à 2015, selon la Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST), plus d'un millier de personnes sont prises en charge chaque année pour cause de lésions attribuables au stress en milieu de travail. Le chiffre triplerait si toutes les demandes adressées à cette commission étaient retenues (Lamarche et al., 2017). Selon ces mêmes données, un tiers

des travailleurs affectés restent absents du travail en moyenne 175 jours, période durant laquelle il faut les soigner, leur assurer des indemnités, et pallier leur absence dans l'organisation. Cette situation représentait en 2012 un coût annuel estimé entre 16 et 20 milliards de dollars aux contribuables canadiens et la situation est loin de s'être améliorée (Watson, 2012).

1.2 Contexte théorique

1.2.1 La relation d'aide, un travail plus à risque

Dans le contexte global du travail et de la pression qui s'y rattache, se situent en particulier les professionnels en relation d'aide, qui semblent vivre une pression supplémentaire relative à la nature de leur travail ; pression qui les mettrait plus à risque de troubles d'adaptation. En effet, la nature de leur travail apporte une exigence supplémentaire par une exposition, entre autres, aux expériences et vécus traumatiques et aux défis d'usagers ayant des besoins particuliers (Geoffrion, 2015). Cette exposition répétée a été mise en lien avec des perturbations au niveau émotionnel, cognitif et comportemental (Evans et al., 2006). Les effets pourraient aussi se ressentir sur la qualité des services et à travers entre autres un impact sur le jugement clinique des professionnels au point d'entrainer un risque d'erreurs dommageables envers la personne aidée (LeBlanc et al., 2015; Reader & Gillespie, 2013; Shanafelt et al., 2002). Les structures et organisations en pâtissent également par la réduction de l'efficacité des employés, l'augmentation de l'absentéisme, le taux de roulement du personnel (Dewa et al., 2004; Felton, 1998), la perte de personnel qualifié (Pearlman & Saakvitne, 1995a) et voire la difficulté à recruter du personnel. En Angleterre par exemple, 81% des gestionnaires

disaient avoir des problèmes pour recruter et garder des travailleurs sociaux (Evans et al., 2006). Cette situation est d'ailleurs en train d'être exacerbée par la pandémie actuelle de Covid-19 (Barello & Graffigna, 2020; Barello et al., 2020; Sasangohar et al., 2020; Shah et al., 2020). Barello et al. (2020) ont par exemple révélé dans une étude récente sur l'épuisement professionnel auprès de 376 professionnels de santé en Italie ayant assisté des patients de Covid-19, qu'un pourcentage élevé ont reporté des scores significativement plus élevés que la normale sur au moins une des dimensions de l'épuisement.

1.2.2 Le bien-être psychologique des professionnels en relation d'aide

Bien que la santé mentale des professionnels en relation d'aide soit en avant plan de la recherche depuis plus d'une cinquantaine d'années et que plusieurs outils aient été développés pour son évaluation (Figley, 1995b; Maslach, 1976 ; Pearlman & Saakvitne, 1995b), il existe encore un réel flou conceptuel et des débats sur la nature et les causes de cette problématique touchant les travailleurs (Adams et al., 2001; Geoffrion, 2015; Geoffrion et al., 2016; Jenkins & Baird, 2002). En effet, plusieurs concepts tels la fatigue de compassion, le stress traumatique secondaire, le traumatisme vicariant, ou l'épuisement professionnel ont été proposés pour en rendre compte mais la littérature peine à dissocier ces concepts qui présentent un chevauchement évident (Adams, Matto, & Harrington, 2001; Jenkins & Baird, 2002; Jenkins & Maslach, 1994; Stamm, 2010). Ils sont d'ailleurs parfois utilisés comme synonymes ou entités distinctes, rendant difficile la capitalisation des différentes connaissances acquises et l'accompagnement clinique des équipes en santé et sécurité psychologique au travail (Adams et al., 2006; Bride, Radey, & Figley, 2007; Bride et al., 2004). Certains chercheurs avancent que pour bien comprendre le phénomène, il faudrait prendre en considération les travaux qui parlent de ces principaux et différents

concepts à savoir l'épuisement professionnel, la fatigue de compassion, le traumatisme vicariant et le stress traumatique secondaire (Adams et al., 2001; Jenkins & Baird, 2002).

1.2.2.1 L'épuisement professionnel

L'épuisement professionnel est considéré comme une réponse prolongée face à des stresseurs chroniques émotionnels et interpersonnels au travail (Maslach, 2017; Maslach & Leiter, 2017; Maslach et al., 2001). Introduit dans la littérature par Veil (1959), sous le terme anglophone « exhaustion », l'épuisement professionnel apparaît pour la première fois comme syndrome dans un article publié par Freudenberger (1974) sous le terme anglophone « burnout ». Le psychiatre y fait état d'une fatigue émotionnelle accompagnée d'une perte de motivation et d'engagement, réalité expérimentée par quelques professionnels après un certain temps d'activité. En parallèle, Maslach (1976) qui étudie les émotions en milieu de travail auprès d'intervenants sociaux, découvre que les stratégies d'adaptation utilisées par ces derniers, ont une influence sur l'identité professionnelle et le comportement au travail. Ceci passe notamment par une distanciation du travail, ou dépersonnalisation (Maslach, 2017; Maslach et al., 2001). Elle complète donc les observations de Freudenberger (1974) en ajoutant ce dernier élément. L'épuisement professionnel est alors défini de façon tridimensionnelle par l'épuisement émotionnel, la dépersonnalisation et la perte du sentiment d'efficacité ou d'accomplissement de soi (Maslach & Leiter, 2017; Schaufeli et al., 2009). L'épuisement émotionnel peut se traduire par des symptômes tels qu'être émotionnellement vidé(e) ou frustré(e) par son travail, se sentir à bout à la fin de la journée de travail ou tout simplement au bout du rouleau. La dépersonnalisation renvoie à des symptômes tels que devenir insensible aux gens à cause du travail, avoir l'impression de ne plus se soucier vraiment de ce qui arrive à ses clients

ou patients ou de s'occuper de ces derniers de façon impersonnelle. Et finalement la perte du sentiment d'efficacité renvoie aux symptômes tels que ne plus avoir l'impression d'avoir une influence positive sur les gens, avoir de la difficulté à créer une atmosphère détendue avec ses clients ou patients, ou encore sentir qu'on ne s'occupe plus efficacement de leurs problèmes. La dimension d'épuisement émotionnel a longtemps été considérée comme centrale. En effet, sans être suffisante, elle était jugée nécessaire pour pouvoir parler d'épuisement professionnel (Maslach et al., 1986; Schaufeli et al., 2002) mais comme nous le verrons plus tard, ce n'est plus nécessairement le cas.

1.2.2.2 Le traumatisme vicariant

Le traumatisme vicariant est défini comme la transformation qui se produit chez un thérapeute (ou une personne s'occupant de personnes traumatisées ; Pearlman & Saakvitne, 1995a) en résultante d'un engagement empathique envers l'expérience traumatique d'une personne. Ces changements peuvent causer des dérèglements au niveau physiologique (sensation corporelles, réactions physiologiques, etc…) et cognitif (images intrusives) et affecter l'identité personnelle et professionnelle, la perception du monde, la spiritualité, les capacités et habiletés personnelles, les besoins psychologiques, les croyances en lien avec le sentiment de sécurité, l'estime de soi, la confiance, l'intimité et le sentiment de contrôle (Saakvine & Pearlman, 1996; Sabin-Farrell & Turpin, 2003).

Le contre-transfert, l'empathie, la contagion émotionnelle ainsi que des processus cognitifs ont été proposés comme mécanismes par lesquels ces changements arrivent (Sabin-Farrell & Turpin, 2003). Le contre-transfert est considéré comme l'ensemble des réactions que peut avoir un thérapeute face à son client. La contagion émotionnelle réfère plus à un mécanisme par lequel le thérapeute « capte » les émotions du client et les mime

involontairement. Le DSM-V classe maintenant le traumatisme vicariant dans les troubles de stress post-traumatiques (TSPT) à travers la reconnaissance de l'exposition répétitive à du matériel traumatique comme potentielle cause du TSPT (APA, 2013).

1.2.2.3 La fatigue de compassion ou stress traumatique secondaire

À son origine, la fatigue de compassion est définie comme une forme particulière d'épuisement professionnel affectant les donneurs de soins (Joinson, 1992; Lombardo & Eyre, 2011). Plus tard, Figley (1995a), le propose en remplacement ou équivalence au terme stress traumatique secondaire, alors vu comme la conséquence d'une exposition au récit de l'expérience traumatique d'une autre personne. Les deux termes représentaient selon cet auteur, une forme d'épuisement professionnel des « donneurs de soins » (Figley, 1995a; Figley, 2002).

Les concepts de fatigue de compassion et de stress traumatique secondaire sont repris et développés par Stamm (2002) qui y ajoute un pendant positif : la satisfaction de compassion. En effet, Stamm et al. (2002) comme plusieurs autres chercheurs trouvent que le travail en relation d'aide n'a pas qu'un impact négatif mais peut aussi avoir un effet positif (Geoffrion et al., 2019; Voss Horrell et al., 2011). Elle développe ainsi le concept de qualité de vie professionnelle définie comme le niveau de bien-être psychologique ressenti par un professionnel en relation d'aide face à son travail (Stamm, 2010). La qualité de vie professionnelle est composée de la fatigue de compassion et de la satisfaction de compassion. Dans son modèle, Stamm (2010) positionne l'épuisement professionnel comme une sous-dimension de la fatigue de compassion et y regroupe ses effets tels l'épuisement, la colère, la frustration et la dépression. La deuxième sous-dimension de la fatigue de compassion est identifiée comme stress traumatique secondaire, et met l'accent

sur le traumatisme relié au travail en relation d'aide. L'auteur avance donc le fait que le professionnel en relation d'aide peut être soumis au traumatisme relié à l'intervention en plus de l'épuisement professionnel classique. Toutefois, cet épuisement professionnel n'est pas mesuré par les outils classiques existant mais l'auteur propose plutôt le Professionnal Quality of Life scale (ProQOL), une échelle destinée à évaluer la qualité de vie professionnelle, naturellement composée de 3 facteurs à savoir la satisfaction de compassion, l'épuisement professionnel et le stress traumatique secondaire.

1.2.3 Survol historique du bien-être psychologique en relation d'aide : à l'origine l'épuisement professionnel

Il faut souligner d'entrée de jeu que les principaux concepts en lien avec l'épuisement en relation d'aide tirent leur source du concept d'épuisement professionnel, premier concept défini dans le cadre de l'étude des effets du travail en relation d'aide sur les professionnels (Freudenberger, 1974). En effet, toutes les études menées durant la phase pionnière (1975-1980) pour décrire le phénomène et montrer qu'il est commun, sont réalisées dans le domaine de la santé et de la relation d'aide (Maslach et al., 2001; Schaufeli et al., 2009). Tel que vu précédemment, l'épuisement professionnel est d'ailleurs décrit pendant un temps comme un syndrome d'épuisement émotionnel, de dépersonnalisation et de perte du sentiment d'efficacité affectant les professionnels de la santé (Maslach et al., 1996). Les préoccupations sont avant tout cliniques et doubles; axées non seulement sur les symptômes de la problématique et ses impacts sur la santé mentale des intervenants, mais aussi sur la relation aidant-aidé et son contexte (Maslach & Leiter, 2017; Maslach et al., 2001). La plupart des modèles sont développementaux, investiguant l'ordre d'apparition des sous-dimensions de l'épuisement professionnel et les méthodes de

recherche sont descriptives qualitatives, faites d'études de cas et d'observations dans les organisations (Maslach et al., 2001).

La période allant des années 1980 à 2000 est marquée par le développement de plusieurs questionnaires pour mesurer l'épuisement professionnel et les principaux sont le Maslach Burnout Inventory–MBI (Maslach, Jackson, Leiter, Schaufeli, & Schwab, 1986), le Burnout Measure-BM (Pines et al., 1981) et le Shirom–Melamed Burnout Measure-SMBM (Melamed et al., 1992; Shirom, 1989). Parmi ceux-ci, le MBI semble être le plus utilisé. Bianchi et al. (2015) montrent dans une revue de littérature portant sur 92 études que ce dernier a été utilisé dans 78% des cas. Durant cette période, plusieurs études développementales et longitudinales sont menées, de nombreuses méta-analyses sont aussi effectuées et des méthodes statistiques multiples telles les régressions et équations structurelles, sont mises à profit (Maslach et al., 2001). L'idée est d'étudier les liens complexes entre les facteurs organisationnels et les dimensions de l'épuisement professionnel, et de regarder la contribution unique de certains facteurs (Maslach et al., 2001). Durant cette période, l'épuisement professionnel gagne aussi progressivement l'intérêt d'autres domaines de recherche dont la psychologie industrielle-organisationnelle et les études sont réalisées sur d'autres populations que les professionnels en relation d'aide (Maslach et al., 2001; Maslach & Leiter, 2017). Cette ouverture à d'autres domaines et populations a deux impacts majeurs : le premier portant sur le construit, et le deuxième sur les facteurs reliés à l'épuisement professionnel.

1.2.3.1 Développement de l'épuisement professionnel et impact sur le construit

Un des premiers impacts qu'apportent les résultats de recherches auprès d'autres populations professionnelles est la remise en question de la centralité de la sous-dimension

d'épuisement émotionnel, pourtant initialement au cœur du construit d'épuisement professionnel (Zapf, 2002). Cela entraine des débats autour de la validité du construit qui perdurent à ce jour (Bianchi et al., 2019; Messias & Flynn, 2018; Messias & Flynn, 2019). Cependant, malgré quelques autres tentatives de conceptualisation (Melamed et al., 1992; Pines, 1981; Shirom, 1989) l'épuisement professionnel reste largement défini de façon tridimensionnelle par l'épuisement émotionnel, la dépersonnalisation et la perte du sentiment d'efficacité avec comme principal outil de mesure le Maslach Burnout Inventory (Schaufeli et al., 2009). Cette conceptualisation et son opérationnalisation sont toutefois encore contestées dans la communauté scientifique. Dans un récent article, Bianchi, et al. (2019) avancent que le concept d'épuisement professionnel présente des incohérences et des ambiguïtés en termes de conceptualisation et d'opérationnalisation, un manque de clarté au niveau étiologique, une faiblesse au niveau de la validité discriminante et finalement des problèmes de prévalence et de diagnostic. S'appuyant sur le fait que plusieurs études trouvent un taux de corrélation de Pearson stable au-dessus de 0,60 entre la dépression et l'épuisement professionnel, et sur une revue de littérature incluant 92 études, ils soutiennent que ce dernier n'est rien d'autre qu'une forme de dépression dans le contexte du travail et que les données empiriques pour distinguer les deux concepts sont fragiles (Bianchi et al., 2015). Ils discutent de la similitude des symptômes de la dépression avec les facteurs de l'épuisement professionnel et attribuent la différence trouvée à la limite des connaissances actuelles quant à l'hétérogénéité des symptômes et des formes de dépression. En lien avec l'évaluation diagnostique de l'épuisement professionnel et sa prévalence, ces auteurs ressortent que cette dernière varie de 3 à 69% dépendamment de la

définition de l'épuisement professionnel (Elmore et al., 2016; Garrouste-Orgeas et al., 2015).

1.2.3.2 Développement de l'épuisement professionnel et impact sur les facteurs y étant reliés

L'impact de l'élargissement des études sur l'épuisement professionnel à de nouvelles populations et domaines touche également les facteurs reliés à ce dernier. En effet, la psychologie industrielle-organisationnelle apporte de nouvelles préoccupations, méthodologies et modèles théoriques. Parmi les modèles importés, on peut citer les modèles du stress au travail mettant l'accent sur les exigences reliées au travail (Guglielmi & Tatrow, 1998) et les modèles de concordance ou « fit » qui tablent sur la concordance entre l'environnement de travail et les caractéristiques de l'employé (Kristof-Brown et al., 2005; Maslach et al., 2001). Ces modèles font ressortir des facteurs explicatifs autres que la relation d'aide et mettent plutôt en avant des facteurs tels que la charge de travail et l'environnement (Zapf, 2002). Aujourd'hui, les études portant sur l'épuisement professionnel font communément ressortir plusieurs facteurs de risque tant individuels (sexe, âge, statut marital, autonomie, estime de soi, locus de contrôle, stratégies d'adaptation face au stress, etc…) qu'environnementaux (type d'occupation, caractéristiques du travail, climat de travail, valeurs, attentes, conflits interpersonnels, récompenses/reconnaissance liées au travail, etc. (Adams et al., 2001; Cunningham, 2003; Maslach et al., 2001; Maslach & Leiter, 2017 ; Potter et al., 2013; Sprang et al., 2007).

1.2.3.3 De l'épuisement professionnel à la fatigue de compassion

Face aux enjeux qu'entrainent l'ouverture des études sur l'épuisement professionnel à d'autres professions et domaines, il y a dans la littérature scientifique dès

les années 90, un retour de balancier. Certains chercheurs, principalement du domaine de la santé et de la relation d'aide se recentrent sur l'aspect d'épuisement émotionnel et du lien entre l'aidant et l'aidé ; des termes tels fatigue de compassion, stress traumatique secondaire (Figley, 1995a, 1995b), traumatisme vicariant (Pearlman & Mac Ian, 1995) apparaissent. Parmi ces termes, la fatigue de compassion semble être le concept prédominant (Geoffrion, Lamothe, Morizot, & Giguère, 2019).

Il est intéressant de noter que l'une des premières apparitions du terme fatigue de compassion est située en 1992 dans le cadre d'une étude sur l'épuisement professionnel ; étude menée par Joinson (1992) auprès des infirmières travaillant en service d'urgence. Figley (1995a, 2002) reprend et développe le terme de fatigue de compassion et en parle explicitement comme une forme d'épuisement professionnel des « donneurs de soins » ou de professionnels de la relation d'aide. La fatigue de compassion n'est donc pas perçue à ses débuts comme un concept différent de l'épuisement professionnel mais comme l'application de ce dernier au domaine de la relation d'aide avec des préoccupations différentes portant notamment sur les facteurs propres à ce domaine (Beck, 2011; Figley, 1995a; Pearlman & Saakvitne, 1995a). Il faudra attendre plus tard pour voir apparaitre des différentiations conceptuelles comme dans le modèle de Stamm (2010) qui intègre explicitement l'épuisement professionnel comme sous-dimension de la fatigue de compassion de pair avec le stress traumatique vicariant.

1.2.4 Fatigue de compassion : modèles théoriques actuels dominants et évaluation

1.2.4.1 Modèle de Figley

Figley (1995a) situe la fatigue de compassion au cœur de la relation d'aide avec comme éléments centraux, l'empathie et la compassion, nécessaires selon lui pour une bonne relation thérapeutique. À la base, le professionnel doit avoir une habileté empathique ; une capacité à reconnaître la souffrance de l'autre. Ainsi équipé, lorsque face à cette dernière le professionnel manifeste un souci empathique, c'est à dire la motivation d'aider, il émettra une réponse empathique. La réponse empathique est le degré auquel le professionnel fait des efforts pour réduire la souffrance de l'autre par une compréhension empathique. Cette compréhension des émotions, pensées et comportements de la personne aidée se fait en se projetant dans la perspective de cette dernière. Et c'est cette projection qui expose le professionnel. L'effort ainsi fournit produit un stress de compassion, résidu de l'énergie émotionnelle impliquée dans la réponse empathique. C'est ce stress de compassion qui, à des niveaux élevés, peut mener à la fatigue de compassion. La compassion est alors définie par Figley (1995a) comme le fait de « porter la souffrance » de l'autre et la fatigue de compassion, le coût à payer pour prendre soin des personnes souffrantes (Figley, 2002). Selon l'auteur, deux éléments peuvent cependant modérer ce coût à la baisse, à savoir, le sens d'accomplissement (satisfaction issue de l'aide apportée), et le désengagement, à savoir la capacité de distanciation du professionnel face à la personne aidée. Ces deux concepts ressemblent étrangement à deux dimensions de l'épuisement professionnel : le sentiment d'efficacité et la dépersonnalisation définis par Maslach et al. (2001) avec toutefois une différence conceptuelle majeure puisque Figley (2002) ne les situe pas comme composantes de la fatigue de compassion tels qu'ils le sont

pour l'épuisement professionnel, mais plutôt en modérateurs entre la relation d'aide et cette fatigue de compassion. Finalement, deux autres éléments modèrent à la hausse le risque de fatigue de compassion ; d'une part la chronicité ou exposition prolongée au stress émotionnel, et d'autre part la mémoire traumatique à savoir des souvenirs associés à des expériences négatives avec d'autres clients. Le dernier facteur précipitant de la fatigue de compassion serait les changements brusques, imprévus dans la vie du professionnel (Figley, 2002).

1.2.4.2 Modèle de la fatigue de compassion de Stamm

Stamm (2010), poursuit les travaux menés par Figley (1995a) et propose dans son prolongement, un modèle prenant en compte des travaux issus de l'épuisement professionnel. Elle scinde le concept de fatigue de compassion en deux dimensions à savoir, l'épuisement professionnel et le traumatisme secondaire. Pour Stamm (2002), le professionnel en relation d'aide est d'abord soumis aux mêmes facteurs d'épuisement professionnel que tous les travailleurs mais en plus, il a ceux propres à la relation d'aide, placés sous le concept de stress traumatique secondaire. L'auteur propose aussi un pendant positif à la fatigue de compassion appelé satisfaction de compassion, qu'elle définit comme la capacité de l'intervenant à acquérir un sens de son travail. En effet le modèle stipule que le travailleur oscille entre la gratification que lui procure le travail (satisfaction de compassion), et les aspects négatifs de ce dernier (fatigue de compassion). Cet équilibre est appelé la qualité de vie professionnelle. L'épuisement apparaîtrait lorsque l'équilibre brisé porte le travailleur vers la fatigue de compassion (Stamm, 2010). Le modèle théorique reprend les éléments liés à différents concepts dont la fatigue de compassion, l'épuisement professionnel, le traumatisme primaire et secondaire pour les incorporer en un tout.

Le modèle de Stamm (2010) a le mérite d'être intégrateur et semble à ce jour la meilleure approche pour l'évaluation du bien-être psychologique des professionnels en relation d'aide.

1.2.5 Outils d'évaluation du bien-être psychologique en relation d'aide

Principalement réalisée au début par le Maslasch Burnout Inventory (Maslach et al., 1986), l'évaluation du bien-être psychologique en relation d'aide, particulièrement en ce qui a trait à l'épuisement a aussi évolué et s'est enrichi. En effet, le tournant conceptuel des années 90 avec l'introduction des termes fatigue de compassion, stress traumatique secondaire, traumatisme vicariant, s'est accompagné du développement d'outils reliés à ces concepts (Bride, Radey, & Figley, 2007; Sprang & Craig, 2015; Watts & Robertson, 2015). Toutefois, les chercheurs sont confrontés à une difficulté majeure lorsque vient le moment de faire le choix d'un outil d'évaluation pour un concept précis (Watts & Robertson, 2015). En effet, le flou conceptuel et le chevauchement notés précédemment dans la littérature semblent leur compliquer la tâche. Ainsi dans leur article destiné à recenser et présenter des outils d'évaluation de la fatigue de compassion, Bride et al. (2007) évoquent clairement le fait que malgré une certaine distinction au niveau conceptuel entre les termes traumatisme vicariant, stress traumatique secondaire et fatigue de compassion, ces derniers réfèrent tous à l'impact négatif du travail en relation d'aide. Par conséquent, les auteurs choisissent de les mettre tous sous le chapeau de la fatigue de compassion avant d'en proposer des outils d'évaluation. Même constat du coté de Watts & Robertson (2015) qui font l'exercice pour les outils d'évaluation du traumatisme secondaire chez les intervenantes et cette fois le terme parapluie utilisé est « traumatisme secondaire », pour englober les concepts fatigue de compassion, stress traumatique secondaire, stress post-

traumatique. De plus, les outils d'évaluation identifiés dans ces articles sont les mêmes, portant à croire qu'ils peuvent être utilisés de façon interchangeable pour mesurer un concept ou l'autre. Ces outils sont la Secondary Traumatic Stress Scale (STSS) et le ProQOL. La STSS a été conçue pour mesurer la présence et la fréquence des symptômes d'intrusion, d'évitement, et d'hypervigilance chez les professionnels en relation d'aide auprès de personnes traumatisées (Bride et al., 2004) tandis que l'échelle du ProQOL vise l'évaluation de la qualité de vie professionnelle en relation d'aide. Cette dernière est cependant identifiée dans la littérature comme étant l'échelle la plus utilisée dans l'évaluation des impacts négatifs reliés à la relation d'aide (Geoffrion et al., 2019; Stamm, 2010; Yang & Kim, 2012).

L'échelle du ProQOL tire ses origines du Compassion Fatigue Self test, une des premières échelles expressément développée par Figley (1999) pour l'évaluation des effets négatifs de la relation d'aide. L'échelle mesurait d'une part la fatigue de compassion alors perçue comme traumatisme causé par le travail auprès de personnes traumatisées et d'autre part l'épuisement professionnel. La sous-dimension de fatigue de compassion est composée de 23 items qui renvoient à des symptômes reliés au stress post-traumatique tels l'évitement des pensées ou situations rappelant des expériences effrayantes ou la perte de sommeil. La sous-échelle d'épuisement professionnel loin d'être une reprise des items des principaux questionnaires d'épuisement professionnel, est composée d'items spécifiquement conçus pour le contexte d'épuisement en relation d'aide. On y retrouve donc l'évocation de symptômes tels « Je trouve cela difficile de séparer ma vie personnelle de mon rôle d'aidant » ou encore « Je vis du désespoir en lien avec les personnes que j'aide ». Le Compassion Fatigue Self sTest a par la suite subi plusieurs transformations

dont l'ajout d'une sous-échelle de 26 items représentant les effets positifs du travail en relation d'aide avec des éléments comme « Je me sens revigoré après avoir travaillé auprès des personnes que j'aide » ou encore « J'éprouve de la joie concernant la façon dont je peux aider ceux que j'aide » (Figley & Stamm, 1996). Les modifications et transformations ont continué et culminé avec le changement du nom de l'échelle en ProQOL (Professionnal quality of life scale), pour mieux illustrer ce qu'elle mesurait désormais, à savoir une qualité de vie professionnelle composée d'aspects positifs et négatifs. L'échelle du ProQOL actuelle est composée d'une trentaine d'items réparties en trois sous-dimensions : l'épuisement professionnel, le stress traumatique secondaire et la satisfaction de compassion (Stamm, 2010).

Largement utilisée dans les études portant sur la fatigue de compassion, l'échelle du ProQOL, est déjà à sa cinquième version (ProQOL-5). Elle reste cependant questionnée en lien avec sa validité de construit notamment en termes de pertinence des items et de structure factorielle (Hemsworth et al., 2018; Keesler & Fukui, 2020; Samson, Iecovich, & Shvartzman, 2016). La validité de construit est définie comme le degré auquel un instrument mesure réellement la réalité qu'il prétend mesurer (Heale & Twycross, 2015). En ce sens, la capacité de certains items du ProQOL-5 tels « Je suis heureux », « Ma productivité au travail baisse », « Je me sens piégé par mon travail comme aidant », « Je sursaute ou suis surpris par des bruits inattendus », à mesurer la dimension à laquelle ils sont dédiés a été questionnée dans plusieurs études (Galiana et al., 2017; Sprang & Craig, 2015). Sur les 10 items censés mesurer l'épuisement professionnel, cinq (items renversés) semblent fréquemment poser problème en ce sens que dans les analyses factorielles, ils ne semblent pas toujours contribuer au facteur attendu (Hemsworth et al., 2018; Keesler &

Fukui, 2020; Samson et al., 2016). Même constat pour la dimension de stress traumatique secondaire (Hemsworth et al., 2018). Ceci peut porter à se poser la question de savoir à quel point ces aspects sont bien représentés par le ProQOL-5.

1.3 Synthèse

L'étude sur le bien-être psychologique en relation d'aide a évolué depuis ses débuts dans les années 70 et a connu à travers cette évolution une succession de concepts dont l'épuisement professionnel, le stress traumatique secondaire, le traumatisme vicariant et la fatigue de compassion. D'un point de vue historique, on pourrait même postuler que si la recherche sur l'épuisement professionnel était restée campée dans les domaines en lien avec la relation d'aide, et que ce concept n'avait par conséquent pas été affecté par son exploration dans d'autres contextes, les concepts plus tardifs de stress traumatique secondaire, traumatisme vicariant, fatigue de compassion, n'auraient peut-être pas vu le jour.

Cette genèse des concepts en lien avec le bien-être psychologique et plus particulièrement l'épuisement en relation d'aide pourrait en partie expliquer le flou conceptuel rapporté dans la littérature, le fait que cette dernière peine à les dissocier et qu'ils sont parfois utilisés comme synonymes (Adams et al., 2001; Jenkins & Baird, 2002; Jenkins & Maslach, 1994; Stamm, 2010). Une approche empirique intégrative qui prend en considération les différents concepts tels que suggéré dans la littérature pourrait permettre de mieux en saisir l'essence et les différentes facettes (Adams et al., 2001; Jenkins & Baird, 2002).

En ce sens, le concept de Qualité de vie professionnelle de Stamm (2002) semble s'inscrire dans cette démarche puisqu'il englobe à la fois la fatigue de compassion, l'épuisement professionnel, le stress traumatique secondaire, tout en proposant une dimension positive qui vient ainsi compléter la notion de bien-être psychologique en relation d'aide. Il faut cependant noter que ce modèle n'a jamais été validé empiriquement en plus des critiques en lien avec la validité de construit de l'échelle du ProQOL-5.

1.4 Objectifs de la thèse

La présente thèse se propose de faire un pas vers une meilleure compréhension de la problématique touchant le bien-être des professionnels en relation d'aide et une meilleure compréhension du rôle des différents prédicteurs postulés. Cet objectif est poursuivi et atteint en trois étapes faisant chacune l'objet d'un article. L'objet du premier article sera d'affiner l'échelle du ProQOL-5 afin de répondre aux critiques portant sur sa validité de construit auprès d'une population d'intervenants en protection de la jeunesse. Une fois cela fait, le deuxième article tentera à partir des principaux concepts retenus (épuisement professionnel, fatigue et satisfaction de compassion, stress traumatique secondaire, anxiété, et dépression), d'extraire une variable empirique intégratrice représentant le bien-être psychologique en relation d'aide, et de discuter des résultats en lien avec le modèle postulé de Stamm (2010) notamment sa structure factorielle. Finalement, le troisième article se penchera sur un modèle explicatif intégrateur de l'épuisement en relation d'aide, en lien avec les principaux facteurs prédicteurs postulés dans les études en lien avec les concepts qui y sont rattachés. Les facteurs retenus ici sont les caractéristiques de l'environnement de travail et l'empathie.

1.5 Participants et procédures

La présente thèse s'inscrit dans le projet Iso-Stress, projet plus large d'implantation éco-systémique et d'évaluation d'un programme de gestion de stress dans le Centre Jeunesse de Montréal-Institut Universitaire (CJM-IU), actuel Centre de protection de l'enfance et de la jeunesse du Centre Intégré Universitaire de Santé et de Services Sociaux (CIUSSS) du Centre-Sud-de-l'Île-de-Montréal. A l'époque de la collecte, le CJM-IU était composé de 10 directions, dans lesquelles se distribuaient plus de 3000 employés (dont 2000 cliniciens) qui fournissaient directement ou indirectement des services à 13 000 jeunes et familles. Le projet Iso-Stress visait à la fois les gestionnaires, les intervenants et les jeunes hébergés. Il est issu de deux projets pilotes d'implantation et d'évaluation de deux programmes de gestion de stress dont Déstresse et Progresse (D&P) adressé aux jeunes, et le programme web Stress et Compagnie (S&C) destiné aux intervenants. Les deux projets menés au CJM-IU en 2012 et 2013 par le Centre d'études sur le stress humain ont donné des résultats encourageants quant à la réduction du stress des jeunes et des intervenants (Fouda, 2016; Plusquellec et al., 2016). Iso-stress proposait donc l'administration conjointe des deux programmes à savoir Déstresse et Progresse aux jeunes de 12 ans et plus hébergés au CJM-IU, et Stress et Compagnie aux intervenants, personnels administratifs, chefs d'unités et directeurs. L'échantillon potentiel représentait 456 jeunes répartis dans 40 unités, et 1040 professionnels, membres du personnel d'encadrement et de gestion. L'implantation et l'évaluation se sont faites par vague et par direction. Le projet a été évalué et approuvé par le comité d'éthique du Centre intégré universitaire de santé et de services sociaux du Centre-sud de l'Ile-de-Montréal.

La méthode d'échantillonnage aléatoire stratifiée a été privilégiée. Les unités appariées selon le type de clientèle étaient distribuées de manière aléatoire dans les groupes témoin ou expérimental par tirage au sort, à l'intérieur d'une même direction. La participation au projet était sur base volontaire. Ainsi même si une équipe participait au projet, tous les intervenants n'y participaient pas nécessairement. En termes de temps de mesure, un prétest précédait l'intervention, suivi de trois post-tests.

Dans le cadre de ce projet, nous ne nous sommes intéressés qu'aux intervenants et gestionnaires. Au moment des analyses, environ 585 participants avaient répondu aux questionnaires sur une période s'étalant de 2015 à 2018. Toutefois, un addendum a été fait en cours de route pour ajuster ou rajouter certains outils propres au projet de thèse. C'est ainsi que *l'Interpersonal Reactivity Index* servant à mesurer l'empathie, un questionnaire sur les caractéristiques de l'environnement de travail et un questionnaire sur l'anxiété ont ainsi été ajoutés. Ceci justifie la raison pour laquelle le premier article a 585 participants alors que les suivants n'en comptent que 303. Bien qu'il aurait été intéressant d'exploiter tous les temps de mesure, nous n'avons utilisé que les données du prétest pour des questions de puissance statistique. Des données post-intervention auraient réduit de moitié l'échantillon puisque nous n'aurions pu travailler qu'avec le groupe témoin. Ceci n'aurait pas permis d'avoir un nombre d'intervenants suffisant pour les analyses de la thèse. Les participants étaient âgés de 23 à 75 ans, devaient travailler au moins 3 jours/semaines. De nos 303 participants à l'ensemble des mesures, presque 84% étaient des femmes.

1.6 Principales analyses statistiques utilisées

1.6.1 Analyses factorielles

Les analyses factorielles représentent un des outils statistiques les plus utilisés pour le développement et l'évaluation d'échelles psychologiques (Floyd & Widaman, 1995). C'est une famille de méthodes statistiques basées sur des matrices de corrélation ou covariance, qui permettent de synthétiser un ensemble de variables en un nombre plus restreint de facteurs indépendants et donc à priori non corrélés (Benzécri, 1973; Delacroix et al., 2021). Les facteurs ainsi obtenus sont peu sensibles aux fluctuations d'erreurs et offrent matière à des analyses plus stables (Benzecri, 1977). En plus de permettre la réduction d'un grand nombre de variables en un nombre plus modeste à des fins d'opérations subséquentes, les analyses factorielles peuvent être utilisées pour découvrir la nature et le nombre de dimensions d'une réalité sous-jacente aux variables ou construire un indice pour mesurer une caractéristique complexe composée de plusieurs éléments (Delacroix et al., 2021). Les deux principales méthodes de cette famille sont l'analyse en composantes principales, et l'analyse factorielle en facteurs communs. Alors que l'analyse en composantes principale tiendra compte des variances propres des variables traitées, l'analyse en facteurs communs les exclut pour ne garder que la variance partagée provenant des facteurs communs (Achim, 2020). En ce sens, l'analyse en facteurs communs sera préférée pour des besoins théoriques reliés à la recherche de construits ou facteurs dits latents (car non directement mesurés) tirés des différentes variables mesurées, alors que l'analyse en composantes principales sera plus appropriée pour le calcul des indices ou la réduction du nombre de variables (Delacroix et al., 2021).

Les analyses factorielles peuvent être d'ordre exploratoires ou confirmatoires. L'approche exploratoire est souvent utilisée pour découvrir et déterminer un nombre optimal de facteurs non présumés à l'avance ou pour réduire le nombre de variables alors que la confirmatoire permet de vérifier ou valider une structure factorielle hypothétique par les données observées (Floyd & Widaman, 1995).

1.6.2 Modèles d'équations structurelles

Tout comme les régressions multiples, les modèles d'équations structurelles (SEM) permettent de tester différents liens dont la causalité entre plusieurs variables, avec cependant plus d'avantages (Garson, 2015; Marsh et al., 2012). Parmi les possibilités qu'offrent les modèles d'équations structurelles, on retrouve le fait qu'ils permettent de tester globalement un modèle théorique. Ainsi, ils deviennent très utiles lorsqu'on veut évaluer un modèle incluant des variables indépendantes, plusieurs variables dépendantes, des variables médiatrices et/ou modératrices (Garson, 2015). Les SEM sont par ailleurs tout indiqués pour inclure des variables latentes, non directement mesurées, mais modélisées à partir des indicateurs mesurés (Garson, 2015). Ceci permet donc d'évaluer des modèles complexes incluant des construits théoriques non directement observables. Cette méthode offre aussi l'avantage d'avoir des postulats plus flexibles en permettant par exemple la modélisation de variables indépendantes corrélées entre elles, tenant ainsi compte de la multicolinéarité, les termes d'erreur des différentes variables du modèle (Garson, 2015).

De nature confirmatoire, les modèles d'équations structurelles nécessitent préalablement du chercheur la définition d'un modèle théorique basé sur la littérature (Garson, 2015). L'objectif des SEM est de minimiser l'écart entre le modèle théorique

postulé, et celui représenté par les données. Ils fournissent en ce sens des indices qui permettent d'évaluer cette qualité d'ajustement (Marsh et al., 2004). Il s'agit plus précisément du CFI (Comparative Fit Index), du RMSEA (Root Mean Square Error of Approximation). D'après la littérature, un ajustement adéquat ou excellent requiert des valeurs respectives de CFI supérieures à .90 et .95 et inférieures à .08 et .05 sur le RMSEA (Hu & Bentler, 1999; Marsh et al., 2004).

1.6.3 Analyse de profils latents

L'analyse de profils latents est une méthode statistique qui tout comme l'analyse de classes latentes, consiste à identifier dans une population donnée, des sous-groupes à partir d'un certain nombre de variables (Collins & Lanza, 2009). Alors que l'analyse de classes latentes est utilisée pour des variables catégorielles, l'analyse de profils latents l'est pour des variables continues. Cette méthode repose sur une approche centrée sur la personne dont l'objectif est de faire ressortir l'hétérogénéité non observée dans une population. Ceci est fait en catégorisant les sujets en sous-groupes de personnes présentant les mêmes profils de réponse à partir de variables observées, et en tentant de comprendre les liens entre ces groupes de population et d'autres variables (Collins & Lanza, 2009; Howard & Hoffman, 2018). Plus concrètement, il s'agit d'un processus incrémental d'analyse de modèles avec un nombre croissant de profils (k, k+1, k+2, etc…). Les analyses fournissent des indices permettant de comparer les modèles entre eux pour déterminer celui qui s'ajuste le plus aux données et par conséquent, révèle le nombre de profils ressortant. Ainsi a-t-on le BIC (Bayesian Information Criterion) simple ou ajusté, le AIC (Akaike Information Criterion), le BLTR (Bootstrap Likelihood Ratio Test) et l'entropie (Celeux & Soromenho, 1996; Masyn, 2013; Tein et al., 2013). Généralement, un

BIC plus faible désigne un modèle plus ajusté alors qu'une valeur significative BLRT d'un modèle indique que ce dernier est statistiquement meilleur que le précédent (Masyn, 2013; McLachlan, 1987). Ainsi si un modèle à k profils a un BIC plus petit que celui à k-1 profils, on peut conclure qu'il est meilleur que ce dernier, et le BLRT indique alors si la différence entre les deux modèles est significative. L'entropie servira alors à conforter si la classification ainsi obtenue l'est avec une incertitude minimale, généralement illustrée par une valeur d'entropie supérieure à 0,80 (Celeux & Soromenho, 1996; Tein et al., 2013).

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Chapitre 2 : Article 1

Item Reduction and Construct Validity of the French Version of the Professional Quality of Life (ProQOL-5) in a Sample of Québec Child Protection Workers

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Abstract

The mental health of social and healthcare professionals, including child protection workers, has been of great concern for several decades. Various concepts such as burnout, secondary traumatic stress, compassion fatigue, or professional quality of life have been proposed to describe this concern. Each of them has even a specific instrument to assess it. The ProQOL has been proposed to assess the professional quality of life of caregivers since it incorporates many of these concepts as a construct. However, many studies have pointed out some issues regarding its construct validity and have urged for a reduced version that would be easier to use in order to assess occupational mental health of professionals. Based on a sample of 585 child protection workers, this article pursued the objective of reducing the French version of the 30-item ProQOL-5 scale and assessing whether it can be seen as an unidimensional construct. A reduced scale of 16 items was created, called ProQOL-FR16. This scale showed good psychometrics with a global Cronbach's alpha of .87 and more precisely .86 for Compassion satisfaction, .82 for Burnout, and .74 for Secondary Traumatic Stress. It has the same quality as ProQOL-5 in terms of convergent validity and can be viewed either as a whole or a three-factor construct. The scale was also found to have a general factor underlying the different concepts assessed by it. These findings will provide researchers and clinicians with a good, shorter tool that could help them save time while still obtaining accurate results.

Keywords: Burnout, secondary traumatic stress, professional quality of life, compassion fatigue, compassion satisfaction

The mental health of social and healthcare professionals, including child protection workers, has been of great concern for several decades (Gray et al., 2019; Riley & Weiss, 2016). Indeed, the results of many studies have pointed out that taking care of others exposes them to traumatic experiences and to specific challenges in supporting people with special needs (Felton, 1998; Freudenberger, 1989; Geoffrion, 2015). This could lead to physical and psychological disturbances, including emotional, cognitive, and behavioral difficulties, anxiety, depression, and burnout (Evans et al., 2006; Maslach, 2017; Maslach & Leiter, 2017; Maslach et al., 2001). These difficulties have shown the need for a concept and tool able to assess professionals' occupational mental health.

Some concepts that are used to explore the nature of the problem and its consequences include burnout, secondary traumatic stress, and compassion fatigue. Burnout is considered as a prolonged response to chronic emotional and interpersonal stressors at work with three dimensions: emotional exhaustion, depersonalization, and the loss of a sense of effectiveness (Maslach & Leiter, 2017; Maslach et al., 2001). Secondary traumatic stress is defined as the consequences of exposure to the narrative of another person's traumatic experience, i.e. the emotional duress that results when an individual hears about the firsthand trauma experiences of another (Figley, 1995b). Compassion fatigue is defined as a form of caregiver burnout and more precisely, involving tension and preoccupation derived from work with clients and their trauma (Figley, 1995a; Potter et al., 2013; Stamm et al., 2002). These various concepts are intertwined, but compassion fatigue appears to be one of the most useful concepts when looking at the consequences of caring for others, according to Geoffrion et al. (2019).

Originally proposed by Figley (1995a), compassion fatigue concept was extended by Stamm (2005) who argued that taking care of people not only had a negative impact, but a positive one as well. She then proposed professional quality of life as a conceptual model, defined as the quality one feels in relation to his or her work as a helper, including positive and negative aspects (Stamm, 2010). The negative impact of caring composed of burnout and secondary traumatic stress was regrouped by Stamm (2005) under compassion fatigue (CF), while the positive aspect was named compassion satisfaction. To assess professional quality of life, the author proposed the ProQOL scale (Stamm, 2005) composed of three subscales: burnout (BO), secondary traumatic stress (STS), and compassion satisfaction (CS).

The ProQOL scale was originally derived from Figley (1999)'s Compassion Fatigue Self-Test (CFST), a 40-item questionnaire based on clinical experience, and aimed to assess compassion fatigue and burnout. Although composed of two subscales, the factor analysis of the Compassion Fatigue Self-Test suggested only one stable factor reflecting a depressed mood in relation to work, accompanied by feelings of fatigue, disillusionment, and worthlessness (Bride et al., 2007; Figley, 1995). Later, a positive dimension with 26 items was added to CFST to assess compassion satisfaction, leading to the renaming of the scale to the Compassion Satisfaction and Fatigue Test, a scale with 66 items (Stamm, 2005). At this time, Stamm (2005) chose to call the negative scale compassion fatigue and to separate it in two subscales, i.e. burnout and secondary traumatic stress. This created more confusion, since these terms had already been used as synonyms by several authors (Beck, 2011; Figley, 2002; Stamm, 2005). Subsequently, Stamm (2005) proposed in an unpublished work a more parsimonious 30-item

questionnaire, the ProQOL from the Compassion and Fatigue test. According to Stamm, seven items were kept from each Compassion and Fatigue Test subscale, either as they appeared originally or reframed, and three items were added (Stamm, 2005):

> "Items were retained if they met both high item-to-scale criteria and were theoretically good representatives of the subscale construct", "Quantitative decisions were made using Cronbach's alpha, factor analysis, and multigroup factorial invariance" and "new items were developed from the most recent literature on burnout and theory relating to compassion satisfaction" (Stamm, 2005, p4).

Since this process was unpublished, it is thus difficult to assess the construct validity of the ProQOL or to compare it with subsequent studies (Bride et al., 2007). Several empirical studies tried to validate the ProQOL and particularly replicate its factor structure, but it seems to be unclear whether the covariances among the ProQOL items are best explained by a single factor or by two or three correlated factors (Geoffrion et al., 2019; Hemsworth et al., 2018). The construct validity of the ProQol remains an open issue. The ProQOL scale, now in its fifth version, has been widely used in studies assessing the occupational mental health of social and healthcare professionals (Stamm, 2010; Yang & Kim, 2012), although its psychometric properties, especially construct validity and reliability, are still debated in recent studies on the topic (Geoffrion et al., 2019; Hemsworth et al., 2018; Komachi et al., 2012; Watts & Robertson, 2015).

The construct validity of an instrument is defined as the extent to which it accurately measures the concept it is supposed to measure (Heale & Twycross, 2015). Construct validity is usually assessed by factorial analysis and correlations with scales that assess the same construct (convergent validity) or scales that assess different constructs (divergent validity; André et al., 2015).

Accordingly, several studies have analyzed the structure factor of the ProQOL-5 with various populations of different countries (Galiana et al., 2017; Hemsworth et al., 2018; Samson et al., 2016). Although they came to the conclusion that it actually had three factors, as postulated by Stamm (2010), they had to make a few adjustments to arrive at a satisfactory final solution. Indeed, although they found good fits with their data, Galiana et al. (2017), for example, found in their study with 385 Spanish and 161 Brazilian palliative care professionals that three items (STS_2, BO_4R, BO_29R) did not have significant loadings. Similar findings were done in a study with 299 Australian nurses, 303 Canadian nurses, and 503 Canadian palliative care workers (Hemsworth et al., 2018). For example, the BO subscale reversed and some items from the STS subscale either did not load on the STS factor or had a very low loading score on it (Hemsworth et al., 2018).

These findings have been replicated in other studies along with reliability issues (Keesler & Fukui, 2020; Samson et al., 2016) and raised questions about the pertinence of some items of the ProQOL-5. Hemsworth et al. (2018) particularly questioned the pertinence of two items of STS (STS_2 and STS_5), and pointed out that, contrary to the other items of STS, STS_2 (“I am preoccupied with more than one person I help”) and STS_5 (“I jump or am startled by unexpected sounds”) did not really seem to be associated with traumatic work experiences. Samson et al. (2016) highlighted the fact that items BO_8 (“I am not as productive at work because I am losing sleep over the traumatic experiences of a person I help”) and BO_10 (“I feel trapped by my job as a helper”) may be associated with indirect trauma exposure, leading them to load onto STS instead of the BO dimension. The BO_4 item (“I am happy”) has also been questioned

(Sprang & Craig, 2015). To reach a satisfactory tridimensional solution, Samson et al. (2016) excluded seven items from the ProQOL-5, including the four reversed items of BO (BO_1R, BO_4R, BO_17R, BO_29R) that loaded onto the CS factor, one BO item (BO_15R) and one STS (STS_28) item that did not meet the minimum loading criteria of .35, and 1 STS (STS_11) item that had similar loading scores on BO and STS. Hemsworth et al. (2018) also proposed a solution that excluded six items. Based on their findings congruent with previous studies, they both reached the conclusion that removing some BO and STS items did not affect the reliability of the scale, while improving its convergent validity assessed by confirmatory factor analysis or the average variance explained (Hemsworth et al., 2018; Samson et al., 2016). They thus called for a refining of the STS and BO subscales with fewer items.

Furthermore, using a sample of child protection workers, Geoffrion et al. (2019) explored the possibility of the unidimensionality of the ProQOL-5 that could lead to a unique composite score based on the computation of all the subscales scores. Using a bifactor model, the study was able to find a general factor that accounted for half of the common variance of the ProQOL-5. The authors concluded that the ProQOL-5 could be used as a whole and as a tool to assess specific dimensions.

The aim of the present study was to refine the French version of the ProQOL-5 (Stamm, 2010) using a large sample of child protection workers from a large North American city. We assessed the possibility of decreasing the number of items to make it more parcimonieus and convenient and we present the factorial structure of this abridged version. Convergent validity were also investigated for this abridged version. It is the first study of ProQOL-scale reduction with a French sample.

Methods

Sample and Data

The data used for this study came from a larger research project, "Towards an ISO-Stress Label: Optimizing Stress Management for Clients and Staff of the Montréal Youth Centre to Increase the Quality of Services and the Well-being of Employees," directed by the last author. It assessed the effectiveness of a stress-management program for child protection workers. This study utilized a sample of 585 child protection workers in residential treatment centers for youths in Montréal, Canada. The participants included 483 females and 102 males, aged from 23 to 75 years old, and who worked at least 3 days per week. The data were collected from 2015 to 2018 with measures at four time points (a pretest before the stress management program, then on weeks 7, 12, and 20 post-program completion). Only the pretest scores were used in the current study. All procedures were approved by the Institutional Review Board of Centre intégré universitaire de santé et de services sociaux du Centre-sud de l'Île-de-Montréal.

Measures

Professional quality of life was assessed by the ProQOL-5, a 30-item scale developed and translated into French by Stamm (2010). It measures three dimensions, i.e. compassion satisfaction, burnout, and secondary traumatic stress, with reliability coefficients of .72, .87, and .80 for each sub-scale, respectively (Stamm, 2005). Each subscale has 10 items for which participants are asked to rate their experience over the last month in relation to the item on a five-point Likert scale from 1 (never) to 5 (very often). The compassion satisfaction subscale is about the pleasure derived from

professional caring assessed with items like “I get satisfaction from being able to help people” and “I feel invigorated after working with those I help” (Stamm, 2010). The burnout subscale addresses feelings of hopelessness, difficulties in dealing with work, or being effective, with items like: “I feel overwhelmed because my case workload seems endless.” and “I feel worn out because of my work as a helper” (Stamm, 2010). Secondary traumatic stress targets symptoms of work-related trauma, including sleep difficulties, intrusive images, or avoiding reminders of the person’s traumatic experiences with items like: “Because of my helping, I have felt on edge about various things” and “As a result of my helping, I have intrusive, frightening thoughts” (Stamm, 2010).

Depression was assessed with the Beck Depression Inventory (BDI), a standardized 21-item scale that targets characteristic attitudes and symptoms of depression (Beck, Epstein, Brown, & Steer, 1988). For each item, participants are asked to rate their experience over the last 2 weeks by choosing one over four statements on a four-point Likert scale from 0 to 3, like “I am not particularly discouraged about the future” (0) to “I feel the future is hopeless and that things cannot improve”(3; Beck et al., 1988). The scale was translated into French by Bourque and Beaudette (1982) and shows a good internal consistency of .90.

Anxiety level was assessed using the anxiety subscale of the French version of the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983). The subscale has seven items targeting anxiety symptoms, excluding somatic items. Participants were asked to rate their experience related to the items on a four-point Likert scale from 0 to 3. The Canadian French version was translated by Savard et al. (1998), and showed an internal consistency of .89 for the anxiety subscale. Anxiety subscale includes items like

"Worrying thoughts go through my mind" and "I get sudden feelings of panic" (Zigmond & Snaith, 1983).

Posttraumatic stress was assessed by the Posttraumatic Stress Disorder Checklist (Weathers et al., 2013), a self-reported scale based on the DSM-5 (APA, 2013). The scale has 20 items that evaluate the frequency of PSTD symptoms on a five-point Likert scale ranging from 1 (not at all) to 5 (extremely). The participants are asked to rate how much over the past month they have been bothered by symptoms like "Repeated, disturbing, and unwanted memories of the stressful experience" or "Trouble remembering important parts of the stressful experience" (Weathers et al., 2013). The French version used was adapted from Blevins, Weathers, Davis, Witte, and Domino (2015) and had an internal consistency of .93 in our sample.

Burnout was measured by the Maslach Burnout Inventory (Maslach et al., 1986), a self-reported scale intended to assess the frequency and intensity of perceived burnout among caregivers. This tool of 22 items is composed of three subscales: emotional exhaustion (MBI-EE; nine items), depersonalization (MBI-DE; five items), and personal accomplishment (MBI-PA; eight items). The emotional exhaustion subscale targets feelings of overextension and draining of emotional resources with items like "I feel used up at the end of the workday", and "I feel frustrated by my job" (Maslach, Jackson, & Leiter, 1996). Depersonalization is linked to the person's feeling of impersonal involvement and detachment towards the people helped with items like "I don't really care what happens to some recipients" and "I feel recipients blame me for some of their problems" (Maslach et al., 1996). Personal accomplishment assesses participant's feeling of competence at work with items like "I have accomplished many worthwhile things in

this job", or "I feel I am positively influencing other people's lives through my work" (Maslach et al., 1996). Participants are asked to rate their experience related to each item on a seven-point Likert scale ranging from 0 (never) to 6 (daily). The French translation used has an internal consistency of .90 for emotional exhaustion, .64 for depersonalization, and .74 for personal accomplishment (Dion & Tessier, 1994).

Treatment of Data and Statistical Analyses

Item Reduction

Our first objective was to reduce the number of items of the ProQOL-5 scale. To achieve this objective, we chose a process that has already been described in the literature.

Step 1: Reduction based on mean and standard deviation. It is common in item reduction studies to use item level analysis to discriminate the items that are more relevant for a scale. For this purpose, some studies looked at missing rate, item score mean, and standard deviation (Jin et al., 2018). Based on this, as the item scores of this sample did not differ on missing rates, we decided to look at item score means and standard deviation. Based on previous studies on the Likert scales (Jin et al., 2018; Lester, Inman, & Bishop, 2014; Norman, 2010; Sullivan & Artino, 2013), we used the 20% criterion for the item reduction using item score means. We removed any item with a mean score higher than the highest possible score minus 20% or lower than the lowest possible score plus 20%. The logic behind this process is to remove items that are too skewed. Every item lower than 1.80 or higher than 4.20 was removed. The criterion for the standard deviation was a value smaller than .67, one sixth of the score range (Jin et al., 2018). In this case, items that have not enough variability were removed.

Step 2: Reduction based on correlations and factorial analysis

Correlation Analysis. The inter-item correlations are related to internal consistency reliability of a tool and are often used to test at which degree the items of the same subscale are related (Jin et al., 2018). To achieve that, we first looked at the average inter-item correlation of each item with the remaining items of its subscale. If the value was lower than .30, we determined that the item could be excluded since it is not related enough to the other items of the same subscale (Hair, Hult, Ringle, & Sarstedt, 2016). Another way to test that is through the correlation of each item with its subscale. In this case, a value less than .60 is an exclusion criterion (Hair, Black, Babin, & Anderson, 2010). In one case, the criterion is based on the consistency of the item with the other items of the subscale, and in the other case, the criterion is based on the consistency of the item with the subscale as a whole.

Factorial Analysis. We conducted exploratory factorial analysis (EFA) and more precisely principal component analysis, to determine if an item should be kept in the scale. EFA was used to check if we found the same factorial structure (CS, BO, and STS) as Stamm (2010) and how each item loaded on the factor found. It also helped to identify the items that could be removed from the scale to improve its validity. Various values of factor loading could be found in the literature as a criterion to consider a significant contribution to a factor : .30 (Costello & Osborne, 2005), .40 (Hinkin, 1995, 1998), .45 (Tabachnick, Fidell, & Ullman, 2007), and even higher (Hair, Black, Babin, Anderson, & Tatham, 2006). We chose the .40 criterion, which is one of the most frequently used. Furthermore, to be more strict and to ensure that each item loaded mainly on only one factor, we added another criterion for the EFA; the difference between the primary and alternative factor loadings should be higher than .20 (Hinkin, 1998).

Configural Analysis of the Reduced ProQOL Scale

To achieve the aims of the configural analysis of the ProQOL with the remaining items, CFA were carried out in three steps. In the first step of the analysis, three-factor CFA models (first and second order) were carried out to validate the factorial structure (CS, BO and STS) of the scale as proposed by Stamm (2005). The first order analysis was useful to examine the correlations among the three latent factors while confirming this model. The second order helped to check if the three latent factors could, together, represent a single higher concept (Delacroix et al., 2021; Stamm, 2010). The second step was a one-factor analysis CFA model (general measure) to verify the hypothesis of unidimensionality of the scale. Finally, two bifactor CFA models (with two and three specific factors) were tested to verify the ultimate hypothesis of multidimensionality among the scale items. The bifactor model assumed that each item simultaneously loaded onto a global construct and one of the specific composite factors, and that all factors were orthogonal (i.e., uncorrelated with each other). These two analyses checked the possibility of a general factor with, on one hand, three specific composite factors or concepts (CS, BO and STS), and on the other hand, two specific composite factors or concepts, i.e. compassion satisfaction and compassion fatigue composed of BO + STS as presented by Stamm (2010). In addition to item loadings on the general factor and the composite factors, the explained common variance (ECV) was also computed for the bifactor model. ECV is an index of the proportion of the common variance extracted, explained by the general factor and the composite factors (Rodriguez, Reise, & Haviland, 2016). An ECV higher than 85% suggests that the instrument is sufficiently

unidimensional to warrant a one-factor model (Rodriguez et al., 2016; Stucky & Edelen, 2014).

All modeling analyses were carried out with the statistical modeling software Mplus 7.4 (Muthén & Muthén, 2018). In the modeling analyses, the robust maximum likelihood (MLR) estimation method was used, which provides estimates of standard errors and fit indexes appropriate for conditions, such as ordinal Likert-scale item responses and data non-normality. For model fit assessment, we considered the following model-fit indices: comparative fit index (CFI) and root mean square error of approximation (RMSEA). As suggested in the literature (Hu & Bentler, 1999; Marsh et al., 2004), an adequate and excellent model fit may be indicated by values greater than .90 and .95 on CFI, respectively, and by values lower than .08 and .05 for RMSEA, respectively. Chi-squared tests of model fit were also reported, and the Bayesian information criterion (BIC) was used to compare the three models. Those information criteria do not themselves describe model fit, but a model with a lower value indicates a better fitting model compared to a model with a higher value when alternative models are compared.

Convergent Validity of the Reduced ProQOL Scale

We conducted convergence analysis for the reduced version of ProQOL. The objective was to determine if this reduced version had the same level of correlation with related concepts as the original longer version. As many studies have done, we looked at the correlations between our scale and well-validated scales of depression, anxiety, and burnout (Fukumori et al., 2016; Hemsworth et al., 2018; Keesler & Fukui, 2020). We used a comparison test to investigate whether there were significant differences between

the correlation scores of the 16-item version and the 30-item version of the ProQOL with the burnout, depression, and anxiety scales.

Results

The descriptive results of the three dimensions of ProQOL-5 scale (with 30 items) in our child protection workers sample (Table 1) were comparable to those of other cross-cultural validation studies of the ProQOL-5 (Table A.1 in supplementary material) cited above (Duarte, 2017; Galiana et al., 2017; Samson et al., 2016). Similar levels of compassion satisfaction, burnout, and secondary traumatic stress were found with Portuguese nurses (Duarte, 2017) and Israeli health care providers including physicians, nurses, and social workers in primary health care and palliative care setting (Samson et al., 2016), although our sample seems to be more negatively affected than Brazilian and Spanish palliative care professionals including physicians, nurses, psychologists, social workers, and nurse assistants (Galiana et al., 2017).

Item Reduction of ProQOL-5

Step 1: Results of Mean and Standard Deviation Analysis

The results show that five items did not meet the inclusion criterion of the mean ($1.80 \leq \boldsymbol{M} \geq \mathbf{4.20}$). These items were CS_12 (M=4.24), STS_14 (M=1.75), STS_23 (M=1.47), STS_25 (M=1.53), and STS_28 (M=1.62). For the standard deviation analysis, three items did not meet the inclusion criterion ($\boldsymbol{SD} \geq \mathbf{.67}$). These items were CS_3 (SD=.65), BO_1R (SD=.66), and BO_29R (.63). At this step, the eight problematic items were removed. The subsequent analysis was made with a scale of 22 items.

Table 1

Descriptive Statistics of ProQOL-5 scale –30 items

No	Item Description	M	SD	Skewness	Kurtosis
	COMPASSION SATISFACTION	**3.85**	**.51**		
3	*I get satisfaction from being able to help people.*	4.15	*.65*	-.39	.18
6	I feel invigorated after working with those I help.	3.49	.83	-.29	.17
12	*I like my work as a helper.*	*4.24*	.68	-.74	1.01
16	I am pleased with how I am able to keep up with helping techniques and protocols.	3.23	.89	-.16	-.28
18	My work makes me feel satisfied.	3.94	.73	-.29	-.10
20	I have happy thoughts and feelings about those I help and how I could help them.	3.85	.67	-.58	1.19
22	I believe I can make a difference through my work.	3.69	.74	-.06	-.23
24	I am proud of what I can do to help.	3.97	.70	-.35	.27
27	I have thoughts that I am a success as a helper.	3.82	.68	-.32	.40
30	I am happy that I chose this work.	4.15	.76	-.71	.55
	BURNOUT	**2.31**	**.47**		
1R	*I am happy.*	1.92	*.66*	-.34	.18
4R	I feel connected to others.	2.30	.91	-.46	-.17
8	I am not as productive at work because I am losing sleep over traumatic experiences of a person I help.	1.90	.76	.63	.39
10	I feel trapped by my job as a helper.	1.98	.96	.83	.28
15R	I have beliefs that sustain me.	1.97	.84	-.99	1.46
17R	I am the person I always wanted to be.	2.27	.78	-.41	.09
19	I feel worn out because of my work as a helper.	2.85	.92	.19	-.05
21	I feel overwhelmed because my case workload seems endless.	3.03	1.05	.16	-.49
26	I feel bogged down by the system.	3.01	.96	.04	-.10
29R	*I am a very caring person.*	1.84	*.63*	-.43	.56
	SECONDARY TRAUMATIC STRESS	**2.16**	**.49**		
11	Because of my helping, I have felt on edge about various things.	2.90	.96	.08	-.31
13	I feel depressed because of the traumatic experiences of the people I help.	1.89	.74	.43	-.18
14	*I feel as though I am experiencing the trauma of someone. I have helped.*	*1.75*	.78	.75	-.09
2	I am preoccupied with more than one person I help.	3.31	.85	-.05	-.01
23	*I avoid certain activities or situations because they remind me of frightening experiences of the people I help.*	*1.47*	*.69*	1.54	2.40
25	*As a result of my helping, I have intrusive. frightening thoughts.*	*1.53*	.69	1,12	.69
28	*I can't recall important parts of my work with trauma victims.*	*1.62*	.75	1.40	2.66

5	I jump or am startled by unexpected sounds.	2.71	1.02	.44	-.23
7	I find it difficult to separate my personal life from my life as a helper.	2.38	.87	.68	.69
9	I think that I might have been affected by the traumatic stress of those I help.	2.09	.86	.36	-.40

Note. Italics: items with values above or under the inclusion criteria

Step 2: Results of Correlations and Factorial Analysis

The correlational analysis results of the 22 remaining items (Table 2) showed the following average inter-item correlation values for each subscale: CS (.42), BO (.24), and STS (.31). This value was weak for the STS subscale and problematic for the BO subscale, considering the criterion of .30 (Hair et al., 2016). The average correlation of each item with the remaining items of the subscale to which it belongs showed that five items met the exclusion criterion ($\boldsymbol{r < .30}$): BO_4R (r=.04), BO_8 (r=.24), BO_15R (r=.16), BO_17R (r=.22), and STS_5 (r=.20). The results of the correlation between each item and the subscale to which it belongs (Table 2) pointed to six items that did not meet our inclusion criterion: ($\boldsymbol{r \geq .60}$). CS_16 (.58), BO_4R(.27), BO_8(.49), BO_15R (.44), BO_17R (.53), and STS_5(.55). Table A.2 shows the correlation results between all items of the same subscales of the original ProQOL-5.

The results of the EFA performed on the same 22 items revealed a three-factor solution as postulated by Stamm (2010)**,** with good Cronbach's alpha: CS (α=.85), BO (α=.72), and STS (α=.72). Two items failed to load on any factor: BO_4R and STS_5. The loadings of the compassion satisfaction subscale were consistent with the Stamm construct. All of the items of this subscale loaded with a score higher than .40, our inclusion criterion (Hinkin, 1995, 1998), but CS_16 did not meet the criterion of a minimum .20 difference between the primary and alternative factor loadings. For the burnout subscale, the factorial solution was less obvious. The three reversed items of the BO (BO_4R, BO_15R,

BO_17R) loaded on the CS subscale. For the CFA results (Table 2), three items did not load on their respective factors: BO_4R (.012), BO_15R (.251), and STS_5 (.348), indicating that they may be problematic.

Based on correlational and factorial analysis, any item that met at least two exclusion criteria was removed. We thus removed all of the reversed items of BO and the items STS_5, CS_16, and BO_8. The reduced French version of ProQOL-5 scale was then composed of 16 items: seven items for CS (6, 18, 20, 22, 24, 27, 30), four items for BO (10, 19, 21, 26), and five items for STS (2, 7, 9, 11, 13). We chose to name it ProQOL-FR16.

Table 2

Summary of Item Reduction Analysis – Step 2 with 22 items

COMPASSION SATISFACTION							
α = .85			*rr = .42*				
Item	Average inter-items r	r with subscale	α-Item	LOADING EFA			Loading CFA
				CS	BO	STS	
CS_6	.366	.645	.845	.548	.288	.079	.537
CS_18	.486	.777	.821	.758	.461	.118	.772
CS_20	.405	.664	.837	.613	.178	.136	.590
CS_22	.461	.742	.826	.713	.314	.060	.717
CS_24	.493	.778	.821	.768	.326	.131	.755
CS_27	.459	.733	.827	.699	.443	.205	.718
CS_30	.444	.724	.829	.690	.321	.100	.691

BURNOUT							
α = .72			*rr = .24*				
Item	r	r with subscale	α-Item	LOADING EFA			Loading CFA
				CS	BO	STS	
BO_10	.338	.738	.657	.444	.700	.482	.743
BO_19	.358	.769	.647	.365	.812	.436	.760
BO_21	.313	.715	.667	.257	.771	.402	.692
BO_26	.289	.670	.678	.328	.627	.345	.616

SECONDARY TRAUMATIC STRESS							
α = .72			rr = .31				
Item	r	r with subscale	α-Item	LOADING EFA			Loading CFA
				CS	BO	STS	
STS_2	.312	.642	.688	-.003	.436	.500	.526
STS_7	.345	.690	.671	.139	.415	.583	.557
STS_9	.344	.684	.672	.085	.360	.701	.546
STS_11	.348	.709	.668	.331	.729	.526	.757
STS_13	.334	.649	.681	.217	.445	.587	.569

Note: r is the average correlation of an item with the remaining items of the subscale it belongs to; rr is the average inter-item correlation; α-Item is the Cronbach alpha if the item was removed.

Configural Analysis of ProQOL-FR16

Factorial Analysis

The first-degree three-factor model had adequate adjustment indices with the data observed. The results (Table 3a) show .93 (higher than .90) for the CFI and .06 (lower than .08) for the RSMEA, suggesting a tridimensional structure as proposed by Stamm (2010). The BIC for this model was 19963, to be compared with the next models. However, the scale did not meet conservative criteria that require a CFI higher than .95 and a RSMEA lower that .06 regarding fit indices (Hu & Bentler, 1999). The loadings of all 16 items were significant on their respective factor and presented satisfactory loading scores (above .40; (Hinkin, 1998). Correlations of .52 were observed between CS and BO, .34 between CS and STS and .89 between BO and STS.

The second-degree factor model had exactly the same results (Table 3a) as the first-degree one (CFI=.93; RSMEA=.06; BIC=19963), suggesting again the tridimensionality of the ProQOLFR-16, underpinned by a general factor. Additional results showed that this general factor is led by the BO dimension with the highest loading score of 1.17, followed by STS (.76) and CS (.44)

The results (Table 3a) of the one-factor model did not show good fit indices (CFI=.60; RSMEA=.14; BIC=20954), rejecting the assumption of unidimensionality of the ProQOL-FR16.

The results (Table 3b) of the bifactor model with three specific composite factors (CS, BO, STS) showed good fit indices (CFI=.96; RMSEA=0.05; BIC=19913), meeting the conservative criteria. This suggests that the scale can be viewed as a general construct while still having three composite factors. The results showed that the loadings of the CS factor were all higher on the specific composite factor than on the general factor. In contrast, those of BO and STS were higher on the general factor than on the specific factors. In addition, the results show that the items of the BO composite were all non-significant in the bifactor model, suggesting that all the variance was absorbed by the general factor on which the items had the highest loadings. The ECV index showed that the general factor accounted for 60.02% of the common shared variance among the 16 items. The general factor would thus be reliable, although not unidimensional (Stucky & Edelen, 2014). The factor CS had the largest ECV index (22.6%) of the three composite factors, followed by the STS factor (9.6%). Finally, the composite factor BO had an ECV index of only 7.6%, which meant that very little of the common item variance could be explained by the single factor BO.

The model with two specific factors was also tested to see if ProQOL-Fr-16 could also be viewed as a two-dimension scale composed of compassion satisfaction and compassion fatigue, as postulated by Stamm (2010). The results (Table 3b) of the bifactor model with two specific composite factors (CS, CF) showed good fit indices (CFI=.96; RMSEA=0.05; BIC=19919), also meeting the conservative criteria. This suggests that the

scale can be viewed as a general construct while still having two composite factors, i.e. compassion satisfaction and compassion fatigue. All 16 items loaded on the two specific composites factors, but three items of STS (2, 7, 9) did not load adequately on the general factor, and one (STS 13) of the two items that loaded had a week loading of .27 (Hinkin, 1998). The ECV index showed that the general factor accounted for 43.6% of the common shared variance among the 16 items. As in the bifactor model with three specific factors, the general factor of this model would thus be reliable, although not unidimensional (Stucky & Edelen, 2014). The factor compassion fatigue had the largest ECV index (33.8%) of the two composite factors, followed by the compassion ssatisfaction factor (21.3%; Table 3b).

Table 3a

Configural Analysis Results of the ProQOLFR-16 Scale

	One Factor CFA			Three Correlated Factors CFA 1st order			Three Correlated Factors CFA 2nd order		
	Chi-squared	*1327.687*		*Chi-squared*	*333.289*		*Chi-squared*	333.289	
	df	104		df	101		df	101	
	p	.000		*p*	.000		*p*	.000	
	RMSEA	.142		RMSEA	.063		RMSEA	.063	
	CFI	.606		CFI	.925		CFI	.925	
	BIC	20954		BIC	19963		BIC	19963	
	b (SE)	*p*	Loading	b (SE)	*p*	Loading	b (SE)	*p*	Loading
CS-6	1.00	-	.43	1.00	-	.53	1.00 (.00)	.00	0.53
CS-18	1.31 (.14)	.00	.64	1.29 (.11)	.00	.78	1.29 (.11)	.00	0.78
CS-20	.76 (.11)	.00	.41	.90 (.09)	.00	.59	0.90 (.09)	.00	0.59
CS-22	1.09 (.13)	.00	.52	1.22 (.11)	.00	.72	1.22 (.10)	.00	0.72
CS-24	1.09 (.13)	.00	.56	1.19 (.10)	.00	.75	1.19 (.10)	.00	0.75
CS-27	1.18 (.15)	.00	.62	1.10 (.10)	.00	.71	1.10 v	.00	0.71
CS-30	1.11 (.13)	.00	.53	1.20 (.10)	.00	.70	1.20 (.10)	.00	0.70
	b (SE)	*p*	Loading	b (SE)	*p*	Loading	b (SE)	*p*	Loading
BO-10	1.95 (.38)	.00	.73	1.00	-	.74	1.00 (.00)	.00	0.74
BO-19	1.84 (.39)	.00	.71	1.02 (.06)	.00	.79	1.02 (.06)	.00	0.79
BO-21	1.86 (.44)	.00	.63	1.08 (.08)	.00	.74	1.08 (.08)	.00	0.74
BO-26	1.62 (.34)	.00	.60	.86 (.06)	.00	.64	0.86 (.06)	.00	0.64

	b (SE)	*p*	Loading	b (SE)	*p*	Loading		b (SE)	*p*	Loading
STS-2	.84 (.28)	.00	.35	1.00	-	.54		1.00 (.00)	.00	0.54
STS-7	1.00 (.27)	.00	.41	1.04 (.10)	.00	.55		1.04 (.10)	.00	0.55
STS-9	.90 (.25)	.00	.38	1.01 (.11)	.00	.53		1.01(.11)	.00	0.53
STS-11	1.82 (.40)	.00	.68	1.62 (.17)	.00	.77		1.62 (.17)	.00	0.77
STS-13	.97 (.23)	.00	.47	.91 (.09)	.00	.56		0.91(.09)	.00	0.56
					.00		F BY		.00	
CS with BO	-			.17 (.03)		.52	F1	1.00 (.00)		0.44
CS with STS	-			.07 (.01)	.00	.34	F2	4.26 (.80)	.00	1.17
BO with STS	-			.29 (.03)	.00	.89	F3	1.76(.30)	.00	0.76

Table 3b

Bifactor Analysis Results of the ProQOLFR-16

	Bifactor CFA - three specific factors						Bifactor CFA - two specific factors					
	Chi-squared	*229.968*					*Chi-squared*	235.408				
	df	88					df	88				
	p	.000					*p*	.000				
	RMSEA	.05					RMSEA	.05				
	CFI	.96					CFI	.96				
	BIC	19913					BIC	19919				
	Composite CS (ECV=22.6%)			General (ECV=60.2%)			Composite CS (ECV=21.3%)			General (ECV= 43.6%)		
	b (SE)	*p*	Loading	b (SE)	*p*	Loading	b (SE)	*p*	Loading	b (SE)	*p*	Loading
CS-6	.38 (.04)	.00	.45	.23 (.04)	.00	.28	0.32 (.04)	0.00	0.39	0.31 (.05)	0.00	0.37
CS-18	.46 (.03)	.00	.62	.33 (.03)	.00	.45	0.39 (.04)	0.00	0.52	0.43 (.05)	0.00	0.58
CS-20	.40 (.03)	.00	.60	.13 (.03)	.00	.19	0.42 (.03)	0.00	0.62	0.14 (.03)	0.00	0.20
CS-22	.49 (.03)	.00	.66	.24 (.03)	.00	.32	0.45 (.04)	0.00	0.60	0.31 (.04)	0.00	0.41
CS-24	.48 (.03)	.00	.69	.24 (.03)	.00	.34	0.47 (.03)	0.00	0.67	0.27 (.04)	0.00	0.38
CS-27	.38 (.03)	.00	.57	.30 (.03)	.00	.44	0.36 (.03)	0.00	0.53	0.33 (.03)	0.00	0.48
CS-30	.46 (.03)	.00	.61	.25 (.03)	.00	.33	0.41 (.04)	0.00	0.54	0.33 (.05)	0.00	0.43
	Composite BO (ECV=7.6%)						Composite Compassion Fatigue (ECV=33.8%)					
	b (SE)	*p*	Loading	b (SE)	*p*	Loading	b (SE)	*p*	Loading	b (SE)	*p*	Loading
BO-10	-.61 (.76)	.42	-.64	.80 (.05)	.00	.83	0.39 (.06)	0.00	0.62	0.60 (.05)	0.00	0.62
BO-19	.13 (.09)	.17	.14	.74 (.04)	.00	.80	0.36 (.08)	0.00	0.70	0.65(.06)	0.00	0.70
BO-21	.25 (.24)	.31	.23	.80 (.05)	.00	.76	0.45 (.10)	0.00	0.59	0.62 (.08)	0.00	0.59

BO-26	.06 (.05)	.26	.06	.61 (.04)	.00	.63	0.31 (.07)	0.00	0.54	0.53 (.06)	0.00	0.54
	Composite STS (ECV=9.6%)											
	b (SE)	*p*	Loading	b (SE)	*p*	Loading						
STS-2	.33 (.05)	.00	.39	.35 (.04)	.00	.41	0.51(.05)	0.00	0.60	0.11 (.08)	0.15	0.13
STS-7	.39 (.05)	.00	.44	.37 (.04)	.00	.42	0.53 (.04)	0.00	0.60	0.13 (.06)	0.04	0.15
STS-9	.45 (.05)	.00	.52	.33 (.04)	.00	.39	0.51 (.05)	0.00	0.59	0.11 (.06)	0.06	0.12
STS-11	.18 (.05)	.00	.19	.68 (.04)	.00	.71	0.48 (.07)	0.00	0.50	0.55 (.07)	0.00	0.57
STS-13	.28 (.04)	.00	.38	.34 (.03)	.00	.47	0.38 (.04)	0.00	0.51	0.20 (.04)	0.00	0.27

Inter-construct Correlations and Descriptive Analysis

As a tridimensional scale, the ProQOLFR-16 showed good internal consistency with a general Cronbach's alpha of .87 and sub-scale alphas of .86 for CS, .82 for BO, and .74 for STS. A posteriori analysis of the correlations between the constructed factors demonstrated all significant correlations (Table 4). Regarding the Cohen (2013) rule of thumb to interpret these effect sizes, we found a small to medium correlation between CS and STS, a strong correlation between CS and BO, and a very strong correlation between BO and STS (Table 4). All three composite factors were very strongly correlated with the general factor. Also, descriptive means showed that all three dimensions of the ProQOL-FR16 presented different means across the sample, suggesting that subjects perceived the three measures differently.

Table 4

Descriptive Means and Inter-construct Pearson Correlations Between Subscales of ProQOL-FR16

	CS (α = .86)	BO (α = .82)	STS (α = .74)
CS	-		
BO	-.43	-	
STS	-.23	.65	-
Mean (se)	3.85 (.54)	2.72 (.79)	2.52 (.61)

Note: all p < .000, n=585.

Convergent Validity of ProQOL-FR16

The results of the correlation analysis between both versions of ProQOL (30 and 16 items) were conclusive. The correlations of the 16-item version mean scores with those from de depression, anxiety and burnout scales were significant and followed the

pattern of the 30- item version, with similar values (Table 5). For the comparison test, Table 5 shows that many correlation scores were significantly different between the two versions, and that the 30- item version had correlations slightly higher than the 16- item version. Although the test showed significant differences, we could see that those differences remained in the weak interval (Cohen, 2013).

Table 5

Correlations Between scores of ProQOL-5, ProQOL-FR16 and and scores of Burnout, Anxiety, and Depression

	CS 30-item	CS 16-item	Z-Score Comparison test	B0 30-item	BO 16-item	Z-Score Comparison test	STS 30-item	STS 16-item	Z-Score Comparison test
	r	r		r	r				
CS - 30 item		.97	-	-.65	-.45	-	-.27	-.24	-
B0 - 30 item		-.62	-		.86	-	.60	.59	-
STS - 30 item		-.25	-	.60	.63	-		.90	-
MBI-EM	-.49	-.47	-2.22**	.73	.77	-2.55**	.60	.60	-.06
MBI-DE	-.34	-.33	-.80	.44	.42	1.48	.34	.33	.52
MBI-PA	.63	.61	3.19**	-.45	-.34	-5.87**	-.23	-.20	-1.96**
HADS	-.42	-.40	-2.48**	.57	.54	1.50	.55	.51	2.55**
PTSD	-.29	-.26	-2.58**	.48	.41	3.91**	.49	.41	5.20**
BDI	-.39	-.38	-1.52	.59	.51	4.34**	.43	.41	1.21

** $p < .000$, n=585

Discussion

The mental health of child protection workers is of great interest, especially with the current pandemic where they are on the front line. Short instruments that can accurately evaluate the occupational mental health related to their work are crucial. The

ProQOL-5 is one of the most commonly used instruments for this purpose, although there are still discussions on certain aspects of its validity and reliability (Geoffrion et al., 2019; Hemsworth et al., 2018). There have been calls in the literature stating the need for a shorter version of ProQOL-5, which could be theoretically and clinically relevant. The aim of our study was to refine the French version of ProQOL-5 (Stamm, 2010) to a shorter version that could be easily used in large epidemiologic studies with child protection workers, to explore the validity of this abridged version, and to investigate whether or not it could be considered as unidimensional. For these purposes, we used a sample of 585 child protection workers in Québec.

The mean levels of compassion satisfaction, burnout, and secondary traumatic stress in our sample were somewhat comparable with the findings of other studies. Child protection workers of our sample tended to be more negatively affected by their work than Brazilian and Spanish palliative care professionals (Galiana et al., 2017) but affected similarly than Hebrew palliative care professionals (Samson et al., 2016) and Portuguese nurses (Duarte, 2017).

Item Reduction of the ProQOL-5

Our study contributes to this field of research since we were able to reach a 16-item scale with good psychometrics with very limited consequences on the reliability of the scale. The process we used, i.e. item-based analysis based on mean, standard deviation, correlational, and factorial methods, has already shown its value in various studies (Jin et al., 2018; Lester et al., 2014; Norman, 2010; Sullivan & Artino, 2013). The eight items (CS_12, STS_14, STS_23, STS_25, STS_28, CS_3, BO_1R, BO_29R)

that were removed following analyses on means and standard deviation were an issue not only in our sample, but also in the Spanish, Brazilian, and Hebrew versions (Duarte, 2017; Galiana et al., 2017; Samson et al., 2016). Correlational and factorial analysis also brought up the same issue already documented in the literature; namely, the problematic average inter-item correlation for BO and STS, and the fact that some of the items did not load on the expected factor (Craig & Sprang, 2010; Hemsworth et al., 2018; Samson et al., 2016), which led authors to question the pertinence of some items and also to conclude that these items, mainly the BO reversed items, should be removed or reformulated. This confirmed our decision to remove six more items (BO_4R, BO_8, BO_15R, BO_17R, STS_5, CS_16). Some may be concerned by the loss of information at a conceptual level, due to the removal of these items. But, as mentioned above, the pertinence of some of the items removed had already been questioned. For example, items BO_1R ("I am happy") and STS_5 ("I jump or am startled by unexpected sounds") had been criticized as lacking specificity for the concept they are supposed to assess (Samson et al., 2016; Sprang & Craig, 2015). These two items did not, as a matter of fact, load on their respective factor. This lack of specificity could also apply to BO_4R ("I feel connected to others"), BO_15R ("I have beliefs that sustain me"), BO_17R ("I am the person I always wanted to be"), and BO_29R ("I am a very caring person"). Burnout item 8 ("I am not as productive at work because I am losing sleep over the traumatic experiences of a person I help") was also criticized for the fact that it may be more associated with secondary traumatic stress (indirect trauma exposure) than burnout (Samson et al., 2016). In fact, this item loaded on secondary traumatic stress in our study.

Although items STS_23 (“I avoid certain activities or situations because they remind me of the frightening experiences of the people I help”), STS_25 (“As a result of my helping, I have intrusive, frightening thoughts”), STS_28 (“I can’t recall important parts of my work with trauma victims”), CS_3 (“I get satisfaction from being able to help people”), CS_12 (“I like my work as a helper”), and CS_16 (“I am pleased with how I am able to keep up with helping techniques and protocols”) did not meet the inclusion criteria based on means, standard deviation, inter-item or item-subscale correlations, a loss of information could actually be argued for example if researchers are interested in intra-individual change over time on these items. Some of these items, however, had a significant correlation with all the other items of the same subscale from the ProQOL-5, such as CS_3, with coefficients ranging from .27 to .53 (Table A.2). Correlations between CS_3 and CS_18 (“My work makes me feel satisfied”; $r=.53$, $p<.001$) or CS_24 (“I am proud of what I can do to help”; $r=.50$, $p<.001$) may indicate that the information of this item is not completely lost when removed.

Reliability of ProQOL-FR16

After the reduction of the ProQOL-5, we explored the psychometric properties of the reduced version. The revised version of ProQOL with 16 items had good internal consistency with reliability coefficients that were better than the original version for BO (.82 compared to .72), comparable for CS (.86 compared to .87), and lower for STS (.74 compared to .80). But, even for STS, Cronbach’s alpha was still higher than the recommended minimum of .60 (Nunnally, 1978). All items loaded significantly on their respective factor, resolving the issues raised previously in the literature about ProQOL-5.

This result has direct practical consequences, since researchers and clinicians can assess professional quality of life of child protection workers with the ProQOL-FR16, a questionnaire that takes half as long to administer as the original ProQOL-5 questionnaire.

Construct Validity of the ProQOL-FR16

Dimensionality

Although the first-degree three-factor model tested had adequate adjustment indices and all the loading scores of the items were significant on the postulated factors, the bifactor models were definitely the best models with excellent fit indices and the smallest value of BIC across all models, indicating that they had the best fit with the observed data. These results of the ProQOL-FR16 are congruent with a previous validation study of the original ProQOL-5 with child protection workers, which showed that the best models were the bifactorial models with two or three composite factors (Geoffrion et al., 2019). Thus, the results suggest that the ProQOL-FR16 scale can be used to measure a global construct, i.e. professional quality of life, as well as specific ones, i.e. compassion satisfaction, burnout and secondary traumatic stress. Geoffrion et al. (2019) obtained the same results in their study with child protection workers from another organization in Québec and found that the general factor explained half of the common variance. Geoffrion et al. (2019) advanced thus the idea of the unidimensionality of the ProQOL-5, suggesting that compassion satisfaction and compassion fatigue (comprised of BO and STS) should be viewed as two opposite poles of the same construct. However, our results did not validate this assumption of unidimensionality, since the one factor CFA model we tested was not conclusive and the

maximum explained common variance reached by the general factor was 60.2% while a minimum of 85% is required to consider the possibility of a unidimensional scale (Rodriguez et al., 2016; Stucky & Edelen, 2014).

The results of the bifactor models in our sample of child protection workers also suggest that besides a general factor, it is also possible to assess two (compassion satisfaction and compassion fatigue) or even three specific composite factors (compassion satisfaction, burnout, and secondary traumatic stress). This is also consistent with previous studies (Geoffrion et al., 2019). It means that compassion fatigue could be assessed as a whole alongside a compassion satisfaction subscale and a general factor. This also makes sense, since in the first-degree three-factor model, the correlation between burnout and secondary traumatic stress was very high (.89), consistent with previous findings (Cieslak et al., 2014; Geoffrion et al., 2019). Put together, the results of the two bifactor models support the idea of Stamm (2010) in that professional quality of life could be conceptually viewed either as a global concept, as three-subscale construct (composed of compassion satisfaction, burnout, and traumatic secondary stress), or as a two-dimension construct representing negative and positive aspects of caring, where the negative one (compassion fatigue) is composed of burnout and secondary traumatic stress. This study confirms the potential of the ProQOL-FR16 to assess all these possibilities. In line with that, two recent studies proposed a reduced version of the ProQOL-5 scale with two and three factors (Heritage et al., 2018; Lazăr et al., 2022). Using a sample of 1615 Australian nurses and Rasch analysis, Heritage et al. (2018) proposed a 21-item version of ProQOL-5 with three factors while Lazăr et al. (2022) with a sample of 533 Romanian social workers proposed a 20-item version of ProQOL-5 with

two factors. Our study reached the same results with fewer items, making it interesting in terms of parsimony. It's also the first to propose a reduced version with a French sample.

Construct validity regarding the mental health of child protection workers

The analysis of the bifactor models showed that for the model with three specific composite factors, the general factor was driven by burnout, showing a lower representativity for CS and STS. The same tendency was present with the second-degree factor model results, in which burnout had the highest loading score. This observation was even clearer in the bifactor model with two specific composite factor models, where most of the STS items did not load on the general factor despite good fit indices. Geoffrion et al. (2019) found the same issue with the loadings of STS on the general factor with their bifactor analysis results. either with three or two composite factors, since none of the STS items reached the minimum loading score criterion of .40 (Hinkin, 1998) on the general factor and two even failed to load. At the same time, at the composite level, almost none of the BO items loaded significantly. This suggests that once the common variance is captured by the general factor, there is almost no specificity left for the burnout construct and it would have no identity on its own. This differs from the results obtained by Geoffrion et al. (2019), in which each scale still had its specificity beside the general factor, which was driven by not only by BO, but by BO and CS. An explanation could be that the results of this study is specific to ProQOL-FR16. Another explanation could be that in our population of child protection workers, the burnout cannot exist alone when thinking about professional quality of life; it is always accompanied by STS and CS, while CS and STS could exist on their own. However, the problem of representativity remains either at the general factor level with a lack of

representativity at least for secondary traumatic stress, or at the composite level with the disappearance of burnout specificity. This is not the first time that the measurement properties of burnout and secondary traumatic stress scales have been questioned (Heritage et al., 2018). This may suggest that the ProQOL-related scales alone may not be optimal to assess the different concepts related to the occupational mental health of child protection workers.

Convergent Validity

When we examined the convergent validity of the ProQOL-FR16, we saw that it had similar strength associations to what was found for the ProQOL-5 with other instruments measuring related mental health constructs in previous studies (Fukumori et al., 2016; Hemsworth et al., 2018; Keesler & Fukui, 2020). The 16-item version could thus be a good alternative to the ProQOL-5. The ProQOL-FR16 could therefore be used as a replacement for ProQOL-5 with confidence that it would be as effective to assess professional quality of life with accuracy.

Limitations

Although our study contributes significantly to improve the assessment of social and healthcare professional's quality of life, it has some limitations that must be considered before drawing general conclusions. The first limitation is that our sample is somewhat homogeneous, with only child protection and family workers, when the ProQOL-5 was developed for various populations. Secondly, our sample was composed of 80% women. This tends to be common in health and social services in Québec and could affect the

results. The item-based analysis for the reduction of the scale was based on our sample, so descriptive statistics may vary from one sample to another. For example, if we look at the Portuguese sample reported in Duarte's study (Duarte, 2017), every item has an SD above the criterion of .67, meaning that none of the items would have failed to meet this criterion, possibly because of greater sample heterogeneity. Furthermore, removing some of the items only on the basis of SD and means could bring a loss of some information at the construct level, It is thus recommended that the ProQOL-FR16 be tested with other samples of social and healthcare services workers.

Conclusion

Our study provides evidence that professional quality of life can be assessed among child protection workers by a single instrument of 16 questions that is valid and reliable. The tool can be used either to assess the professional quality of life as a global score (by inverting the BO and STS subscales items and summing the scores of all items of the three dimensions), or to assess separately compassion satisfaction and compassion fatigue (by summing burnout and secondary traumatic stress items) and finally to assess the three original composite scores (compassion satisfaction, burnout and secondary traumatic stress). More parsimonious, the ProQOL-FR16 could be clinically very useful as a screening tool to assess the occupational mental health of child protection workers.

Despite this promising result, the ProQOL-related measures should be improved to optimally capture the different concepts of professional quality of life. They may then also not be optimal to assess the different concepts related to occupational mental health

of child protection workers. More studies are needed in this sense either to review the ProQOL-5 scale or to propose alternative solutions.

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Appendix

Table A.1

Descriptive Statistics of our Sample Compared with Cross-cultural Samples

No. Item	Description	M					SD				
		Iso-Stress	SPA	BRA	HEB	POR	Iso-Stress	SPA	BRA	HEB	POR
	COMPASSION SATISFACTION	3.85	4.07	4.16	4.00	3.80	.51	.83	.95	.83	.78
3	I get satisfaction from being able to help people.	4.15	4.57	4 .50	4.22	3.73	.65	.58	.67	.78	.83
6	I feel invigorated after working with those I help.	3.49	4.27	4 .02	3.81	4.23	.83	.79	1.09	.89	.75
12	I like my work as a helper.	4.24	4.63	4 .72	4.46	3.99	.68	.64	.60	.69	.76
16	I am pleased with how I am able to keep up with helping techniques and protocols.	3.23	3.50	3 .41	3.63	4.52	.89	1.02	1.41	.89	.57
18	My work makes me feel satisfied.	3.94	4.16	4 .07	4.25	3.85	.73	.77	1.00	.76	.67
20	I have happy thoughts and feelings about those I help and how I could help them.	3.85	3.97	4 .24	4.09	3.23	.67	.83	.93	.63	.87
22	I believe I can make a difference through my work.	3.69	3.26	3 .78	3.7	3.78	.74	1.07	1.19	.91	.80
24	I am proud of what I can do to help.	3.97	4.05	4 .10	4.22	3.85	.70	1.12	1.23	.83	.92
27	I have thoughts that I am a success as a helper.	3.82	3.91	4 .20	3.39	3.69	.68	.75	.68	1.09	.81
30	I am happy that I chose this work.	4.15	4.44	4 .58	4.31	3.15	.76	.77	.73	.85	.85
	BURNOUT	2.31	1.56	1.50	2.23	2.52	.47	1.14	1.26	.94	.92
1R	I am happy.	1.92	1.36	1 .30	2.24	2.42	.66	.76	.83	.82	1.12
4R	I feel connected to others.	2.30	1.14	1 .12	1.99	2.91	.91	1.03	.97	.81	1.17

8	I am not as productive at work because I am losing sleep over the traumatic experiences of a person that I help.	1.90	1.16	1 .26	1.57	3.24	.76	.97	1.26	.67	.99
10	I feel trapped by my job as a helper.	1.98	1.22	1 .31	1.85	3.28	.96	1.18	1.19	1.07	.94
15R	I have beliefs that sustain me.	1.97	1.50	1 .36	2.53	2.03	.84	1.62	1.80	1.24	.78
17R	I am the person I always wanted to be.	2.27	1.41	1 .37	2.26	2.27	.78	.95	1.10	.9	.80
19	I feel worn out because of my work as a helper.	2.85	1.68	1 .85	2.59	2.05	.92	1.09	1.29	.93	.72
21	I feel overwhelmed because my case workload seems endless.	3.03	1.79	1 .71	2.74	2.27	1.05	1.18	1.32	1.06	.77
26	I feel bogged down by the system.	3.01	1.73	1 .94	2.36	2.15	.96	1.3	1.46	1.05	.76
29R	I am very caring person.	1.84	2.61	1 .76	2.16	2.64	.63	1.31	1.35	.87	1.14
	SECONDARY TRAUMATIC STRESS	2.16	1.25	1.41	2.02	2.55	.49	.98	1.12	.90	.88
11	Because of my helping, I have felt on edge about various things.	2.90	1.20	1 .56	1.91	2.37	.96	1.09	1.31	.99	.84
13	I feel depressed because of the traumatic experiences of the people I help.	1.89	.75	1 .01	2.24	2.23	.74	.87	.98	.86	.87
14	I feel as though I am experiencing the trauma of someone that I have helped.	1.75	.71	1 .02	1.83	2.85	.78	.88	1.12	.87	.95
2	I am preoccupied with more than one person I help.	3.31	2.98	3 .23	2.98	1.76	.85	1.09	1.13	.88	.79
23	I avoid certain activities or situations because they remind me of the frightening experiences of the people that I help.	1.47	0 .70	1 .41	1.76	2.07	.69	.87	1.35	.92	.83
25	As a result of my helping, I have intrusive, frightening thoughts.	1.53	0 .69	1 .01	1.6	2.69	.69	.83	1.05	.84	.96
28	I can't recall important parts of my work with trauma victims.	1.62	0 .99	0 .85	1.67	2.70	.75	.99	.94	.87	.95
5	I jump or am startled by unexpected sounds.	2.71	1 .81	1 .63	2.09	3.89	1.02	1.23	1.12	.98	.82
7	I find it difficult to separate my personal life from my life as a helper.	2.38	1 .81	1 .66	2.25	2.32	.87	1.18	1.29	.98	.88
9	I think that I might have been affected by the traumatic stress of those I help.	2.09	0 .87	0 .78	1.89	2.66	.86	.79	.92	.85	.96

Table A.2

ProQOL-5 Subscales Items Correlations

	CS_3	CS_6	CS_12	CS_16	CS_18	CS_20	CS_22	CS_24	CS_27
CS_3									
CS_6	.43**								
CS_12	.49**	.41**							
CS_16	.27**	.31**	.25**						
CS_18	.53**	.44**	.61**	.32**					
CS_20	.38**	.36**	.41**	.28**	.39**				
CS_22	.40**	.37**	.43**	.29**	.55**	.44**			
CS_24	.50**	.38**	.47**	.38**	.55**	.51**	.60**		
CS_27	.42**	.34**	.44**	.34**	.54**	.46**	.50**	.56**	
CS_30	.44**	.37**	.65**	.27**	.63**	.40**	.49**	.48**	.48**
	BO_1	BO_4R	BO_8	BO_10	BO_15R	BO_17R	BO_19	BO_21	BO_26
BO_1									
BO_4R	.18**								
BO_8	-.17**	0.04							
BO_10	-.33**	-0.03	.34**						
BO_15R	.26**	.20**	-0.06	-.16**					
BO_17R	.47**	.17**	-.17**	-.31**	.27**				
BO_19	-.32**	-0.03	.35**	.58**	-.17**	-.26**			
BO_21	-.26**	0.06	.30**	.48**	-.13**	-.20**	.64**		
BO_26	-.29**	0.03	.23**	.48**	-.14**	-.23**	.47**	.51**	
BO_29R	0.07	.17**	0.01	-0.08	.17**	.13**	-0.01	.09*	0.02
	STS_2	STS_5	STS_7	STS_9	STS_11	STS_13	STS_14	STS_23	STS_25
STS_2									
STS_5	.15**								
STS_7	.41**	.23**							
STS_9	.33**	.22**	.38**						
STS_11	.37**	.23**	.37**	.38**					
STS_13	.31**	.20**	.34**	.42**	.39**				
STS_14	.27**	.26**	.36**	.51**	.35**	.51**			
STS_23	.12**	.23**	.18**	.30**	.19**	.28**	.31**		
STS_25	.19**	.24**	.32**	.36**	.35**	.46**	.42**	.36**	
STS_28	0.04	.14**	.089*	.17**	.13**	.20**	.24**	.22**	.26**

** $p < .01$; * $p < .05$

Chapitre 3 : Article 2

What really happens to child protection workers' mental health – an empirical view

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Abstract

The field of social care and healthcare seems to put its workers' psychological health at greater risk. The nature of their occupation makes additional demands on them through exposure to traumatic experiences, and the challenges of users with special needs. Some concepts like burnout, secondary traumatic stress, vicarious trauma and compassion fatigue, have been proposed to understand this occupational mental health issue. An integrative model through the concept of Professionnal Quality of Life with three dimensions (compassion satisfaction, burnout and secondary traumatic stress) was also proposed by Stamm to capture the nature of this occupational mental health issue in social and healthcare professions. Although actively used, this theorical model has not been formally validated in a published work.

Based on a sample of 303 child protection workers, our study proposed to take a step towards clarifying the different facets of occupational mental health of child protection workers. This was done through factorial and latent profiles analyses including burnout, compassion fatigue, compassion satisfaction, secondary traumatic stress, posttraumatic stress, depression and anxiety concepts.

Results suggested that child protection workers'mental health seems to consist of a positive component, the sense of efficacy and satisfaction, and two negative components, namely psychological exhaustion and trauma, supporting Stamm model of Quality of Life. The results also showed that none of the tools currently used can capture alone the reality of the impact of working in the caring professions. It suggests either to improve the ProQOL scale so that it can better capture trauma, use a combination of tools, or design another specific tool for that, based on the findings of the present article

Keywords: Burnout, secondary traumatic stress, professional quality of life, compassion fatigue, compassion satisfaction, vicarious trauma, depression, anxiety, posttraumatic stress

Work can be both a source of well-being (Blustein, 2008; Casey, 1995; Garner & Méda, 2006; Litchfield et al., 2016; Meda, 1998; MÉDA, 1998; Stamm, 2010) and a source of challenges (Dewa et al., 2004; Lamarche et al., 2017; Maslach & Leiter 2017; Maslach et al., 2001; Stamm et al., 2002). Indeed, work-related stress may lead to physical and psychological health problems, including cardiovascular illness (Kivimaki et al., 2012), hypertension, muscle aches, headaches, insomnia, and respiratory and gastrointestinal disorders, but also, at the psychological level, depression, anxiety, and other related problems (Felton, 1998; Fries et al., 2009; Johnson et al., 2005; Maslach et al., 2001). On this issue, social care and healthcare professionals including child protection workers seem to be at greater risk through exposure to traumatic experiences, working with perpetrators of violence and crimes, and the challenges of users with special needs (Bell et al., 2003; Canfield, 2005; Dagan et al., 2016; Evans et al., 2006; Geoffrion, 2015; Michalopoulos & Aparicio, 2012). This repeated exposure to negative emotions is related to emotional, cognitive, and behavioral disturbances in healthcare professionals (Canfield, 2005; Evans et al., 2006). These disturbances may also have repercussions on the quality of services and could even affect the professionals' clinical judgment to the point of causing harmful errors in care(LeBlanc et al., 2015; Reader & Gillespie, 2013; Shanafelt et al., 2002). Additionally, structures and organizations increasingly suffer from reduced employee efficiency, increased absenteeism, staff turnover, and loss of qualified staff (Dewa et al., 2004; Felton, 1998; Pearlman & Saakvitne, 1995b). Several concepts including burnout, secondary traumatic stress, vicarious trauma, compassion fatigue, and professional quality of life have been proposed

to capture the impact of caring on the occupational mental health of social and healthcare professionals.

Concepts related to social and healthcare professionals' occupational mental health

Depending on the field of research, different concepts seem to designate overlapping constructs (Adams et al., 2001; Jenkins & Baird, 2002; Jenkins & Maslach, 1994; Stamm, 2010). Burnout is defined as a prolonged response to chronic emotional and interpersonal stressors composed of emotional exhaustion (feelings of overextension and draining of emotional resources), cynicism or depersonalization (feeling of impersonal involvement and detachment towards recipients), and the loss of a sense of effectiveness or efficacy (feeling of competence at work; Maslach et al., 2001; Maslach, 2017).

Secondary traumatic stress is defined as the consequences of exposure to the narrative of another person's traumatic experience; the emotional stress that results when an individual hears about the firsthand trauma experiences of another (Figley, 1995b). Another concept similar to secondary traumatic stress is vicarious trauma, defined as a transformation in cognitive schemes and belief systems that occurs in a therapist, resulting from an empathetic commitment to another person's traumatic experience and associated sequelae (Pearlman & Saakvitne, 1995a). The changes could involve physical reactions, cognitive dysregulations, and affect professional and personal identity (Saakvine & Pearlman, 1996; Sabin-Farrell & Turpin, 2003). That said, social and healthcare professionals are not only affected by indirect exposure but could also be victims of direct exposure to violence, resulting in broader changes (Bradford & de Amorim Levin, 2020; Canfield, 2005; Geoffrion, 2015). Both types of exposure are now

recognized by the Diagnostic and Statistical Manual of Mental Disorders as a potential cause of posttraumatic stress disorder, including vicarious trauma and secondary traumatic stress (APA, 2013).

Posttraumatic stress disorder (PTSD) is an accepted diagnosis since its inclusion in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (APA, 1994). PTSD is viewed as a reaction to an exposure to a traumatic experience including direct exposure to the traumatic event(s); witnessing, in person, the traumatic event(s) as it occurred to others; learning that the traumatic event(s) occurred to a close family member or close friend; experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (APA, 2013).

Compassion fatigue is defined as a form of caregiver burnout through tension and preoccupation derived from working with clients and their trauma (Figley, 1995a; Potter et al., 2013; Stamm et al., 2002). The concept was developed by Figley (1995a) to document the negative impact of caring. Stamm (2005) proposed that taking care of people had not only a negative impact but also a positive one and developed the concept of Professional quality of life to integrate these two aspects.

Distinction on interrelation of the concepts related to social and healthcare professionals' occupational mental health

Despite efforts to try to distinguish compassion fatigue, secondary traumatic stress, burnout, and vicarious trauma, researchers found that they clearly overlap (Adams et al., 2001; Jenkins & Baird, 2002; Jenkins & Maslach, 1994; Stamm, 2010), and are still alternatively used as synonyms or separate entities (Adams, Boscarino, & Figley, 2006; Bride et al., 2007; Bride et al., 2004; Coetzee & Laschinger, 2018). Coetzee and

Laschinger (2018), for example, who recently conducted an integrative literature review with compassion fatigue models, indicated that the term suffered conceptual and methodological limitations, which brought challenges in measurement and empirical research.

The issue around the distinction and interrelation of the concepts related to social and healthcare professionals' mental health can be approached from an history perspective. Indeed, compassion fatigue, vicarious trauma, and secondary traumatic stress all emerged in the 1990s, in the shadow of intensive studies on burnout (Figley, 1995a; Figley & Stamm, 1996; Pearlman & Mac Ian, 1995). At that time, studies on burnout started to be conducted in other populations than caregiver professionals, replacing the caregiver-patient relation as an etiological factor by factors common to all professions, such as workload and environment (Maslach, 2017; Maslach & Leiter, 2017; Maslach et al., 2001; Sabo, 2011; Schaufeli et al., 2009). Researchers, mainly in the field of social and healthcare, then refocused on the aspect of emotional exhaustion and the caregiver/care-recipient relationship, defining burnout in terms such as compassion fatigue (Stamm et al., 2002), secondary traumatic stress (Figley, 1995b), and vicarious trauma (Pearlman & Mac Ian, 1995). Figley (2002), for example, explicitly referred to compassion fatigue and secondary traumatic stress as synonyms and forms of burnout for caregivers or healthcare professionals. The introduction of all these new concepts brought the question to know if they really represented new realities or if they are just a reframing of the already known concepts.

Beyond concepts around social and healthcare professionals occupational mental health

Another scientific debate around concepts related to social and healthcare professionals' occupational mental health is whether they are just taxonomy distractions since the reality they target could be explained by the already existing broader concepts such as depression and anxiety (Bianchi et al., 2015; Bianchi, Schonfield, & Laurent, 2019; Devilly et al., 2009; Elhai et al., 2011; Flory & Yehuda, 2015). A study in a sample of 152 Australian mental health professionals involved in clinical practice explored vicarious trauma, secondary traumatic stress, burnout, and affective distress (depression, anxiety, and tension/stress measured by Depression, Anxiety, and Stress Scales – DASS-21; Devilly et al., 2009). Authors found correlations of .51 between affective distress and vicarious trauma, .49 between vicarious trauma and secondary traumatic stress, and .61 between secondary traumatic stress and emotional distress, finding a strong convergence between these concepts (Devilly et al., 2009). Several studies questioned the distinction between PTSD and depression in its manifestation since they share symptoms including anhedonia, sleep disturbance, and concentration difficulties and have a higher rate of comorbidity (Elhai et al., 2011; Farhood, Fares, Sabbagh, & Hamady, 2016; Flory & Yehuda, 2015; Neria & Bromet, 2000). Other studies claimed that burnout was not valid as a construct but might be considered either as a form of depression in the context of work, as emphasized in a literature review including 92 studies by Bianchi et al. (2015). They attributed the observed differences to the limit of current knowledge on the heterogeneity of symptoms and forms of depression. In a recent article, Bianchi et al. (2019) argued that the burnout concept presents prevalence and diagnosis problems, conceptual and operational inconsistencies and ambiguities, unclear etiology, and lack of discriminant validity. They noted for example that, depending on the definition of

burnout, its prevalence could range from 3% to 69% among medical professionals (Elmore, Jeffe, Jin, Awad, & Turnbull, 2016; Garrouste-Orgeas et al., 2015).

Professional quality of life as an integrative approach for social and healthcare professionals' occupational mental health

Professional quality of life is a concept that attempts to encompass in a hierarchal way most of the previous ones (burnout, secondary traumatic stress, compassion fatigue, vicarious trauma). It is defined as the quality that caregivers feel in relation to their work including negative and positive aspects (Stamm, 2010). The negative aspects of professional quality of life were grouped under the term compassion fatigue, divided into two dimensions: burnout and secondary traumatic stress. Burnout was then described as feelings of hopelessness and difficulties in dealing with work and secondary traumatic stress as a consequence of work-related exposure to people who have experienced an extremely or traumatically stressful event (Stamm, 2010). The positive aspect of professional quality of life was called compassion satisfaction and defined as the ability of the caregiver to acquire and keep a sense of his or her work. To measure this professional quality of life, the author proposed the ProQOL scale, widely used in studies of social and healthcare professionals' occupational mental health (Geoffrion et al., 2019; Stamm, 2005).

Although encouraging, such an approach has been criticized due to the confusion brought in an area already dealing with conceptual uncertainties. For instance, Stamm (2005) chose to call the negative aspect of professional quality of life "compassion fatigue" and to separate it in two dimensions, i.e. burnout and secondary traumatic stress. This created more confusion, since these terms had already been used as synonyms by

several authors (Beck, 2011; Figley, 2002; Stamm, 2005) and their distinction and interrelation along with other concepts as vicarious trauma are still debated. For our knowledge, there has been no validation study published to test empirically Stamm (2005) model of professional quality of life, based on all these main concepts around the occupational mental health of social and healthcare professionals.

Objectives of the study

This article proposes to take a step towards clarifying the different facets of social and healthcare professionals' occupational mental health. It proposes to analyze the results yielded by different scales including burnout, secondary traumatic stress, compassion fatigue and satisfaction, posttraumatic stress disorder, and depression and anxiety, as an attempt to derive a possible empirical multifactorial variable that could capture the essence of social and healthcare professionals' occupational mental health. This could will also help to validate the professional quality of life's model of Stamm (2005) on this issue.

Methods

Sample and data

The data used for this study came from a larger research project "Towards an ISO-Stress label: optimizing stress management for clients and staff of the Montreal youth center to increase the quality of services and the well-being of employees", directed by the last author, and that assessed the effectiveness of a stress-management program for CPWs. The project was presented to residential workers of various teams selected by the board direction of the organization. These employees are mostly trained in social work,

psychoeducation, criminology, etc. with mostly a post-secondary school diploma.. Professionals were free to join the study or not. To be eligible, participants should work at least 3 days per week. Around 80% of workers contacted accepted to participate in the study. The data were collected from 2015 to 2018. This study used the data of the first waves of the larger project for a total of 303 participants that responded to the questionnaires targeted in the present study. The participants were 254 females and 49 males aged from 23 to 75 years old with a mean of 41 years old. Table 1 shows sociodemographic characteristics of the sample.

All procedures were approved by the Institutional Review Board of the Centre intégré universitaire de santé et de services sociaux du Centre-sud de l'Ile-de-Montréal.

Table 1

Sociodemographic Characteristics of the Sample

		n	Percentage
Age	25 and less	11	3.6%
	26–30	45	14.9%
	31–40	124	40.9%
	41–50	68	22.4%
	more than 50	55	18.2%
Gender	Male	49	16.2%
	Female	254	83.8%
Work hours per week			
	less than 35 h	15	4.9%
	35 h	206	68%
	more than 35 h	82	27%

Measures

Professional quality of life including compassion satisfaction, secondary traumatic stress, and burnout were assessed using the French short version of ProQOL-5 (Stamm,

2010), the ProQOL-FR16 (Fouda et al., submitted). This short version of ProQOL-5 was proposed and validated in accordance with many studies that indicated some construct validity issues of the ProQOL-5 and urged for a reduced version that could be easier to use to assess the professional quality of life of caregivers (Galiana et al., 2017; Geoffrion et al., 2019; Hemsworth et al., 2018). The ProQOL-FR16 is composed of 16 items assessing the three dimensions of ProQOL: Compassion satisfaction (CS; 7 items), Burnout (BO; 4 items), and secondary traumatic stress (STS; 5 items). Participants are asked to rate their experience over the last month in relation to the item on a 5-point Likert scale from 1 (never) to 5 (very often). The compassion satisfaction subscale is about the pleasure derived from professional caring assessed with items like "I get satisfaction from being able to help people" and "I feel invigorated after working with those I help" (Stamm, 2010). The burnout subscale addresses feelings of hopelessness, difficulties in dealing with work, or being effective with items like: "I feel trapped by my job as a helper" and "I am not as productive at work because I am losing sleep over traumatic experiences of a person I help" (Stamm, 2010). Secondary traumatic stress targets symptoms of work-related trauma including sleep difficulties, intrusive images, or avoiding reminders of the person's traumatic experiences with items like: "Because of my helping, I have felt on edge about various things" and "As a result of my helping, I have intrusive, frightening thoughts" (Stamm, 2010). Each of the ProQOL-FR16 subscales had a good internal consistency: Cronbach alpha of .86 for CS, .82 for BO, and .74 for STS. Its convergent validity is as good as the original ProQOL-5 (Fouda et al., submitted).

Burnout was also assessed by the Maslach Burnout Inventory (MBI; Maslach et al., 1986), a self-reported scale intended to assess the frequency and intensity of perceived burnout among caregivers. This tool of 22 items is composed of three subscales: emotional exhaustion (MBI-Exhaustion; 9 items), depersonalization or cynicism (MBI-Cynicism; 5 items), and efficacy or personal accomplishment (MBI-Efficacy; 8 items). The emotional exhaustion subscale targets feelings of overextension and draining of emotional resources with items like "I feel used up at the end of the workday" and "I feel frustrated by my job" (Maslach et al., 1996). Depersonalization is linked to participants' feeling of impersonal involvement and detachment towards recipients with items like "I don't really care what happens to some recipients" and "I feel recipients blame me for some of their problems" (Maslach et al., 1996). Personal accomplishment assesses participants' feeling of competence at work with items like "I have accomplished many worthwhile things in this job" or "I feel I am positively influencing other people's lives through my work" (Maslach et al., 1996). Participants are asked to rate their experience related to each item on a 7-point Likert scale ranging from 0 (never) to 6 (daily). The French translation used has an internal consistency of .64 for depersonalization, .74 for efficacy, and .90 for emotional exhaustion (Dion & Tessier, 1994). In our sample, the internal consistency was .63 for depersonalization, .74 for efficacy, and .92 for emotional exhaustion.

Posttraumatic stress was was assessed with the Posttraumatic Stress Disorder Checklist (Blevins et al., 2015; Weathers et al., 1993; Weathers et al., 2013), a self-reported scale based on the DSM-5. The scale has 20 items that evaluate the frequency of posttraumatic symptoms on a 5-point Likert scale ranging from 1 (not at all) to 5

(extremely). The participants are asked to rate how much over the past month they have been bothered by symptoms like “Repeated, disturbing, and unwanted memories of the stressful experience” or “Trouble remembering important parts of the stressful experience” (Weathers et al., 2013). The French version used was adapted from Blevins et al. (2015) and had an internal consistency of .93 in our sample.

Depression was assessed with the Beck Depression Inventory (BDI) that targets characteristic attitudes and symptoms of depression (Beck et al., 1988). It consists of a standardized 21-item scale based on the diagnostic criteria of the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders). For each item, participants are asked to rate their experience over the last 2 weeks by choosing one of four statements on a 4-point Likert scale from 0 to 3, like l “I am not particularly discouraged about the future” (0) to “I feel the future is hopeless and that things cannot improve” (3; Beck et al., 1988). The scale was translated into French by Bourque and Beaudette (1982) and showed a good internal consistency of .90. The internal consistency of our sample was .89.

Anxiety level was assessed using the anxiety subscale of the French version of the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983), a 14-item scale targeting anxiety and depression symptoms excluding somatic items. Participants are asked to rate their experience related to the items on a 4-point Likert scale from 0 to 3. The Canadian French version was translated by Savard, Laberge, Gauthier, Ivers, and Bergeron (1998) and showed an internal consistency of .89 for each subscale. Only the anxiety subscale was used in this study and includes items like “Worrying thoughts go through my mind” and “I get sudden feelings of panic” (Zigmond & Snaith, 1983). The internal consistency of our sample was .78.

Treatment of data and statistical analyses

Factorial analysis.

Exploratory (EFA) and confirmatory (CFA) analysis were used with all the scales mentioned above. This family of statistical methods, based on correlation or covariance matrices, makes it possible to synthesize a set of variables into a smaller number of independent and a priori uncorrelated factors (Benzécri, 1973; Eva Delacroix et al., 2021). However, some authors suggested using a less constrained model when testing a factor model and to allow some correlations among the factors to differ from zero (Van Prooijen & Van Der Kloot, 2001). This approach was found to produce better results with subsequent confirmatory analysis to cross-validate the EFA results (Van Prooijen & Van Der Kloot, 2001).

Exploratory factor analyses can be used to discover the nature and number of dimensions of a reality underlying a set of variables (Delacroix et al., 2021). Therefore, we used them to explore the latent structure that accounts for the correlations among the variables implicated in child protection workers' occupational mental health, allowing each variable to load on all factors (Muthén & Muthén, 2000). We extracted one to 4 factors to see which solution had the best fit with the observed data. The CFA was used to confirm the results of the EFA analysis, based on the number of factors that were retained (Van Prooijen & Van Der Kloot, 2001). Many values have been proposed as the criterion to consider a significant contribution to a factor: .30 (Costello & Osborne, 2005), .40 (Hinkin, 1995, 1998), .45 (Tabachnick et al., 2007), and even higher (Hair et al., 2006). A minimum loading of .40 was taken as the criterion for a variable to be considered in the factor structure since it is one of the most used (Hinkin, 1995).

Many criteria are used to evaluate the fit of a model. There are criteria for good fit (Chi-square), bad fit (Root Mean Square Error of Approximation), incremental fit (Comparative Fit Index, Tucker–Lewis index), and parsimony fit (Akaike and Bayesian; Barrett, 2007; Kenny & McCoach, 2003; MacCallum, Browne, & Sugawara, 1996). For the evaluation of a model fit, a RMSEA less than .01 is excellent, between .01 and .05 is good, between .05 and .08 is acceptable, and greater than .10 is bad (R. C. MacCallum, M. W. Browne, & H. M. Sugawara, 1996). The CFI and TLI should be greater than .9 for a good fit and the BIC and AIC should be as low as possible.

Latent profile analysis

LPA was used as complementary analysis to get another insight into the data (person-centered approach rather than variable-centered approach) and confirm the results of the factorial analysis. LPA analysis classifies individuals into distinct subgroups based on their responses on the scales (Muthén & Muthén, 2000). The idea is that if the concepts considered are different, people would then score differently on the related scales (for example high on one and low on another) showing that the variables are somehow different and do not always go along. Thus, the subgroups could be differentiated on the basis of the heterogeneity of variables scores. But if the concepts are very similar, we should have the same pattern of results for all variables, and the subgroups could only be differentiated on the basis of the intensity of variables scores. LPA is a model testing process with continuous variables (Ferguson et al., 2020). Several fit indices are compared between models (from 1 to x profiles) to choose the optimal one and decide on the number of profiles. The Bayesian Information Criterion (BIC; Celeux & Soromenho, 1996; Masyn, 2013; Tein et al., 2013) was used in order to select the

model with the lowest values, indicating the best fit with the observed data. Additionally, the bootstrap likelihood ratio test (BLRT) was used to evaluate the fit of one model (k) compared to a model with one less profile (k-1). BLRT uses parameter estimation methods to create multiple bootstrap samples to represent the sampling distribution (Masyn, 2013; McLachlan, 1987). A statistically significant BLRT indicates the current model is a better fit than a model with k-1 profiles. Entropy was also used in the model selection; values of .80 or greater provide supporting evidence that profile classification of individuals in the model occurs with minimal uncertainty (Celeux & Soromenho, 1996; Tein et al., 2013). Lastly, the final model had to propose a solution of distinct and meaningful profiles containing at least 5% of the sample. For this analysis, ProQOL-Burnout and MBI-Efficacy items were reversed to have all the variables in the same orientation. As in many other studies that attempt to define profiles, the indicators used here were standardized for the sample as a whole by means of Z scores. This method lets one quickly determine the position of the members of a profile in relation to all of the individuals in the sample. It is now generally agreed that a score above .30 (and below −.30) identifies the indicators that characterize the profile (Brennan et al., 2012).

Models comparison

Usually the model which has the smallest BIC value is considered to have the best balance between fit and parsimony. Kim et al. (2019) used a criterion of 10 of BIC differences between two models indicating 150:1 posterior odds in favor of the model with superior (lower) BIC. This is supported by another study showing that an Mplus BIC difference > 10 is a strong evidence in favor of the model with the highest Mplus

BIC value (Raftery, 1995). This criterion was used as the basis of comparison for the different models (EFA or LPA).

All the analyses were made with Mplus (Muthén & Muthén, 2018). There were no missing values on any of the analyzed variable.

Results

Exploratory factorial analysis results

EFA were conducted from 1 to 4 factors. The results (Table 2) showed good fit indices for the 3-factor solution and 4-factor solution. The 3-factor solution with the lowest BIC score appeared to be the best model, on top of having good fit indices (Kim et al., 2019; Raftery, 1995).

Table 2

Fit Indices for Factorial Models from 1 to 4 Factors

	EFA			
	1 Factor	2 Factors	3 Factors	4 Factors
BIC	4394	4370	4319	4330
Chi-Square value	187.22	117.59	26.911	3.73
df	27	19	12	6
p-value	.00	.00	.00	.71
RMSEA	.14	.13	.06	.00
CFI	.88	.92	.98	1.00

In the results of the 3-factor solution (Table 3), each variable loaded at least on one factor according to the criterion of .40 (Hinkin, 1995).

The factor one was composed by ProQOL-Compassion satisfaction (.88) and MBI-Efficacy (.67), the two positive aspects of caring. Although the MBI-Efficacy

loaded on the first factor, its loading on this factor did not meet the criterion of a minimum difference of .20 with alternative loading (-.51) on the second factor (Hinkin, 1998). The second factor had a clear loading of ProQOL-Burnout (.85), ProQOL-Secondary traumatic stress (.72), and MBI-Exhaustion (.89). MBI-Cynicism also loaded on this second factor (.59) but had a weak difference with its alternative loading (Hinkin, 1998). It also loaded on factor 1 (-.47) and factor 3 (.44). The same pattern could be observed for HADS-Anxiety which loaded on factor 2 (.70) and also on factor 3 (.69). The third factor was composed by PCL-Post-traumatic stress (.88) and BDI-Depression (.69) which also had a weak difference with its alternative loading on factor 2 (.66).

For the factor attribution of the variables with ambiguous factors loading (less than .20 difference with the alternative loading) on the 3-solution factor model (MBI-Efficacy, MBI-Cynicism, HADS-Anxiety, and BDI-Depression), the information provided by the 4-factor solution (Table 3) was used, as it also had very good fits. MBI-Efficacy was then kept with factor 1, MBI-Cynicism with factor 2, BDI-Depression with factor 3. HADS-Anxiety was moved to factor 3. The resulting 3-solution factor model also made sense with theory. Indeed MBI-Efficacy and ProQOL-Compassion satisfaction are both positive aspects of caring (Maslach, 2017; Maslach & Leiter, 2017; Maslach et al., 2001; Stamm, 2010); MBI-Cynicism goes along with the other negative subscales of burnout (Maslach & Leiter, 2017; Maslach et al., 2001); and PCL-Post traumatic disorder have been more linked with BDI-Depression and HADS-Anxiety than variables of the second factor (Elhai et al., 2011; Farhood et al., 2016; Flory & Yehuda, 2015; Neria & Bromet, 2000). This will be discussed in more detail later in the article.

Table 3

Results of the 3-Factor and 4-Factor EFA Solution

	3-factor solution			*4-factor solution*			
	Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3	Factor 4
PROQOL Compassion satisfaction	**.88**	-.53	-.42	-.38	*-.57*	-.36	*.62*
PROQOL Burnout	-.50	**.85**	.45	*.82*	*.71*	.44	-.43
PROQOL-Secondary traumatic stress	-.37	**.72**	.47	**.79**	*.53*	.48	-.32
MBI-Exhaustion	-.58	**.89**	.62	*.77*	*.89*	.58	-.44
MBI-Cynicism	-.47	*.59*	.44	.41	**.66**	.40	-.36
MBI-Efficacity	*.67*	-.51	-.41	-.41	-.48	-.37	**.95**
PCL-Posttraumatic stress	-.40	.58	**.88**	.40	.53	**.94**	-.32
BDI-Depression	-.46	*.66*	*.69*	.51	*.65*	*.66*	-.35
HADS-Anxiety	-.48	*.70*	*.69*	.58	*.64*	*.66*	-.43

Bold: items that met the two criteria (.40 min loading and difference greater than .20 with alternative loading)

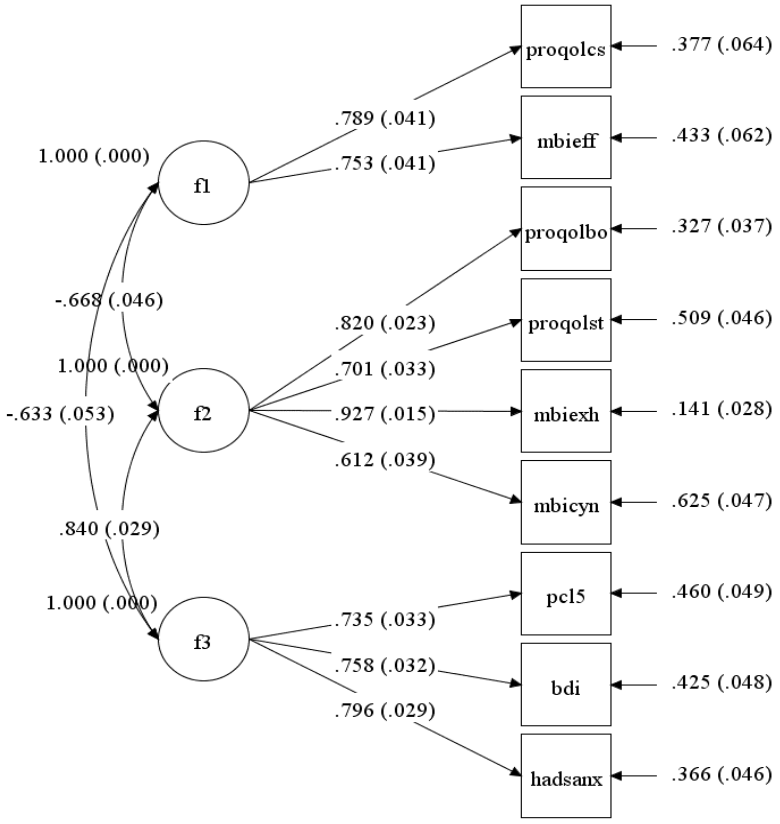
Italics: items with less than .20 between alternative loadings

Confirmatory factorial analysis results

The CFA results (Table 2 and Figure 1) confirmed the 3-factor solution with good fit indices (**RMSEA**=.08; CFI=.96; BIC=4298; $\boldsymbol{Chi - Square = 73.90; p = 0.00; df = 24}$). It also revealed higher correlations scores between the factors; factors 1 and 2 (r=-.66), factors 1 and 3 (r=-.63), and factors 2 and 3 (r=.84). For the loadings, ProQOL-Compassion satisfaction and MBI-Efficacy loaded on factor 1 with respective loadings score of .78 (residual variance=10.6%) and .75 (residual variance=25.3%). The factor 2 also had good loading scores for its items: ProQOL-Burnout (.82; residual variance=22.2%), ProQOL-Secondary traumatic stress (.70; residual variance=19.2%), MBI-Exhaustion (.92; residual variance=22.4%), and MBI-Cynicism (.61; residual variance=55.5%). Factor 3 also had all its items with good loading scores: post-traumatic stress (.73; residual variance=15.9%), anxiety (.79; residual variance=8.6%), and depression (.75; residual variance=4.7%).

Figure 1

Results of the confirmatory factorial analysis structure



Latent profile analysis results

LPA (Table 4) were conducted from 1 to 6 profiles as a complementary approach to the EFA, with the idea that if the concepts are different, people could score differently on the related scales (for example high on one and low on another) but if they are very similar, the same pattern of results would appear for all variables, and the subgroups could only be differentiated on the basis of the intensity of variables' scores. The solution with 5 profiles had the lowest BIC score but did not meet the criteria of profiles with at least 5% of the sample as recommended (i.e. one class has less than 15 participants). It

was then rejected for the 4-profile solution which had a good entropy (.85) and bootstrap *p*-value marginally significant ($p = .069$).

Table 4

Fit Indices for LPA

	1 profile	2 profiles	3 profiles	4 profiles	5 profiles	6 profiles
AIB	5490	4567	4373	4253	4193	4163
BIC	5556	4671	4514	4431	4409	4415
AdjBIC	5499	4582	4394	4279	4225	4199
Entropy	na	.92	.84	.85	.87	.83
Profile sizes	303	198; 105	107; 119; 77	92; 24; 122; 65	95; 118; 14; 58; 18	43; 106; 71; 51; 14; 18
BLRT[a] *p*-value	na	.000	.024	.069	.214	.263

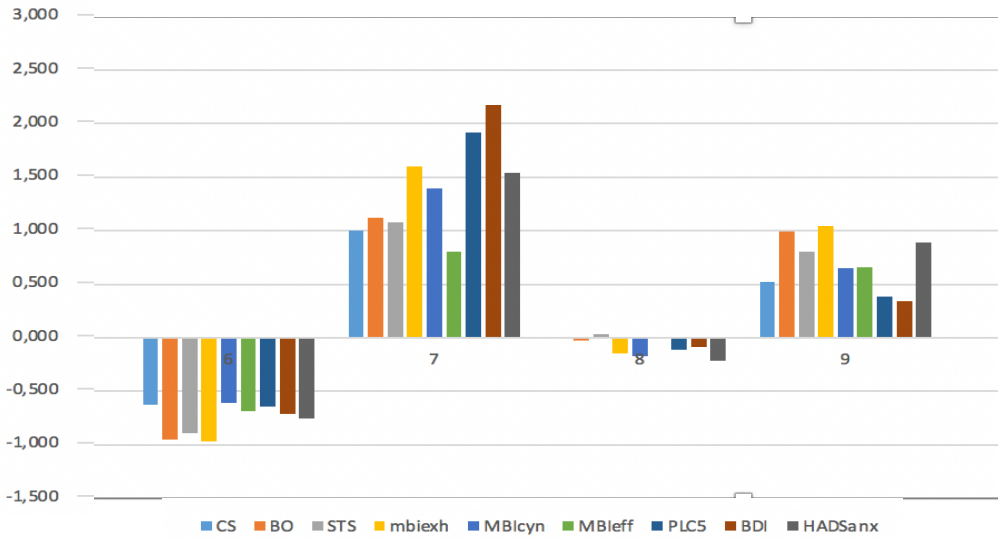
[a] Bootstrap Vuong-Lo-Mendell-Rubin Likelihood Ratio Test

The retained solution shows 4 profiles of participants that differed mostly in terms of intensity. Indeed, the subgroups (Figure 2) appeared to be difficult to distinguish on the basis of score heterogeneity. The first profile was composed by 92 participants that have the lowest scores on negative items (ProQOL-Burnout, ProQOL-Secondary traumatic stress, MBI-Exhaustion, MBI-Cynicism, anxiety, depression, and post-traumatic stress) and positive items (ProQOL-Compassion satisfaction and MBI-Efficacy) compared to the other groups. They appeared less affected by burnout, secondary traumatic stress, exhaustion, cynicism, anxiety, and depression, but also showed low levels of efficacy and compassion satisfaction. The second group (24 participants) had the highest scores on all the items, meaning they had high levels of negative mental outcome (burnout, secondary traumatic stress, exhaustion, cynicism, anxiety, and depression) but also high levels of positive mental outcomes (compassion satisfaction and efficacy). The third group (122 participants), the most important, was

composed by people that appeared neutral with average levels of negative and positive outcomes. The fourth profile (65) had higher scores on negative and positive items compared to the third one, but lower compared to the second profile.

Figure 2

Distribution of the 4-profiles solution (z-score)



Discussion

The aim of this study was to take a step towards clarifying the different facets of social and healthcare professionals, more specifically child protection workers' mental health, by looking for an empirical multifactorial variable that can capture its essence. The mainstream concepts exploring the occupational health of social and healthcare professionals, namely burnout, secondary traumatic stress, compassion fatigue and satisfaction, plus depression, anxiety, and posttraumatic stress were explored for this sake

with the objective to explore the validity of Stamm (2005)'s model of professional quality of life.

The results of the factorial analysis with child protection workers revealed a 3-factor model, consistent with the results found in the mainstream literature on social and healthcare professionals' mental health, indicating three main facets (Stamm, 2002). The first facet, the positive one, could be seen as a sense of satisfaction and efficacy, composed in the child protection workers sample by ProQOL-Compassion satisfaction and MBI-Efficacy). There was no surprise since these two dimensions measured positive aspects of caring. This facet represents the already well-known positive effect that professionals can derive from their work (Geoffrion et al., 2016; Stamm, 2002; Voss Horrell et al., 2011). Our study showed that both efficacy measured by MBI and compassion satisfaction by ProQOL could be integrated in one factor, pointing to the same reality.

The second factor composed by secondary traumatic stress (ProQOL-Secondary traumatic stress), burnout (ProQOL-Burnout), emotional exhaustion (MBI-Exhaustion), and cynicism (MBI-CYN) could be viewed as psychological exhaustion related to work, driven by emotional exhaustion. This factor is interesting since it regroups all the main negative dimensions related to the mental health of professionals namely, ProQOL-Secondary traumatic stress, MBI-Exhaustion, MBI-Cynicism, and ProQOL-Burnout. This result is consistent with the literature presenting them as the same reality with different taxonomies (Stamm, 2010).

PTSD drove a third factor, coupled with depression and anxiety. This factor could be tagged as experienced trauma. This factor is interesting and consistent with previous

studies that pointed to the comorbidity between posttraumatic stress, anxiety, and depression (Ginzburg et al., 2010; Josse, 2017; Spinhoven et al., 2014). For instance, a longitudinal study over 20 years among war veterans revealed a triple comorbidity rate (PTSD-Anxiety-Depression) of 26.730.1% and found that PTSD predicted depression and anxiety but not the contrary (Ginzburg et al., 2010). Interestingly, ProQOL-Secondary traumatic stress did not load on the third factor with PTSD even if both deal with the consequence of exposure to traumatic experience. An explanation could be that the scale used in this study to assess PTSD targets clinical symptoms of DSM-5. For example, the first question of PCL-5 is "Repeated, disturbing, and unwanted memories of the stressful experience?" when the STS items target mostly some preoccupations like "I am preoccupied with more than one person I help." This could suggest that when a lower level of secondary traumatic stress would be more associated with psychological exhaustion a higher level would be associated with PTSD. A recent study on occupational-induced secondary traumatic stress and posttraumatic stress disorder found that PTSD at a diagnostic level was indeed associated with severe form of secondary traumatic stress in respiratory therapists (Burr et al., 2020).

To be exact, depression and anxiety loaded to almost the same extent on the second and the third factor. These loadings of depression and anxiety suggest that mood disorders (depression and anxiety) are at the same time linked to psychological exhaustion and to trauma in child protection workers. It also suggests that there are some elements of depression and anxiety that may be linked with burnout when others may be linked with posttraumatic stress disorder

Using latent profile and factorial analysis with child protection workers, this article tried to offer a complementary insight in the data and to confirm the results of the factorial analysis. The advantage of a person-centered approach is to be able to target subgroups based on their expression of certain characteristics (variable scores; Oberski, 2016). It could help to see if a set of variables could be expressed differently in a population. For example, if it is possible to have people with a high score for depression and low score for burnout this could give a clue that the two variables are somehow different and do not always go along (Cloitre et al., 2013; Marsh et al., 2009). One could then distinguish subgroups based on this difference. But if, on the contrary, a high score for depression is for example always accompanied with a high score for burnout, and the two variables vary together, it would be impossible to distinguish subgroups based on heterogeneity of the scores between the two variables. The only difference could be in the intensity of the scores (Au et al., 2013). This is what the results of the present study with our sample of child protection workers showed. All the variables measured varied together so that it was not possible to differentiate subgroups on another criterion than intensity/severity of symptoms (variable scores). Indeed, all the concepts considered, including the positive aspect of caring, were somehow linked and tended to evolve together. This confirms the assumption evoked by many studies that they may tap the same reality at least to a certain degree which is not surprising (Adams et al., 2006). Burnout and depression seem to share some symptoms (Bianchi et al., 2015), and similarly between posttraumatic stress and depression (Elhai et al., 2011; Farhood et al., 2016; Flory & Yehuda, 2015; Neria & Bromet, 2000). Another study exploring vicarious trauma, secondary traumatic stress, burnout, and affective distress including depression

and anxiety found a correlation of .61 between secondary traumatic stress and affective distress including depression and anxiety, concluding that there is a strong convergence between these concepts (Devilly et al., 2009).

Put together, the results of this article showed that the child protection workers' occupational mental health could be viewed as a single entity with three facets. Indeed, while the latent profile results and the correlations between the three CFA solution factors underlined the fact that all the concepts integrated could be viewed as a unique reality, the good fit of EFA and CFA results still suggest that this reality is composed by three facets. These results are consistent with the findings in social and healthcare professionals mental health studies, confirming that the impact of their work could have a positive facet related with sense of efficacy or accomplishment, a facet related to psychological exhaustion (Maslach, 2017; Maslach & Leiter, 2017; Maslach et al., 2001), and another facet related to trauma (Pearlman & Saakvitne, 1995a; Stamm, 2010). In this sense, they support the Stamm (2010) model of professional quality of life.

In relation to the main target of the present study about the nature and assessment of occupational mental health affecting social and healthcare professionals, this study opens a path for a better understanding and a more exhaustive assessment of the occupational mental health of social and healthcare professionals. Indeed, some researchers have argued that to fully understand the phenomenon, one should consider the main concepts, related to it: burnout, compassion fatigue, secondary traumatic stress, and trauma (Adams et al., 2001; Jenkins & Baird, 2002). The Professional quality of life concept with its ProQOL-related scales brought a great step forward in such an approach, encompassing burnout and secondary traumatic stress as the two dimensions of

compassion fatigue, and by adding a positive component to it (Stamm, 2005). However, as mentioned, many studies suggest that the ProQOL scale is not yet optimal to assess some of the facets of this negative impact of caring on professionals, namely burnout and secondary traumatic stress (Fouda et al., submitted; Hemsworth et al., 2018; Heritage et al., 2018). The results of the present study also suggested that ProQOL-5 may not capture properly the trauma of professionals. Indeed, knowing that professionals could be exposed to both indirect and direct traumatic experiences that could lead to negative impact on their occupational mental health, and taking advantage of the fact that this was taken into account in the DSM-5 with the redefinition of PTSD, the approach used in this study and its results brought a wider view and could inspire either the development of a tool more adapted to the occupational mental health of social and healthcare professionals, the optimization of the ProQOL scale or the necessity at least to include the PSTD scale if one needs to optimally assess the occupational mental health of social and healthcare workers.

Limitations

The study was conducted in a population of child protection workers, mainly women (80%) with a convenience sample. The results should therefore be taken with caution since gender is a factor that can influence occupational mental health. More studies should be conducted with other populations of social and healthcare workers.

The fact that the study was based only on self-reported questionnaires was also a limitation, as this could introduce social desirability bias or a halo effect. Social desirability is the tendency to show one's best side. The halo effect bias is the tendency to base a judgment on something only from one of its characteristics

It would have been very interesting to have other sources of information, either biological markers such as cortisol levels or even administrative data to link them with each of the three dimensions of occupational mental health.

Conclusion

This study helped to clarify the assessment of social and healthcare professionals' occupational mental health. It showed that it is a reality composed by three facets that evolve together, supporting Stamm (2010) model of professional quality of life. Studying the temporal variation of each of these dimensions over the course of a child welfare worker's working life would undoubtedly be a challenge, but more importantly, it would be an instructive endeavor that could help document mental health disorders in this population. Our study also showed that for the moment, none of the tools actually used, including the ProQOL-scale, can capture alone the reality of the impact of taking care of people at work. The next step could be to propose a single questionnaire able to capture this reality or to improve the ProQOL-5 so that it can better capture all the facets of healthcare professionals' occupational mental health. For now, ProQOL-5 and PSTD scales could be use together to a better capture of occupational mental health of social and healthcare workers.

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Chapitre 4 : Article 3

Relation between work-related variables, empathy and occupational mental health in child protection workers: A stress-moderated model

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Abstract

The occupational mental health of child protection workers is of great concern since they are exposed directly and indirectly to traumatic experiences and involved with people with special needs**.** In order to tailor efficient programs to address this issue, one has to know the essence of the problem and which factors should be tackled. The present article proposed to use the major findings on studies on burnout, compassion fatigue, vicarious trauma, secondary traumatic stress, with the aim to propose and test a model that integrates well-documented factors (work-related, empathy, perceived stress) in the development of child protection workers' occupational mental health. This was done with cross-sectional analyses in a sample of 303 child protection workers. The results showed that positive work-related characteristics and empathic concern were benefic to enhance satisfaction and efficacy in child protection workers and protect them against psychological exhaustion and trauma. Conversely, personal distress empathy was found to be a risk factor for psychological exhaustion and trauma, and undermine the satisfaction and efficacy of child protection workers. The results also showed that these relations were moderated by the level of perceived stress.

Keywords: Work environnement, empathy, psychological exhaustion, work trauma, compassion fatigue, compassion satisfaction, perceived stress.

The occupational mental health of social and healthcare workers including child protection workers (CPW) is more than ever of great since their work exposes them to traumatic experiences and to specific challenges in supporting people with special needs (Barello & Graffigna, 2020; Barello et al., 2020; Felton, 1998; Geoffrion et al., 2016; Sasangohar et al., 2020; Shah et al., 2020)**.** In order to tailor efficient programs to address this issue, one has to know the factors that influence the occupational mental health of social and healthcare professionals. But before that, what is exactly occupational mental health in social and healthcare professionals?

Various concepts such as burnout, traumatic secondary stress, compassion fatigue and vicarious trauma have been put forward to understand the social and healthcare professional's occupational mental health (Branson, 2019; Figley, 1995; Isobel & Thomas, 2022; Pearlman & Mac Ian, 1995; Rotenstein et al., 2018; Schaufeli et al., 2009; Zhang et al., 2018). They led to a great base of knowledge not always integrated and also difficult to capitalize on (Coetzee & Laschinger, 2018). It is then recommended to consider the work on the main different concepts mentioned above when working on social and healthcare professional's occupational mental health (Adams et al., 2001; Jenkins & Baird, 2002; Sabo, 2011).

Insights from Burnout Studies in Occupational Samples

Burnout is considered as a prolonged response to chronic emotional and interpersonal stressors at work (Maslach, 2017; Maslach & Leiter, 2017; Maslach et al., 2001). It is composed of three dimensions: emotional exhaustion; cynicism or depersonalization; and the loss of a sense of effectiveness or efficacy.

Studies on general burnout commonly highlight, not surprisingly, several risk factors, both individual (gender, age, marital status, autonomy, self-esteem, locus of control, coping strategies when faced with stress, etc.) and environmental (type of occupation, work characteristics, work climate, values, expectations, interpersonal conflicts, etc.; Adams et al., 2001, Cunningham, 2003, Maslach, 2017; Maslach et Leiter, 2017; Maslach et al., 2001, Potter et al., 2013, Sprang et al., 2007). A recent Quebec study (Marchand et al., 2015) tried to disentangle organizational, familial and personal factors in burnout and depression. The study was conducted from 2009 to 2012 with 63 companies randomly selected, representing 1954 employees, including managers (9.7%), supervisors (6.8%), professionals (15.3%), semi-professionals or technicians (15%), administrative clerks (27.2%), skilled workers (5.4%) and manual workers with no particular qualifications (20.2%). The study reveals that the majority of factors influencing burnout were mostly organizational in nature (skill utilization, decision authority, psychological demands, and social support from colleagues and the supervisor. Thus, according to this study, abusive supervision, interpersonal conflicts and the psychological demands of work were among the major risk factors for burnout. More broadly, the literature has already identified work characteristics, available resources and finally organizational structure as potential factors contributing to burnout (Kristof-Brown et al., 2005; Maslach & Leiter, 2008; Schaufeli et al., 2009). As a consequence, in the current paper, we chose to assess the work-related factors by considering person–organization fit, work–role fit, interpersonal relation and integration into a work team, relation with supervisor, meaning of work, and the psychological demands of the work.

Insights from Compassion Fatigue, Secondary Traumatic Stress, Vicarious Trauma

The most common specific models of social and healthcare professionals' occupational mental health focus on concepts such as compassion fatigue, secondary traumatic stress and vicarious trauma. Secondary traumatic stress is defined as the consequences of exposure to the narrative of another person's traumatic experience; the emotional stress that results when an individual hears about the first-hand trauma experiences of another (Figley, 1995b). Vicarious trauma focuses on the transformation in cognitive schemas and belief systems that occurs in a therapist, resulting from the exposure to another person's traumatic experience (Pearlman & Saakvitne, 1995b). The Diagnostic and Statistical Manual of Mental Disorders now recognizes the repetitive exposure to traumatic experience either directly or indirectly as a potential cause of posttraumatic stress disorder (PSTD), the potential resulting reaction (APA, 2013). Both types of exposure have been documented by social and healthcare professionals (Bradford & de Amorim Levin, 2020; Canfield, 2005). Compassion fatigue refers to a tension and preoccupation derived from work with traumatized (Figley, 1995a; Potter et al., 2013; Stamm et al., 2002).

To explain the social and healthcare professionals' occupational mental health, Stamm (2010) proposed an integrative model based on Figley (1995a) work and findings on burnout. For the author, the professional can experience the reward of work (satisfaction compassion) and the negative aspects of work (compassion fatigue); both composing the quality of professional life. Three categories of factors were then associated with this new concept of professional quality of life: characteristics of the work environment (organizational and task-wise); personal characteristics of the

professional; and the exposure to primary and secondary trauma in the work setting (Stamm, 2010).

Professional quality of life, compassion fatigue, secondary traumatic stress and vicarious trauma all have in common the fact to highlight the caregiving relationship with a focus on empathy (Sabo, 2011).

Empathy as a key factor in Compassion Fatigue, Secondary Traumatic Stress, Vicarious Trauma

Compassion Fatigue, Secondary Traumatic Stress, Vicarious Trauma concepts were raised in the 90s in order to refocus on the consequences of the caregiver–patient relation in the social and healthcare professional's occupational mental health (Figley, 1995b; Pearlman & Mac Ian, 1995; Sabo, 2011). They all identify empathy as a key component of this relation and the main factor in the development of negative impacts on the healthcare professional's occupational mental health (Figley, 1995a; Pearlman & Saakvitne, 1995b).

In Figley (1995a) model, for example, empathy is the core element necessary for a good therapeutic relationship. The professional has to manifest an empathic concern, i.e., the motivation to help the other (Figley, 1995a). This motivation pushes the professional to carry out a certain degree of efforts to reduce the other person's suffering through empathic understanding: understanding the emotions, thoughts and behaviors of the person being helped by projecting oneself in the perspective of the latter (Figley, 1995a). The effort may produce compassionate stress; a residue of the emotional energy involved in the empathic response, which, at high levels, can lead to compassion fatigue. Compassion was then viewed by Figley (1995a) as "carrying the suffering" of the other

and compassion fatigue, the cost of caring for the suffering person (Figley, 2002). Pearlman and Saakvitne (1995b) also viewed vicarious trauma as the result of an empathetic commitment to a person's traumatic experience and associated effects (Beck, 2011; Sabin-Farrell & Turpin, 2003). Empathy was also identified as one of the factors underlying the transformation that occurs in professionals in vicarious traumatization (Sabin-Farrell & Turpin, 2003).

Empathy in social and healthcare professionals is regularly associated with burnout as well as with compassion fatigue in the scientific literature. However, studies show both a positive and negative correlation, attributing the problem of burnout or compassion fatigue to either overempathy (Chikovani et al., 2015; Figley, 2002) or to a lack of it (Cuff, 2016; Nielsen & Tulinius, 2009). Other researches consider empathy as an ability to prevent burnout (Halpern, 2003). These results have been attributed to the multidimensional nature of the empathy construct (Cuff, 2016; Sinclair et al., 2016) which involves both cognitive and affective dimensions (Cuff, 2016). Empathy can arise from a top-down process (cognitive empathy) of representation and understanding the other's emotions, thoughts, and behaviors through logical inferences, contextual data, adopting the perspective of the other, presuming the other's emotional state, observing facial expressions, recalling relevant memories, or imagining facts or situations (Cuff, 2016; Thirioux et al., 2016). On the other hand, the manifestation of empathy can also take the bottom-up (emotional empathy) path through the automatic and partial reproduction of the other person's internal state, called "emotional contagion" (Hatfield et al., 2014), which would be at the heart of the empathetic process (Prochazkova & Kret, 2017). Thus, by perceiving the facial or nonverbal expression of a person displaying an

emotion, the body, through the activation of the mirror neurons (Thirioux et al., 2016), tends to physically reproduce the same emotion, therefore allowing an emotional contagion effect (Keysers & Gazzola, 2010; Kradin et al., 1991; Singer & Klimecki, 2014; Singer & Lamm, 2009). This effect would also be observable at the physiological level through an increase in cortisol (biological stress hormone) levels when perceiving someone else in a stressful situation (Engert et al., 2014).

The Role of Stress as a Moderator Between Work Factors and Mental Health

Stress could be considered as a mechanism with both psychological (perception of threat) and biological dimensions (Lupien et al., 2001; Pruessner, Hellhammer, & Kirschbaum, 1999). Selye (1976) was a pioneer in the biological aspect of stress, defining it as a nonspecific response of the body to any demand made upon it. Classical and recent studies showed that the response involved the secretion of hormones (Lupien et al., 2001; Pruessner et al., 1999; Selye, 1976). These hormones are primarily used to activate the nervous system, or the body's "fight or flight response," characterized by an increase in heart rate, blood pressure and muscle tension(Lupien et al., 2009). Stress is thus adaptive. But when stress becomes chronic, the repeated production of cortisol can create a physiological imbalance and contribute to the development of mental (Jacobsen et al., 2014) and/or physical health problems (Felton, 1998; Kivimaki et al., 2012; Klimecki et al., 2014).

As mentioned above, burnout is perceived as a prolonged response to chronic emotional and interpersonal stressors at work (Cordes & Dougherty, 1993; Maslach, 2017; Maslach & Leiter, 2017; Maslach et al., 2001). Similarly, in his model on compassion fatigue, Figley (1995b) discusses chronic emotional stress as an important

element of the development of compassion fatigue. More generally, the impact of stress on psychological outcomes is well documented (McManus et al., 2002; Melamed et al., 2006; Pruessner et al., 1999; Schaufeli et al., 2009; Zapf et al., 2001). Perceived and chronic stress are found to have links with mental health issues such as burnout, depression and anxiety in social and healthcare workers (Lloyd et al., 2002; Maslach & Leiter, 2008).

Stress has indeed been intensely studied either as a predictor of occupational mental health or as a mediator of the link between numerous predictors and occupational mental health (Schaufeli et al., 2009). But there is a literature scarcity when it comes to its role as a moderator. However, the moderator role of stress could be hypothesized between work-related factors and occupational mental health of social and healthcare professionals since it was found to be linked with risk perception (Greenberg & Schneider, 1995). Stress has also been studied as a moderator in other contexts, such as addiction (Eames et al., 2014; Lam & Wong, 2015), where the stress was found to moderate the effect of childhood trauma and adversity on recent drinking in treatment-seeking alcohol-dependent men (Eames et al., 2014), and to moderate the relationship between problematic Internet use by parents and problematic Internet use by adolescents (Lam & Wong, 2015). Interactions of stress with other factors as moderators, such as emotional intelligence, self-efficacy and self-compassion are also being studied in relation with mental health (Ciarrochi et al., 2002; Lathren et al., 2019; Pratiet al., 2010).

Green et al., (2016) showed that organizational stress in mental health providers can affect their ability to adapt to changes undergone by the mental health organizations, and that could lead to negative outcomes. It can then be possible to hypothesize that

overall level of perceived stress, either from a work or non-work source, can affect the link between work demands and occupational mental health. Stress can thus be considered as a moderator between work demands and occupational mental health. In the same way that stress can influence empathy (Tomova et al., 2014) and have an impact on mental health (Jacobsen et al., 2014), it could also be hypothesized to act as a moderator on the relationship between empathy and mental health in CPWs.

Objectives of the study

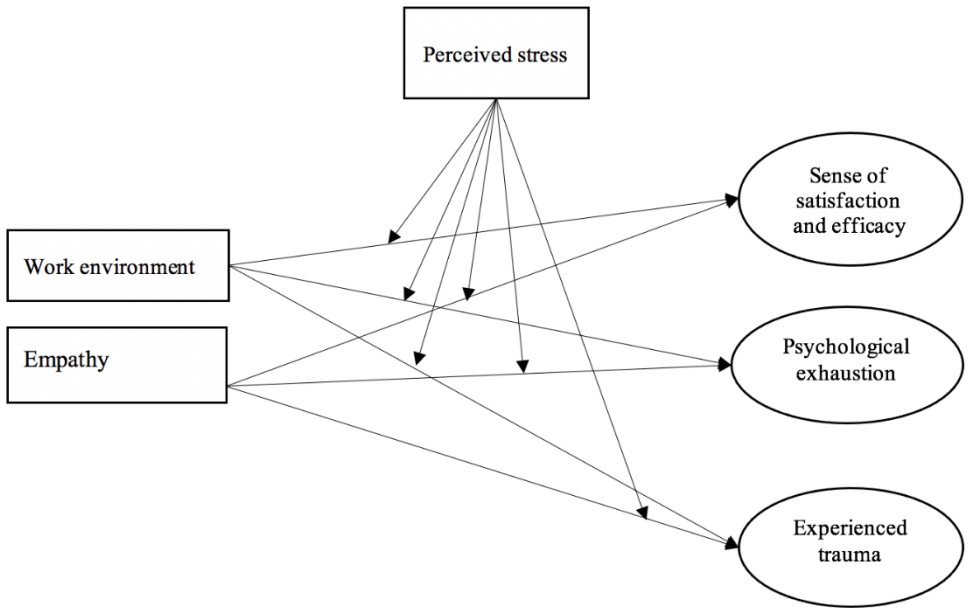
To summarize, on one hand, burnout, traumatic secondary stress, compassion fatigue and vicarious trauma are the main concepts involved in social and healthcare occupational mental health including CPW. According to Fouda et al., (submitted), these concepts could be encompassed in a tridimensional variable. On the other hand, environmental and individual characteristics such as empathy have been identified as factors related to one or the other occupational mental health's concepts. And finally, stress is hypothesized as a potential moderator of these links.

The aim of this paper was to test in a single comprehensive model (Figure 1) based on Stamm (2010) model, the work-related characteristics, empathy, and their links with CPW's occupational mental health composed by three dimensions: sense of satisfaction and efficacity, psychological exhaustion and experienced trauma (Figure 1; Fouda et al., submitted). Based on the literature, our first hypothesis is that work-related characteristics and empathy (emotional and cognitive) would each have a significant link with at least one of the three-factor variables of occupational mental health of professionals. The second hypothesis is that perceived stress would be a potential moderator of links between CPWs' occupational mental health and work-related

characteristics on one side, and empathy on the other. As a second hypothesis, we expect stress to moderate differentially, the links between work-related characteristics and CPWs' occupational mental health dimensions, and between empathy and CPWs' occupational mental health dimensions.

Figure 1

Etiological Model of Healthcare Professional's Occupational Mental Health



Method

Sample and Data

The data used for this study came from a larger research project "Towards an ISO-Stress label: optimizing stress management for clients and staff of the Montreal youth center to increase the quality of services and the well-being of employees", directed by the last author, and that assessed the effectiveness of a stress-management program for CPWs. The project was presented to child protection workers of various teams selected by the board direction of the organization. These employees are mostly trained in social work, psychoeducation, criminology, etc. with mostly a post-secondary school diploma. Professionals were free to join the study or not. To be eligible, participants should work at least 3 days per week. Around 80% of workers contacted accepted to participate in the study. The data were collected from 2015 to 2018. This study used the data of the first waves of the larger project for a total of 303 participants that responded to the questionnaires targeted in the present study. The participants were 254 females and 49 males aged from 23 to 75 years old with a mean of 41 years old. Table 1 shows sociodemographic characteristics of the sample. There were no missing values on any of the analyzed variable.

All procedures were approved by the Institutional Review Board of the Centre intégré universitaire de santé et de services sociaux du Centre-sud de l'Ile-de-Montréal.

Table 1

Sociodemographic Characteristics of the Sample

		n	Percentage
Age	25 and less	11	3.6%
	26–30	45	14.9%
	31–40	124	40.9%
	41–50	68	22.4%
	more than 50	55	18.2%
Gender	Male	49	16.2%
	Female	254	83.8%
Work hours per week			
	less than 35 h	15	4.9%
	35 h	206	68%
	more than 35 h	82	27%

Measures

Assessment of the Child Protection Workers' Occupational Mental Health

The three components of CPW's occupational mental health modeled in this study, i.e. sense of satisfaction and efficacity, psychological and experienced trauma, were assessed with several instruments described below, in a population of CPW. This 3-factor solution was reached using scores of professional quality of life, burnout, secondary traumatic stress, compassion fatigue and satisfaction and other related variables such as depression, anxiety and posttraumatic stress in exploratory and confirmatory factorial analysis. The 3-dimensional variable extracted explained 78.7% of the total variance of all these variables related to social and healthcare occupational's mental health. Sense of satisfaction and efficacy composed by the compassion satisfaction dimension of professional quality of life and the efficacy dimension of burnout representing the positive outcome that professionals can derive from their work (Geoffrion et al., 2016; Stamm, 2002; Voss Horrell et al., 2011). Psychological exhaustion was composed by

secondary traumatic stress and burnout dimensions of professional quality of life, emotional exhaustion and cynicism. Finally, experienced trauma was composed by posttraumatic stress with depression and anxiety. This work was published in another article (Fouda et al., submitted).

Professional quality of life including compassion satisfaction, secondary traumatic stress and burnout were assessed with the French short version of ProQOL-5 (Stamm, 2010), the ProQOL-FR16 (Fouda, Lemieux A., Massé S., Geoffrion S., & Plusquellec P., 2022a). This reduced version of ProQOL-5 was proposed and validated in accordance with many studies that pointed out some construct validity issues of the ProQOL-5 and urged for a reduced version that would be easier to use to assess the professional quality of life of caregivers (Galiana et al., 2017; Geoffrion et al., 2019; Hemsworth et al., 2018). The ProQOL-FR16 is composed of 16 items assessing the three dimensions of ProQOL: Compassion satisfaction (CS; 7 items); Burnout (BO; 4 items); and secondary traumatic stress (STS; 5 items). Participants are asked to rate their experience over the last month in relation to the item on a 5-point Likert scale from 1 (never) to 5 (very often). The compassion satisfaction subscale is about the pleasure derived from professional caring assessed with items like “I get satisfaction from being able to help people” and “I feel invigorated after working with those I help” (Stamm, 2010). The burnout subscale addresses feelings of hopelessness, difficulties in dealing with work or being effective with items like: “I feel trapped by my job as a helper” and “I am not as productive at work because I am losing sleep over the traumatic experiences of a person I help” (Stamm, 2010). Secondary traumatic stress targets symptoms of work-related trauma including sleep difficulties, intrusive images, or avoiding reminders of the person’s

traumatic experiences with items like: “Because of my helping, I have felt on edge about various things” and “As a result of my helping, I have intrusive. frightening thoughts” (Stamm, 2010). Each of the ProQOL-FR16 subscale had a good internal consistency: Cronbach’s alpha of .86 for CS, .82 for BO and .74 for STS. Its convergent validity is as good as the original ProQOL-5 (Fouda et al., 2022a).

Burnout was also measured by the Maslach Burnout Inventory (Maslach et al., 1986), a self-reported scale intended to assess the frequency and intensity of perceived burnout among caregivers. This tool of 22 items is composed of three subscales: emotional exhaustion (MBI-EE; 9 items); depersonalization (MBI-DE; 5 items); and personal accomplishment (MBI-PA; 8 items). The emotional exhaustion targets feelings of overextension and draining of emotional resources with items like “I feel used up at the end of the workday” and “I feel frustrated by my job” (Maslach et al., 1996). Depersonalization is linked to the participant’s feeling of impersonal involvement and detachment towards recipients with items like “I don’t really care what happens to some recipients” and “I feel recipients blame me for some of their problems” (Maslach et al., 1996). Personal accomplishment assesses the participant’s feeling of competence at work with items like “I have accomplished many worthwhile things in this job” or “I feel I am positively influencing other people’s lives through my work” (Maslach et al., 1996). Participants are asked to rate their experience related to each item on a 7-point Likert scale ranging from 0 (never) to 6 (daily). The French translation used has an internal consistency of .64 for depersonalization, .74 for efficacy and .90 for emotional exhaustion (Dion & Tessier, 1994).

Posttraumatic stress was assessed by the Posttraumatic Stress Disorder Checklist (Weathers et al., 1993; Weathers et al., 2013), a self-reported scale based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-V). The scale has 20 items that evaluate the frequency of PSTD symptoms on a 5-point Likert scale ranging from 1 (not at all) to 5 (extremely). The participants are asked to rate how much over the past month they have been bothered by symptoms like "Repeated, disturbing, and unwanted memories of the stressful experience" or "Trouble remembering important parts of the stressful experience" (Weathers et al., 2013). The French version used was adapted from Blevins et al. (2015) and had an internal consistency of .93 in our sample.

Depression was assessed with the Beck Depression Inventory (BDI), which targets characteristic attitudes and symptoms of depression (Beck et al., 1988). It consists of a standardized 21-item scale based on the diagnostic criteria of the DSM-V. For each item, participants are asked to rate their experience over the last 2 weeks by choosing one of four statements on a 4-point Likert scale from 0 to 3, such as "I am not particularly discouraged about the future" (0) to "I feel the future is hopeless and that things cannot improve"(3)(Beck et al., 1988). The scale was translated in French by Bourque and Beaudette (1982) and showed a good internal consistency of .90.

Anxiety level was assessed using the anxiety subscale of the French version of the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983), a 14-item scale targeting anxiety and depression symptoms excluding somatic items. Participants are asked to rate their experience related to the items on a 4-point Likert scale from 0 to 3. The Canadian French version was translated by Savard et al. (1998) and showed an internal consistency of .89 for each subscale. Only the anxiety subscale was used in this

study and includes items like “Worrying thoughts go through my mind” and “I get sudden feelings of panic” (Zigmond & Snaith, 1983).

Assessment of potential predictors

Work-related characteristics considered in this study include the person–organization fit, the work role fit, the quality of interpersonal relationships and the integration into a work team, the relation with supervisors, the meaning of work, and the psychological demands of the work (Adams et al., 2001; Cunningham, 2003; Kristof-Brown et al., 2005; Marchand, Durand, et al., 2015; Maslach, 2017; Maslach et al., 2001; May et al., 2004; Potter et al., 2013; Sprang et al., 2007).

The person–organization fit was assessed by the Professional Identity Scale (PIS) that evaluates the professional’s adherence to the workplace (Adams et al., 2006; Adams et al., 2006; Geoffrion et al., 2016) with items such as “I feel like I am a member of this organization” and “Being a member of this profession is important to me”. It has an original internal consistency of .79 (Adams et al., 2006). The Cronbach alpha of the French translation is .89.

The work–role fit was assessed by French translation of the Work role fit questionnaire (May et al., 2004) realized for this study. This 4-item questionnaire targets an employee’s perceived fit with his job and self-concept with items such as “My job fits how I see myself” and “The work I do on this job helps me satisfy who I am” (May et al., 2004). It has an original Cronbach’s alpha of .92 (May et al., 2004) and in our sample the Cronbach’s alpha was .89.

Interpersonal relationship with colleagues and integration into a work team were assessed by two questionnaires translated into French for this study: Adherence to

colleagues' norms with an original Cronbach's alpha of .61 and Rewarding co-worker relations with an original Cronbach's alpha of .93 (May et al., 2004). Adherence to colleagues' norms is composed of three items that target the degree to which an employee follows co-worker norms and does what is expected of him or her by co-workers with items such as "I go along with the norms in my group of co-workers" and "I do what is expected of me by my co-workers" (May et al., 2004). It has an internal consistency of.60 with our sample. Rewarding co-worker relations is composed of 10 items that target the interpersonal climate between colleagues with items such as "My co-workers value my input" and "My co-workers and I have mutual respect for one another" (May et al., 2004). It reached an internal consistency index (Chonbach alpha) of .93 in our sample.

The relation with supervisor was assessed with the Supportive supervisor relations questionnaire translated into French for this study with items such as "My supervisor helps me solve work-related problems" and "My supervisor praises good work"(May et al., 2004). This questionnaire of 10 items has an original Cronbach's alpha of .93 (May et al., 2004) and in our sample the Cronbach's alpha was also .93.

The meaning of work was assessed with the French version of the Meaningfulness questionnaire translated for the aim of this study. The 6-item questionnaire assesses the degree of meaning that an employee sees in his/her work-related activities with items such as "my job activities are personally meaningful to me" and "the work I do on this job is worthwhile" (May et al., 2004). It has an original Cronbach's alpha of .90 (May et al., 2004) and in our sample the Cronbach's alpha was .70.

The psychological demands of work were assessed by the Trier Inventory of Chronic Stress (Schulz, 1999), which was used to supplement the work-related measures.

This scale is composed of 30 items aimed to assess ten dimensions of work psychological demands: work overload, social overload, overextension at work, lack of social recognition, work discontent, social tensions, social isolation, performance pressure at work, performance pressure in social interactions, and worry propensity. For each item, such as “There were situations where I had to make an effort to gain the trust of people” and “I could no longer cope with the demands of my job”, participants have to rate their experience on a 5-point Likert scale from 1 (never) to 5 (very often; Schulz, 1995). Its internal consistency tvaries between .84 and .95 (Petrowski, Paul, Albani, & Brähler, 2012).

Empathy level was assessed by the Interpersonal Reactivity Index (IRI), a 28-item scale designed to explore emotional and cognitive empathy (Davis, 1983). Participants have to rate their experience on a 7-point Likert scale from 1 to 7. The French version of the questionnaire has an internal consistency ranging from .70 to .81 and has four subscales of 7 items each (Gilet et al, 2013). Emotional empathy is represented by two subscales: tendency to be touched by the suffering of others with items such as “When I see someone being taken advantage of, I feel kind of protective towards them,” and personal distress related to the reaction to this suffering with items such as “In emergency situations, I feel apprehensive and ill at ease.” (Gilet et al., 2013). Cognitive empathy is represented by two subscales, which refer to the ability to understand the point of view of others with items such as “I sometimes find it difficult to see things from the ‘other guy’s’ point of view” for the first one, and finally the fictitious empathic ability to project oneself emotionally and actively in the fictitious characters of books, films, plays, etc. with items such as “When I am reading an interesting story or novel, I imagine how I would feel if the events in the

story were happening to me" (Gilet et al., 2013). The subscales scores were used in the analysis.

Stress Assessment

Perceived stress was assessed by the *Perceived Stress Scale*. This scale assesses the degree to which situations in a person's life appear to be stressful to them (Cohen, 1983). For each item, participants have to rate their experience over the last month on 5-points Likert scale from 1(never) to 5 (very often). The scale is composed of 14 items such as "In the last month, how often have you been upset because of something that happened unexpectedly?" and "In the last month, how often have you felt confident about your ability to handle your personal problem?"(Cohen, 1983). The French version of the scale has an internal consistency of .84 (Lesage et al., 2012).

Treatment of Data and Statistical Analyses

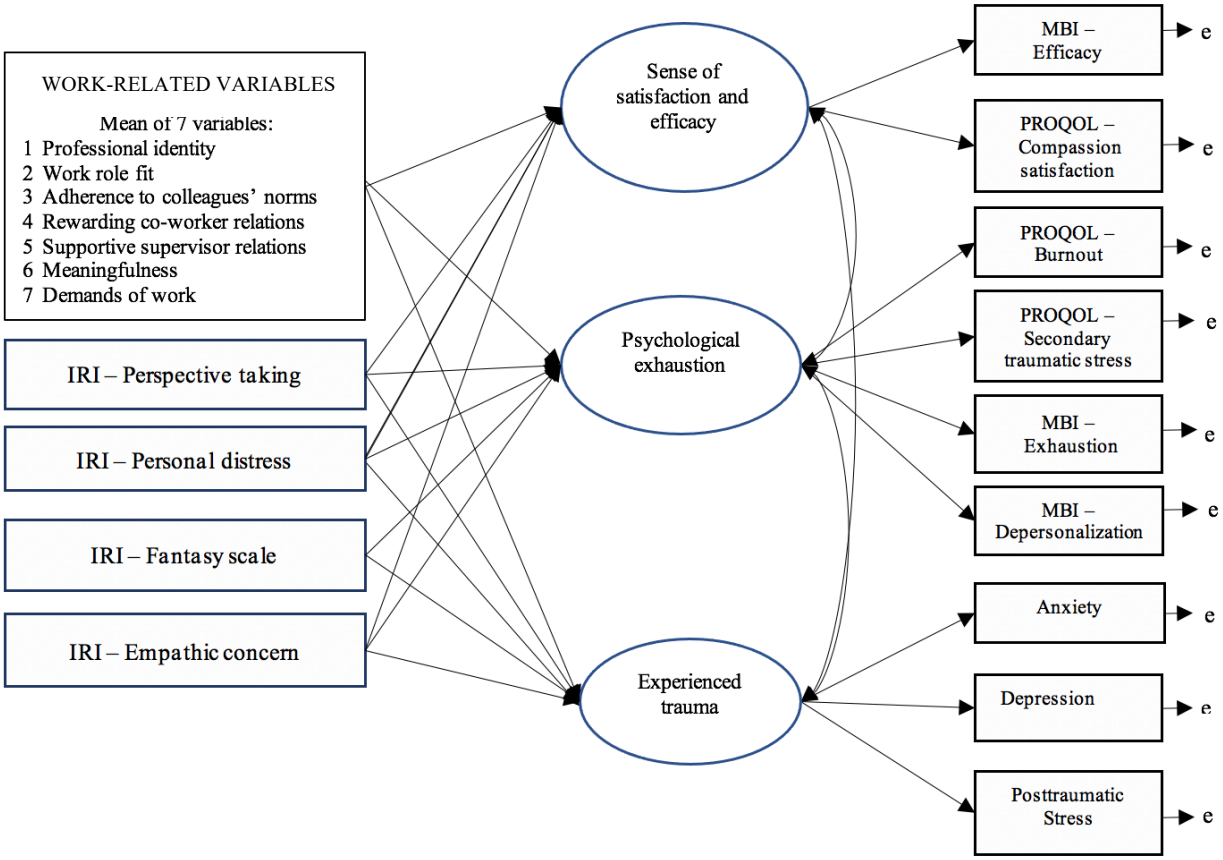
Prior to the model analysis, an index was created for the work-related variables using seven variables (professional's attachment to the workplace, work role fit, adherence to colleagues' norms, rewarding co-worker relations, supportive supervisor relations, meaningfulness and work psychological demands). The index was actually computed by calculating the mean of the seven work-related variables. The process of the computation of this index is explained in the first part of the results section. It would have been good to introduce these seven variables in the model directly, but this would have resulted in a loss of statistical power due to the sample size. The possibility of creating a unique index for empathy was explored but abandoned since the subscales were not really correlated and reached together a Cronbach alpha of only .32.

Structural equation modeling (SEM) analyses were conducted in order to test the model proposed. They are very useful to test theorical models that involve many independent and dependent variables as well as moderators (Garson, 2015). The variables can be either directly measured or latent, giving an advantage to take into account correlations between variables, multicollinearity, and error terms (Garson, 2015; Marsh et al., 2012). The analysis compares the theoretical model with the data and returns fit indices that are used to evaluate how well the theoretical model is adjusted to the observed data (Marsh et al., 2004). We used comparative fit index (CFI), root mean square error of approximation (RMSEA) and chi-square (C^2) as fit indices. A good fit requires a CFI above .90 and an RMSEA under .08 (Marsh et al., 2004). Conservative criteria target a CFI above .95 and an RSMEA under .05 (Hu & Bentler, 1999). As for the value of C^2, it should ideally be small enough not to reach the significance level of p-value < .05 (Bollen, 1989). However, this is known to be a very sensitive measure and is frequently significant in larger samples (n > 200; Hu & Bentler, 1999).

We first tested the model presented in Figure 2 (Step 1) to explore the links between the independent variables, factors postulated (work-related and empathy), and the dependent variables, CPW occupational mental health dimensions. Then, perceived stress was introduced in the model (Step 2) to explore its moderator effect on all links (Figure 1). In order to avoid potential multicollinearity issues in the models, all variables were standardized (Aiken, West, & Reno, 1991) prior to create interaction terms in the moderation model.

Figure 2

SEM of the Effect of Work-related variables and Empathy on CPW's Occupational Mental Health



In relation with the number of participants needed to reach an adequate statistical power, many criteria have been proposed. Statistical power is the probability of rejecting the null hypothesis (e.g. good fit of the model) when it is false and is dependent on the chosen alpha level, the magnitude of the effect of interest, and the sample size (Cohen, 2013; Wolf et al., 2013). Early research suggested sample size *N* could be between 100 and 200 (Boomsma, 1985; Gerbing & Anderson, 1985). Other researches suggested that *N* should depend on the number of parameters and proposed a ratio of 5 participants for 1 estimated parameter for normally distributed data, and 10 participants for 1 for arbitrary distributions (Bentler & Bonett, 1980; Deng et al., 2018). Based on this ratio approach, our sample may not have the right size to reach adequate statistical power. However, other researches suggested that this ratio approach could sometimes overestimate the sample size needed and that under certain conditions, the sample size could be smaller than the suggested ratio (de Winter et al., 2009; Deng et al., 2018; MacCallum et al., 1996). MacCallum et al. (1996) suggested another approach to estimate sample size in relation with expected effect size and the degrees of freedom. More degrees of freedom and larger effect sizes requiring fewer observations to reach the acceptable statistical power. Based on this, to reach a power of .80 with a sample of 300 participants (p=.05 and RMSEA between .05 and .08), it requires level of degrees of freedom between 40 and 100.

All the analyses were made with Mplus (Muthén & Muthén, 2018).

Results

Computation of a Work-related variables Index

In order to reduce the number of variables in our models, variables related to work were used to explore the possibility of a global index. Professional identity, work role fit, adherence to colleague's norms, rewarding co-worker relations, supportive supervisor relations, work meaningfulness and work psychological demands related to work had significant intervariable correlations with each other (Table 2). Thirteen out of 21 correlations were between the medium (.30) and high effect size (.50; Cohen, 2013). Cronbach's alpha, the mean of all split-half reliabilities, was also computed from all the items of all seven scales taken together to check the internal consistency of the meta-measure, or in other words, the degree of interrelatedness among the variables (Cortina, 1993; Green, Lissitz, & Mulaik, 1977). In our sample, Cronbach's alpha was .87. A large alpha implies that a great portion of the variance is attributable to a general factor (Cortina, 1993), that there is very little item-specific variance, making it possible to build a single index with the items (Cortina, 1993; Cronbach, 1947). Based on these results, an index (work environment fit index) was computed for the work-related variables. This was done by reversing some variables' scores, to have all the work-related variables in the same direction so that the high score represents a better work environment fit. The mean scores of each variable were then standardized and a global mean of the seven variables was computed in order to have a work environment fit index. Each of the seven variables had medium to high correlation with the global work environment fit variable. The work psychological demands through the Trier Inventory of Chronic Stress were the most related to the work environment fit index with a correlation of .93.

Table 2

Correlations Between Work-Related Variables

	1.	2.	3.	4.	5.	6.	7
1. Professional identity scale							
2. Work role fit	.35***						
3. Adherence to colleagues' norms	.27***	.26***					
4. Rewarding co-worker relations	.45***	.42***	.45***				
5. Supportive supervisor relations	.19***	.21***	.37***	.45***			
6. Work meaningfulness	.44***	.58***	.18***	.32***	.15*		
7. Work psychological demands	.40***	.34***	.28***	.39***	.37***	.21***	
8. Work environment fit index	.57***	.46***	.47***	.60***	.52***	.40***	.93***

*p<.05, ** p<0.01, p<0.001; n=303

Descriptive Statistics and Correlations of the Variables in the Model

Table 3 shows the descriptive statistics of the sample for all the variables included in the model. The majority of correlations between the variables (117/136) were significant (Table 3) and 73/136 were between medium (.30) and high range (.50)(Cohen, 2013).

Table 3

Descriptive Statistics of Variables

	M	SD	Min	Max	Median	Skewness	Kurtosis
PROQOL-Compassion satisfaction	3.78	.28	2.14	5.00	3.86	-.07	.03
PROQOL - Burnout	2.90	.68	1.00	5.00	2.75	.25	-.09
PROQOL-Secondary traumatic stress	2.63	.38	1.00	4.80	2.60	.05	.13
MBI- Exhaustion	2.22	1.59	.00	5.22	2.00	.52	-.69
MBI- Efficacy	4.45	.58	2.13	6.00	4.50	-.38	-.24
MBI- Depersonalization	1.15	.89	.00	4.80	1.00	1.19	1.30
Post-traumatic stress	.61	.35	.00	2.95	.50	1.45	2.08
Depression	.37	.11	.00	1.86	.29	1.27	2.05
Anxiety	.98	.23	.00	2.29	.86	.57	-.23
IRI-Empathy – Perspective taking	37.27	28.79	18.00	49.00	37.00	-.15	-.08
IRI-Empathy – Personal distress	19.89	42.84	7.00	39.00	2.00	.32	-.36
IRI-Empathy_Fantasy scale	27.86	59.43	8.00	47.00	27.00	.03	-.64
IRI-Empathy – Empathic concern	38.06	27.14	23.00	49.00	38.00	-.23	-.13
Perceived stress	22.09	61.05	.00	45.00	22.00	.17	-.05
Work environment fit index	.00	.39	-2.21	1.39	.07	-.39	.03

Table 4

Correlations Between the Variables of the Models

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. PROQOL Compassion satisfaction														
2. PROQOL - Burnout	-.44***													
3. PROQOL Secondary traumatic stress	-.31***	.66***												
4. MBI- Exhaustion	-.50***	.76***	.63***											
5. MBI-Efficacy	.59***	-.44***	-.33***	-.44***										
6. MBI- Depersonalization	-.41***	.47***	.36***	.58***	-.36***									
7. Post-traumatic stress	-.32***	.39***	.42***	.52***	-.33***	.37***								
8. Depression	-.39***	.51***	.46***	.62***	-.35***	.45***	.61***							
9. Anxiety	-.40***	.54***	.51***	.66***	-.43***	.40***	.61***	.54***						
10. IRI-Empathy – Perspective taking	.28***	-.15***	-.06	-.21***	.27***	-.19***	-.14*	-.10	-.18***					
11. IRI-Empathy – Personal distress	-.33***	.23***	.29***	.33***	-.37***	.14*	.34***	.26***	.42***	-.35***				
12. IRI-Empathy_Fantasy scale	.02	.17***	.24***	.18***	-.05	.11	.21***	.15**	.21***	.06	.16***			
13. IRI-Empathy – Empathic concern	.25***	-.11	.07	-.12*	.20***	-.31***	.00	.04	-.05	.42***	-.04	.29***		
14. IRI-Perceived stress	-.42***	.55***	.52***	.64***	.41***	.33***	.58***	.69***	.63***	-.06	.32***	.18***	.06	
15. Work environment fit index	.48***	-.63***	-.54***	-.71***	.44***	-.50***	-.59***	-.57***	-.61***	.28***	-.32***	-.14*	.14*	-.58***

*p<.05, ** p<0.01, p<0.001; n=303

Model Analysis Results

The model was tested in two steps. First of all, the basic model (Figure 2) was tested. Then, the moderation of perceived stress was added and tested. All the steps were done with SEM analysis. The SEM analysis results were conclusive. The two models tested had good fit indices (Table 5) with CFI above .90 and RMSEA under .08. Based on MacCallum et al. (1996) rule regarding the sample size, the statistical power for both models would be higher than .90. The models also reached the 5 participants for 1 parameter ratio with 49 free parameters for step 1 and 64 for step 2 (Bentler & Bonett, 1980; Deng et al., 2018).

Table 5

SEM Analysis Results

	X^2	df	p	RMSEA	CFI
Step 1: Basic model (Figure 2)	143.95	59	<.001	.07	.95
Step 2: Moderation of perceived stress	192.24	89	<.001	.06	.95

df: degree of freedom

Relation of Work environment fit and Empathy with CPWs' Occupational Mental Health

The basic model looked at the relations between the work environment fit index, and each of the four empathy dimensions with the CPWs' occupational mental health. The model was confirmed. Results (Figure 3) showed that both work environment fit and empathy had significant links with the three dimensions of the CPW's occupational mental health. For empathy, except IRI-Perspective taking, the other three dimensions (empathic concern, personal distress and fantasy scale) were related with at least one dimension of CPWs' mental health.

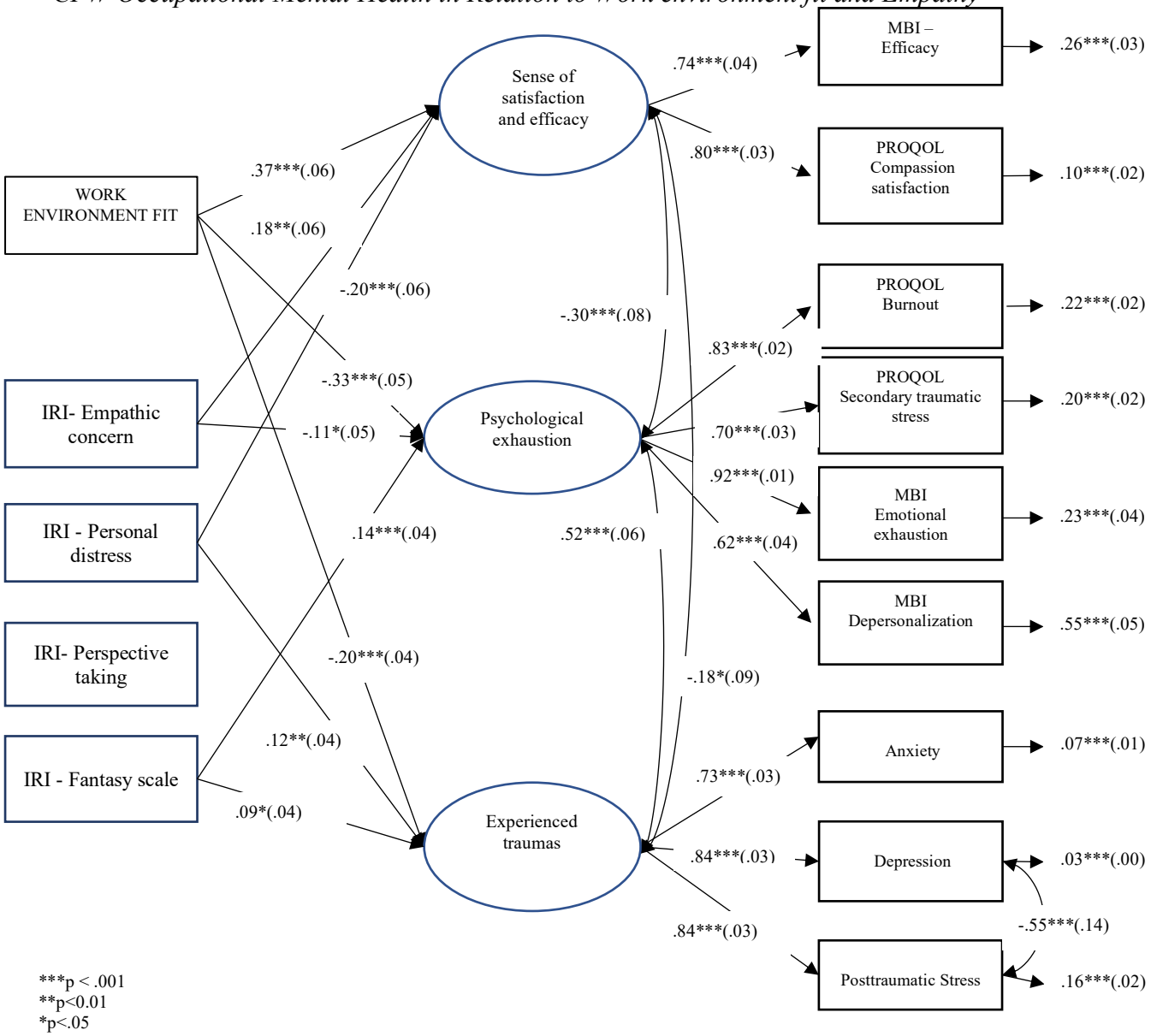
More specifically, sense of satisfaction and efficacy showed positive links with work environment fit ($p < .001$; $\beta = .37$) and empathic concern ($p = .002$; $\beta = .18$), and negative with personal distress empathy ($p = .001$; $\beta = -.20$). This suggests that the better the work environment fit, the more likely professionals experience a sense of satisfaction and efficacy, and the better the professional's empathic concern, the more likely they experience a sense of satisfaction and efficacy. On the contrary, the higher the personal distress empathy, the less people are likely to experience sense of satisfaction and efficacy.

Psychological exhaustion was negatively linked with work environment fit ($p < .001$; $\beta = -.33$) and empathic concern ($p < .023$; $\beta = -.11$), and positively with empathy fantasy scale ($p = .001$; $\beta = .14$), suggesting that the better the work environment fit, the less professionals are likely to experience psychological exhaustion, and the better the professional's empathic concern, the less they are likely to experience psychological exhaustion. Conversely, the higher their score on the fantasy empathy scale, the more likely they will experience personal exhaustion.

Experienced trauma was negatively linked with work environment fit (p<.001; β = -.20) and positively with personal distress empathy (p<.007; β = .12) and fantasy scale (p<.027; β = .09). This suggests that the better the work environment fit is, the less people are likely to experience trauma. On the contrary, the higher the score of fantasy empathy scale or personal distress, the more people are likely to experience trauma.

Figure 3

CPW Occupational Mental Health in Relation to Work environment fit and Empathy



Moderation Effects of Perceived Stress

The results of this second step in the SEM analysis exploring moderation with perceived stress are shown in Table 6. First of all, perceived stress had a medium to strong link with each occupational mental health dimension and particularly with experienced trauma.

Regarding interactions, the level of perceived stress did not seem to moderate neither the relations between the work environment fit index and the sense of satisfaction and efficacy, nor the relation between the various forms of empathy and the sense of satisfaction and efficacy. Whatever the level of perceived stress, the relations between the work environment fit and the sense of satisfaction, and between the level of empathy and the sense of satisfaction would not change.

However, with regard to psychological exhaustion, two significant interaction effects were observed and are illustrated in Figures 4a and 4b. The negative link between work environment fit and psychological exhaustion (better work environment fit linked with less psychological exhaustion) was amplified in presence of high level of stress. In other terms, the more CPW perceived stress, the less a negative work environment fit predicted psychological exhaustion. (Figure 4a). In the same way, the negative link between empathic concern and psychological exhaustion (high empathic concern linked with less psychological exhaustion) was amplified in presence of high level of stress. Said differently, the more CPW perceived stress, the less a low level of empathic concern predicted psychological exhaustion.

With regard to experienced trauma, two significant interaction effects were also found (Figures 4c and 4d). The negative link between work environment fit and experienced trauma (better work environment fit linked with less experienced trauma) was amplified in the presence of high levels of stress. In other terms, the more CPW perceived stress, the less a negative work

environment fit predicted experienced trauma (Figure 4c). Conversely, the link between personal empathy distress and psychological exhaustion (high personal empathy distress linked with high experienced trauma) was amplified in presence of high level of stress. Said differently, the more CPW perceived stress, the more a high level of empathy distress put them at risk of experiencing trauma (Figure 4d).

Table 6

Moderation of Perceived Stress on the Link Between Work Environment Fit Index, Empathy and Occupational Mental Health

	Sense of satisfaction and efficacy	Psychological exhaustion	Experienced trauma
Perceived stress	-.32 (.06)***	.53 (.04)***	.68 (.04)***
Work environment fit x Perceived stress	.04 (.05)	-.18 (.04)***	-.12 (.04)**
IRI-Perspective taking x Perceived stres	-.08 (.06)	.06 (.04)	.08 (.04)
IRI-Personal distress x Perceived stress	.00 (.06)	-.03 (.04)	.13 (.04)**
IRI-Fantasy scale x Perceived stress	-.05 (.06)	-.04 (.04)	.03 (.04)
IRI Empathic concern x Perceived stress	.00 (.06)	-.11 (.04)*	-.06 (.04)

***p < .001; **p<0.01; *p<.05

Figure 4a

Interaction Effect of Perceived Stress and Work Environment Fit on Psychological Exhaustion

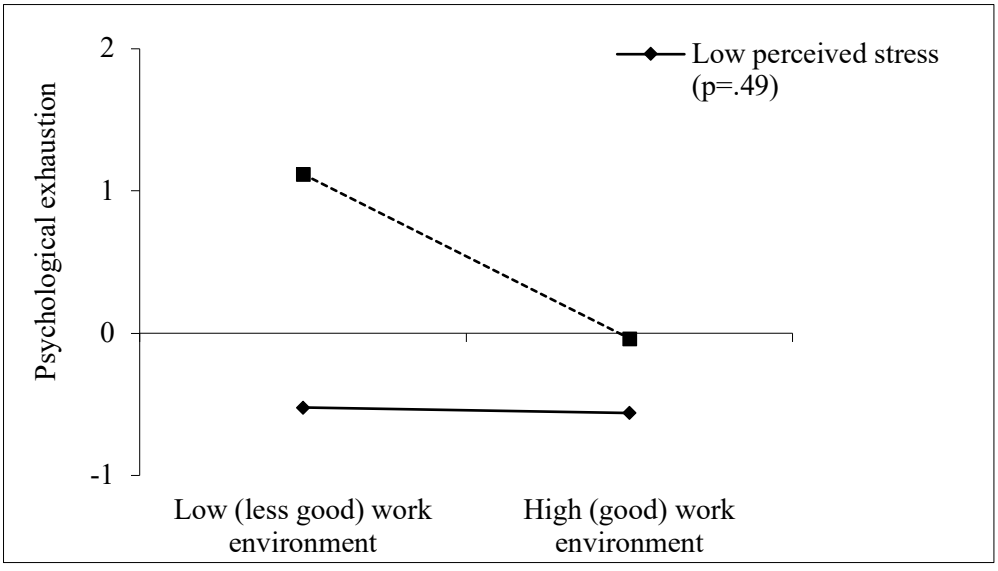


Figure 4b

Interaction Effect of Perceived Stress and Empathic Concern on Psychological Exhaustion

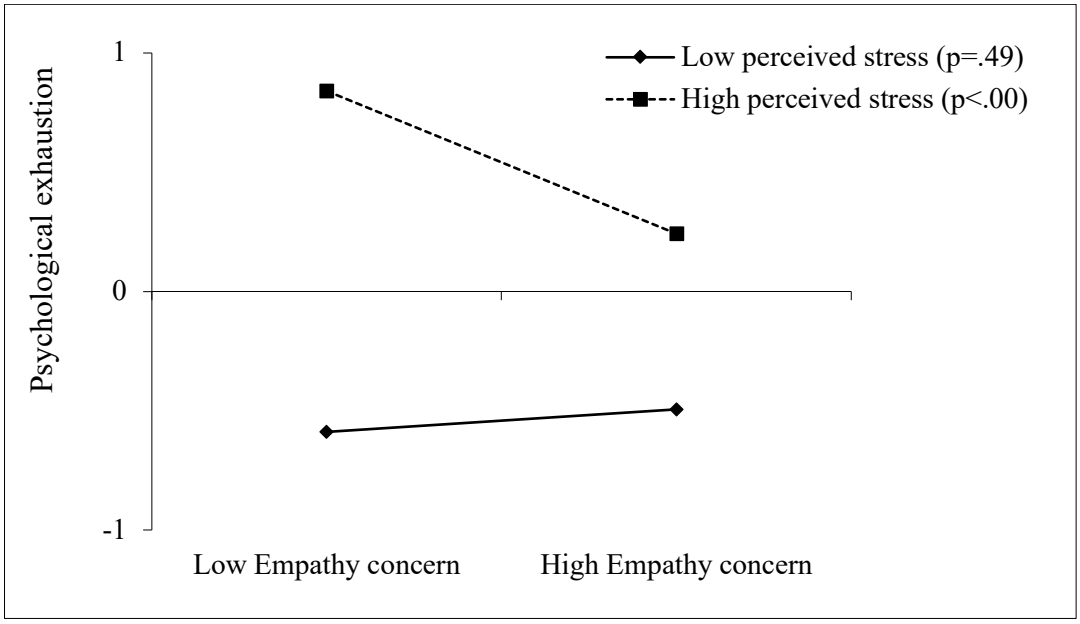


Figure 4c

Interaction Effect of Perceived Stress and Work Environment Fit on Experienced Trauma

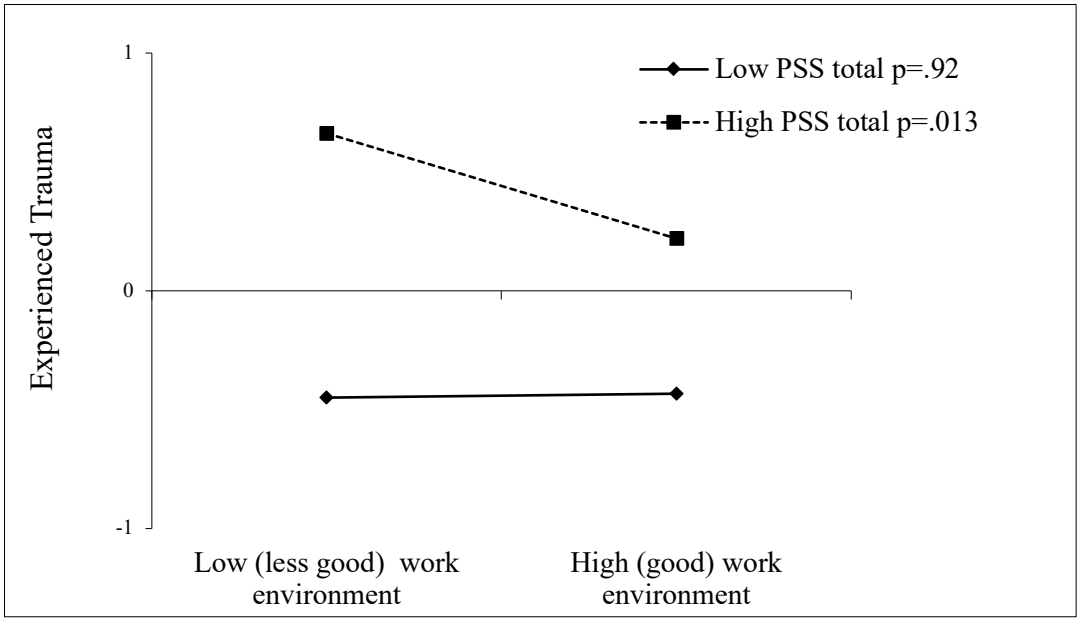
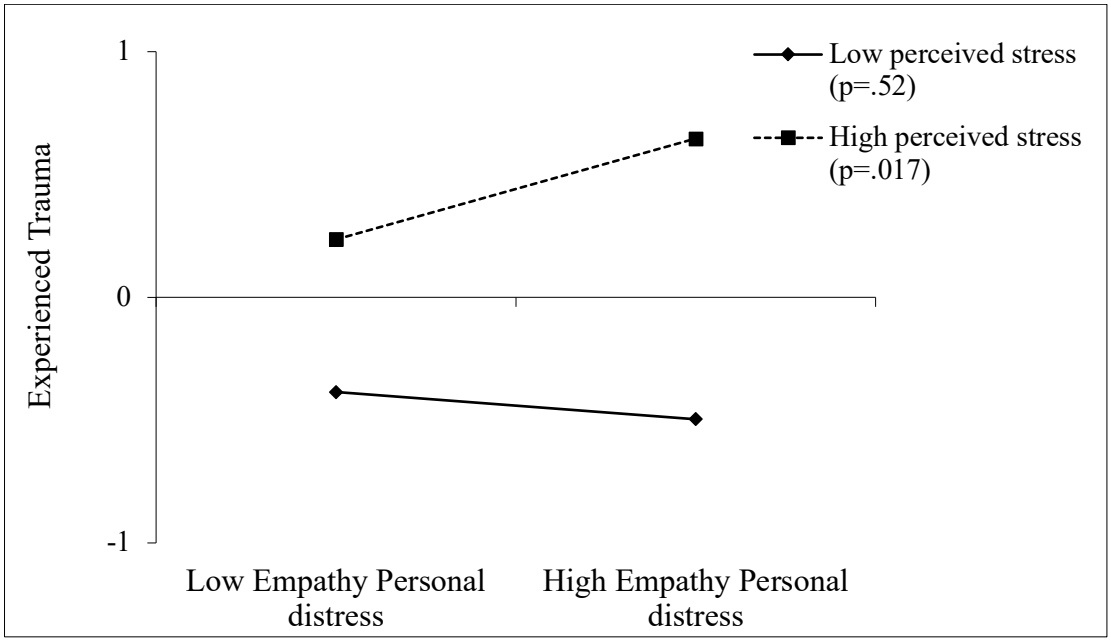


Figure 4d

Interaction Effect of Perceived Stress and Personal Distress Empathy on Experienced Trauma



Discussion

The aim of this paper was to propose and test a model that integrates well-documented factors (quality of the work environment fit, empathy, perceived stress) in the healthcare professional's occupational mental health. The proposed model investigated the differential links of work environment fit and empathy on three dimensions of child protection workers' occupational mental health, with potential moderation by stress. For this purpose, a sample of CPWs was used.

Our first hypothesis was that the quality of work environment fit and empathy (emotional and cognitive) would have significant and differential links with at least one of the three-factor variables of occupational mental health of CPW. As anticipated, both work environment fit and some asspects of empathy had differential links with all aspects of

occupational mental health of professionals. Looking at the Beta coefficients, work environment fit (from .20 to .37) and empathy (from .09 to .20) appeared to have important independent weight on the occupational mental health of CPW. Both concepts should be taken into account when looking at occupational mental health of CPWs.

Work environment fit and CPWs' Occupational Mental Health

More specifically, we found that work environment fit was indeed significantly related to each of the three aspects of occupational mental health. As documented in previous studies on burnout, secondary traumatic stress and compassion fatigue, a good work environment fit appeared to be negatively linked with psychological exhaustion and trauma (Marchand et al., 2015; Schaufeli et al., 2009; Stamm, 2005). This is also consistent with the results of previous studies underlying the importance of organizational factors on the occupational mental health of professional caregivers, including burnout and secondary traumatic stress (Green et al., 2014; Kulkarni et al., 2013). A good work environment fit also appeared to be linked with sense of satisfaction and efficacy, which is consistent with other studies (Schaufeli et al., 2009). Globally, these results are in accordance with the literature findings on professionals' occupational mental health, that showed a significant effect of work environment fit on positive and negative outcomes at work (Boscarino et al., 2004; Green et al., 2014; Kulkarni et al., 2013; Marchand et al., 2015; Maslach, 2017; Maslach & Leiter, 2017; Maslach et al., 2001; Ortlepp & Friedman 2002; Potter et al., 2013; Schaufeli et al., 2009; Sprang et al., 2007; Stamm, 2010). As already evoked, Marchand et al. (2015) found, for example, that the majority of factors influencing burnout were mostly organizational in nature. More precisely, the authors found that job insecurity (Beta = .086), skill utilization (Beta = .046), abusive supervision (Beta = .021), interpersonal conflicts (Beta = .031), and psychological demands

(Beta = .058), predicted emotional exhaustion even after controlling for family factors (marital status, presence of minor children, household income, marital strain, parental strain), work–family conflicts and personal characteristics (gender, age, physical health, smoking, physical activities, self-esteem, locus of control, childhood stressful events). In our study, the work environment fit index appears to be greatly influenced by the variable of work psychological demands (correlation of .93 betweeen both variables), which included subscales from the Trier Inventory of Chronic Stress (work overload, social overload, overextension at work, lack of social recognition, work discontent, social tensions, social isolation, performance pressure at work, performance pressure in social interactions, and worry propensity). This tool was designed to assess specific dimensions of work in accordance with the systemic-requirement-resource model (Becker, 1997; Petrowski et al., 2020), contrary to the more general perceived stress scale that assesses one's perception of feeling stressed at one point (Cohen, 1983).

Empathy and CPWs' Occupational Mental Health

According to our results, empathy appeared to have significant links with the three aspects of CPWs' occupational mental health. In the scientific literature, this association between empathy and healthcare providers' mental health is not so clear, particularly the direction of this association, and several contradictory results could be reported (Chikovani et al., 2015; Cuff, 2016; Figley, 2002; Halpern, 2003; Nielsen & Tulinius, 2009). In our study, we used the Interpersonal Reactivity Index scale, which had the advantage of considering various aspects of empathy and one could observe that associations differ according to the nature of the different dimensions. For example, our results revealed that empathic concern would be desirable because of its negative association with psychological exhaustion and positive association with the sense of satisfaction and efficacy. Conversely, a high level of

personal distress should be avoided because of its positive association with trauma and negative association with sense of satisfaction and efficacy. The same kind of associations were found in a study with 281 Salvation Army officers using the Interpersonal Reactivity Index to assess empathy and the Maslach Burnout Inventory for occupational mental health (Gross, 1994). Gross (1994) found that personal distress was negatively associated with sense of efficacy, whereas empathic concern was positively associated with sense of efficacy. They also found that personal distress was a significant predictor of emotional exhaustion when empathic concern appeared to be a significant protector against depersonalization. This is consistent with other findings showing that empathic concern is often related with social and healthcare professionals' satisfaction and mental health (Lamothe et al., 2014; Paro et al., 2014; Shanafelt et al., 2005), while personal distress is associated with burnout and compassion fatigue (Thomas, 2013). Lamothe et al. (2014), using a sample of 294 French physicians to explore the links between empathic concern measured by the Toronto Empathy Questionnaire and burnout by the MBI, found that empathic concern might be protective against burnout.

As to cognitive empathy, two results emerged from the current study. The first one is the absence of a significant association found between the level of perspective taking and any of the mental health dimensions.

The second one is that a high level on the fantasy scale appeared to be a risk factor for CPWs' occupational mental health. The fantasy scale is the ability to project oneself emotionally and actively in fictitious situations. This is particularly interesting since some studies using the Interpersonal Reactivity Index found associations between empathy with fictional characters and empathy for real people, suggesting that they may have similarities,

and pointed to the usefulness of the IRI-Fantasy scale (Namba et al., 2021; Nomura & Akai, 2012). Although the application of this concept to reality is still vague, the fantasy scale has already been identified as a risk factor for social and healthcare professionals' occupational mental health, and more specifically for secondary traumatic stress (Franco et al., 2020; Fülöp et al., 2011; McArthur et al., 2017). Studying professional quality of life and burnout amongst 800 radiation and clinical oncologists of 94 countries, Franco et al. (2020) found that a higher level of IRI-Fantasy scale was significantly correlated to a higher level of PROQOL-Secondary traumatic stress. The same result was found in a study amongst 67 psychiatry residents between IRI-Fantasy scale and intrusion symptoms of Secondary Traumatic Stress Scale (Bride et al., 2004; Fülöp et al., 2011).

Surprisingly, perspective taking did not relate to any dimensions of the CPW occupational mental health. Perspective taking has been found by a large number of studies to be linked positively with ProQOL-Compassion satisfaction and MBI-Sense of efficacy and negatively with ProQOL-Burnout and MBI-Depersonalization (Day & Chambers, 1991; Farina et al., 2020; Franco et al., 2020; Fülöp et al., 2011; Lamothe et al., 2014; Lopes & Nihei, 2020; Paro et al., 2014; Sturzu et al., 2019). Day and Chambers (1991), for example, found that IRI-Perspective taking was negatively correlated with MBI-Depersonalization and MBI-Efficacy in rehabilitation counselors. Another study with 1,650 randomly selected medical students found that MBI-Depersonalization was associated with lower IRI-Perspective taking when MBI-Efficacy was associated with higher IRI-Perspective taking (Paro et al., 2014). Franco et al. (2020) found that IRI-Perspective taking was related positively with ProQOL-Compassion satisfaction and negatively with ProQOL-Burnout symptoms in radiation and clinical oncologists. On the other hand, Gleichgerrcht and Decety

(2013), in a study with 7584 Argentinian physicians, found that IRI-Perspective taking was exclusively related to the ProQOL-Compassion satisfaction, but not to the ProQOL-Burnout or to the ProQOL-Secondary traumatic stress. Wagaman et al. (2015) using the Empathy Assessment Index (Lietz et al., 2011), a scale composed by four subscales (affective response, self–other awareness, perspective taking, and emotion regulation) did not find any association between perspective taking and any of the three dimensions of ProQOL-5 in a sample of social workers. Tei et al. (2014), in a sample of nurses, did not find any link between IRI-Perspective taking and MBI-Efficacy or MBI-Depersonalization, but on the contrary, they found a link with MBI-Emotional exhaustion.

These results on empathy suggest that if the tendency to be touched by the suffering of others (empathic concern) could be good for professional caring, the ability to connect emotionally and actively to a person's suffering (fantasy scale) and the distress in reaction to this suffering (empathy distress) could be harmful. These differential results support the idea that the contradictory results on the links between empathy and occupational mental health could be attributed to the multidimensional reality of the empathy construct (Cuff, 2016; Sinclair et al., 2016).

Stress as a Moderator

Our second hypothesis was that stress would moderate the link between work environment fit and CPWs' occupational mental health and also the link between empathy and CPWs' occupational mental health. This hypothesis was partly confirmed. Results showed that perceived stress moderated some links between work environment fit, empathy and two dimensions of CPWs' occupational mental health.

If, in the first place, a good work environment fit appeared to predict a weak level of psychological exhaustion and trauma, the link was stronger for professionals who perceived more stress. Since our work environment fit index was composed by various related measures, this result is not so surprising. Other studies have found these kind of interaction effects between occupational stress and work environment fit ressources. For example, a study found that employees with high social support at work from colleagues or supervisor were found to be less affected by occupational stress than those who did not have the same support (Kachi et al., 2020; Krishnan, 2002; Ribeiro et al., 2018; Yousaf et al., 2019). Meaningfulness at work also appeared to reduce employees perceived stress levels (Ding & Liu, 2019; Kachi et al., 2020). Organizational literature explains this mainly by the notion of fit that has given rise to a family of models such as person–environment, person–vocation model, person–organization, person–group, person–supervisor, etc…(Kristof-Brown et al., 2005)**.** These models are anchored in an ecological perspective and stipulate that the concordance between the characteristics of the worker and those of the work environment will be predictive of the employee's adaptation to stress at work (Kristof-Brown & Guay, 2011)**.** This important scientific literature suggests that when the professional is dealing with stress, the increase of resources, such as values alignment, team and supervisor support, meaning of work, task designing to better fit the work-role, and the reduction of work psychological demands may help for a better adaptation (Kristof-Brown & Guay, 2011; Kristof-Brown et al., 2005).

The results showed another interaction effect of stress and emotional empathy (empathic concern and personal distress) on CPWs' occupational mental health. Studies about stress-empathy interaction on occupational mental health are scarce. A qualitative study with 24 medical student residents revealed that participants identified stress factors such as an

organizational or contextual situation as moderators that in interaction with empathy could lead to burnout (Picard et al., 2016). In a recent study, Khalaila (2022) explored this interaction amongst 300 informal caregivers. The results showed that MBI-Exhaustion was positively related to the interaction between emotional empathy measured by IRI and caregiver perceived stress measured by the perceived caregiver burden (Bachner & Ayalon, 2010). Our study showed more differentiated results. If indeed the link between the personal distress aspect of emotional empathy and a negative outcome of caring (experienced trauma) appeared to be stronger with a high level of perceived stress, the result was the opposite for the other aspect of emotional empathy, empathic concern. Empathic concern appeared to be negatively associated with psychological exhaustion. Here also, this effect increased with the perceived stress level of professionals. So, a higher level of empathic concern would have a stronger association with low level of psychological exhaustion for professionals who perceive higher levels of stress no matter its source.

These results could bring about another way to consider stress in occupational mental health studies. Indeed, according to each CPW stress level, the strength between factors that play an influence on mental health, and the actual levels of mental health would change.

Limitations

The first limitation is that the study was conducted with a sample of child protection workers in Quebec. This sample was a convenience one and people were free to join the study or not. However, around 80% of participants contacted were enrolled in the study. The second limitation is the unbalanced sex-ratio, which limits generalization. Another limitation is the fact that the study was cross-sectional, which does not allow testing causal effects. A longitudinal design would have been better to test properly the model. The self-reported

questionnaires could also be subject to some desirability bias from the participants. It would also have been good to include some control variables known to have an effect on occupational mental health such as gender, age, marital status but statistic power was a limitation for that.

Before extending the results, there is a need for further studies to empirically test the model proposed here and see whether the same results could be found or whether there are differences due to the population studied.

Conclusion

This study proposes and tests a model that integrates well-documented factors (work-related, empathy and perceived stress) of healthcare professionals' occupational mental health. In summary, the results showed that work environment fit (work-related variables) and empathy each carried important weight on the child protection workers' occupational mental health. This means that interventions aimed at enhancing the mental health of these workers should target both aspects. The results also gave sufficient information on which aspect of empathy should be targeted to improve a specific CPW's occupational mental health dimension. For example, to improve the sense of efficacy and satisfaction, one would have to work to stimulate empathic concern and reduce personal distress related to empathy, in addition to dealing with work environment factors. The role of stress as a moderator should also be taken into account. Further studies are needed to confirm these findings and maybe to generalize them to more caregiving professions.

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Chapitre 5 : Discussion générale et conclusion

5.1 Résumé des principaux résultats empiriques

L'objectif principal de la présente thèse était de faire un pas vers une meilleure compréhension du bien-être psychologique des professionnels en relation d'aide grâce à un échantillon d'intervenants jeunesse du Centre intégré universitaire de santé et de services sociaux du Centre-sud de l'Île-de-Montréal. Pour mener à bien cette tâche, la première étape consistait à explorer les différents concepts s'y rapportant dans la littérature et à faire un point sur leurs apports respectifs et leurs liens. Cette étape a été effectuée dans l'introduction générale où l'enjeu du bien-être psychologique en relation d'aide ainsi que les principaux concepts qui y sont rattachés (burnout, stress traumatique secondaire, traumatisme vicariant et fatigue de compassion) ont été exposés. Dès lors, l'intérêt s'est tourné vers l'évaluation de ce bien-être psychologique et plus précisément sur la validité de l'un des principaux outils utilisés pour cela : le ProQOL-5.

Le premier article a permis d'atteindre ce premier objectif de la thèse à savoir, proposer et valider une version réduite du ProQOL-5, et voir dans quelle mesure cet outil permettait de couvrir les différents concepts reliés au bien-être psychologique en relation d'aide. En lien avec l'objectif de la thèse, le principal résultat de cet article en plus de la validation d'une version réduite du ProQOL-5, a été de relever que le ProQOL-5 ne semblait pas optimal comme questionnaire pour évaluer toutes les facettes du bien-être psychologique en relation d'aide et particulièrement le stress traumatique secondaire et le burnout. Une autre méthode s'avérait donc souhaitable.

Fort de ce résultat, la deuxième étape dans la poursuite de notre objectif de thèse a consisté à explorer à travers l'article 2, l'essence et les différentes dimensions du bien-être

psychologique en relation d'aide à partir des variables représentant les différents concepts en lien avec cet enjeu. Cet article a exploité les données de questionnaires ciblés pour l'évaluation des concepts reliés au bien-être psychologique en relation d'aide. Il a fait ressortir une variable tridimensionnelle représentant ce bien-être. Les trois dimensions qui varient ensemble représentent ce qui pourrait être considéré comme trois facettes du bien-être psychologique en relation d'aide à savoir le sentiment de satisfaction et d'efficacité, l'épuisement psychologique et le trauma. Cet article a donc confirmé à un certain point le modèle tripartite du bien-être psychologique en relation d'aide proposé par Stamm (2010) à travers son concept de qualité de vie professionnelle. Il semble cependant plus complet en ce qui concerne notamment l'évaluation du traumatisme et du burnout, grâce à l'utilisation d'instruments de mesure spécifiques validés et reconnus comme mesurant les différents construits impliqués. Il suggère aussi que bien que pouvant être un bon indicateur du bien-être psychologique en relation d'aide, l'échelle du ProQOL devrait être améliorée si elle est destinée à capter toutes les facettes du bien-être psychologique en relation d'aide et plus particulièrement la dimension traumatique reliée à ce travail.

La troisième et dernière étape consistait dès lors à partir de la variable tridimensionnelle de l'article 2, à explorer un modèle explicatif du développement du bien-être psychologique en relation d'aide, inspiré du modèle de Stamm (2010). Le modèle incluait comme prédicteurs potentiels, les facteurs reliés à l'environnement de travail, et l'empathie, considérée comme un des éléments clés en relation d'aide. Le stress a été introduit dans le modèle comme modérateur potentiel. Les résultats de cet article ont permis de confirmer les hypothèses de départ à savoir les liens différenciés de l'environnement de travail et de l'empathie avec le bien-être psychologique en relation d'aide, et de faire ressortir comment le

stress perçu modérait certains de ces liens. Il offre donc une validation partielle du modèle de Stamm (2010) postulant le role des caractéristiques de l'environnement de travail, et des caractéristiques personnelles dans le développement du bien-être psychologique en relation d'aide. Ce modèle de Stamm (2010) est toutefois bonifié ici par la modération du stress perçu.

Mis ensemble, les trois articles nous ont permis d'apporter un éclairage supplémentaire sur la nature de la santé mentale en relation d'aide. Ceci a été effectué en faisant ressortir ses trois dimensions, sur la base des principaux concepts qui y sont reliés. Certains liens jusqu'ici documentés dans la littérature entre l'environnement de travail, l'empathie et différents concepts de bien-être psychologique au travail, ont pu aussi être retrouvés avec les facettes de la variable tridimensionnelle.

De plus, les articles ont apporté deux autres éléments majeurs dans cette thèse à savoir : le fait que le ProQOL-5, un des principaux outils utilisés dans ce domaine serait à bonifier pour couvrir réellement tous les aspects de bien-être psychologique en relation d'aide, et enfin la place du stress perçu, non pas comme un médiateur comme cela est classiquement fait dans la littérature, mais comme modérateur des liens entre l'environnement de travail, l'empathie et le bien-être psychologique. Ceci a permis de saisir quels éléments peuvent en cas de stress améliorer ou aggraver la santé mentale des intervenants. Les principaux résultats détaillés de chaque article sont exposés ci-dessous.

5.1.1 Principaux résultats de l'article 1

L'article « Item Reduction and Construct Validity of the French Version of the Professional Quality of Life (ProQOL-5) in a Sample of Quebec Child Protection Workers »

avait pour objectif de réduire et de valider le ProQOL-5, en plus d'investiguer sa capacité à couvrir les différentes dimensions du bien-être psychologique au travail. En effet comme mentionné en introduction de cette thèse, le concept de Qualité de vie professionnelle (Stamm, 2010) mesuré par ce questionnaire s'inscrit dans une démarche intégrative qui prend en considération différents concepts reliés au bien-être psychologique dont le stress traumatique secondaire, le burnout, la fatigue de compassion et son pendant positif la satisfaction de compassion.

Tout d'abord, les analyses ont permis d'arriver à une échelle du ProQOL-5 réduite à 16 items (ProQOL-FR16), en lieu et place des 30 initiaux. Ce qui représente une réduction de presque de moitié. En plus d'être parcimonieuse, l'échelle réduite permet de répondre aux critiques de l'échelle originale en lien avec la validité de construit tout en conservant la même structure factorielle.

L'échelle réduite conserve les trois dimensions originelles : satisfaction de compassion (7 items), stress traumatique secondaire (5 items) et burnout (4 items). Le ProQOL-FR16 a aussi de bons indices psychométriques avec des alpha de Cronbach de 0,86 pour la satisfaction de compassion (contre 0,87 pour le ProQOL-5), 0,82 pour l'indice de burnout (contre 0,72 pour le ProQOL-5) et 0,74 pour le stress traumatique (contre 0,80 pour le ProQOL-5), bien au-delà du minimum recommandé (Nunnally, 1978). Le ProQOL-FR-16 démontre également une bonne validité convergente avec l'anxiété, la dépression, le stress post-traumatique et le burnout (mesuré par le MBI), avec 16 corrélations sur 18 de niveaux modéré à fort (0,30; Cohen, 2013). Ces résultats sont comparables à ceux trouvés avec le ProQOL-5 à 30 items dans d'autres études (Fukumori et al., 2016; Hemsworth et al., 2018; Keesler & Fukui, 2020).

Finalement, l'exploration de la dimensionnalité du ProQOL-FR16 montre que bien que cette échelle puisse avoir un facteur général avec une consistance interne de 0,87, elle ne peut être considérée comme unidimensionnelle et sa structure tridimensionnelle reste valable. Ces résultats concordent avec ceux de Geoffrion et al. (2019), qui parallèlement aux trois facteurs composites (compassion de satisfaction, épuisement professionnel, stress traumatique secondaire), avaient aussi trouvé un facteur général au ProQOL-5, dans un échantillon d'intervenants jeunesse. Concrètement, cela signifie que le ProQOL-FR16, tout comme le ProQOL-5, pourrait être utilisé comme mesure globale de la qualité de vie professionnelle tout en gardant sa structure tridimensionnelle.

Les analyses montrent cependant que si l'objectif est de mesurer uniquement l'indice de burnout, il serait plus prudent de le faire avec un autre outil validé qu'avec la sous-échelle burnout du ProQOL. La même prudence pourrait aussi s'appliquer pour le stress traumatique secondaire. D'où l'intérêt d'utiliser des questionnaires dédiés dans le deuxième article pour mieux compléter l'évaluation de ces aspects.

5.1.2 Principaux résultats de l'article 2

Le deuxième article de cette thèse a permis d'extraire une variable tridimentionnelle intégratrice représentant le bien-être psychologique en relation d'aide, en s'appuyant sur des outils reconnus et validés, permettant de mesurer efficacement les principaux concepts s'y rapportant. Cette démarche de considérer ensemble le burnout, la fatigue de compassion, le stress traumatique secondaire, le trauma, et d'y adjoindre la dépression et l'anxiété, deux concepts avec lesquels ils ont des liens étroits, est novatrice. Elle est une réponse à l'appel de plusieurs chercheurs qui estiment que pour bien comprendre le bien-être psychologique dans

sa globalité, il faudrait considérer les travaux qui parlent de ces différents concepts (Adams et al., 2001 ; Jenkins & Baird, 2002).

L'approche centrée sur les variables incluait en plus des indices de burnout, satisfaction de compassion et stress traumatique secondaire mesurés par le ProQOL, des mesures validées de stress posttraumatique, dépression, anxiété et burnout. Elle a permis de faire ressortir une variable empirique intégratrice tridimensionnelle représentant le bien-être psychologique professionnel en relation d'aide. La première dimension, positive, regroupe le sens d'accomplissement du MBI et la satisfaction de compassion du ProQOL, soit le côté positif du travail en relation d'aide (Geoffrion et al., 2019; Stamm, 2002). La deuxième semble représenter le cœur de l'épuisement psychologique puisqu'elle regroupe tous les principaux éléments qui y sont reliés (épuisement émotionnel, cynisme, dimension burnout du ProQOL, stress traumatique secondaire). La troisième regroupe le stress posttraumatique, la dépression et l'anxiété. Bien que ce modèle soit proche de celui de Stamm (2010), une différence cruciale est à souligner. Premièrement dans le présent modèle, le stress traumatique secondaire et l'indice de burnout se retrouvent dans le même facteur comparativement au modèle de Stamm (2010) où ils représentent deux dimensions séparées. Deuxièmement en incluant l'indice du stress post-traumatique, le modèle intègre les dernières avancées en lien avec le Manuel Diagnostique et Statistique des Troubles Mentaux (DSM-5 ; APA, 2013) en ce qui a trait au trauma. En effet, la révision du diagnostique de trouble de stress post-traumatique par l'inclusion du traumatisme par exposition indirecte permet d'avoir une image plus globale des réactions aux différentes expositions (directes et indirectes) que vivent les professionnels (Bradford & De Amorim Levin, 2020 ; Canfield, 2005 ; Geoffrion, 2015), ce que ne permettait pas la sous-échelle de stress traumatique secondaire du ProQOL-5 (Stamm,

2010). En ce sens d'ailleurs, il est intéressant de noter que le stress traumatique secondaire et le stress posttraumatique ne se sont pas retrouvés dans la même dimension de la variable de bien-être psychologique en relation d'aide bien que ciblant tous les deux le traumatisme relié au travail. Ceci pourrait s'expliquer par le fait que l'échelle PCL-5 utilisée pour évaluer le stress posttraumatique est un outil diagnostic évaluant le trauma à un degré plus sévère que le ProQOL-5. Cette piste semble confirmée par une étude récente qui a trouvé une association entre des niveaux cliniques de stress posttraumatique et des scores élevés de stress traumatique secondaire (Burr et al., 2020).

L'analyse des liens entre les trois dimensions identifiées du bien-être psychologique en relation d'aide tend toutefois à soutenir l'idée selon laquelle ils touchent une même réalité globale (Adams et al., 2001; Jenkins & Baird, 2002; Sabo, 2011). En effet, des corrélations fortes relient les trois dimensions : -0,66 entre le sentiment de satisfaction et d'efficacité et l'épuisement psychologique ; -0,63 entre le sentiment de satisfaction et d'efficacité et le trauma et 0,84 entre le l'épuisement psychologique et le trauma.

Dans l'analyse centrée sur la personne, nos résultats indiquent que toutes les variables évoluaient en même temps, rendant impossible la caractérisation de profils particuliers ; en effet les différents groupes ne différaient qu'au niveau de l'intensité des « symptômes ». Ceci suggère le fait qu'ils forment une seule grande entité. Ces résultats ne sont pas surprenants et vont dans le sens de l'état actuel des connaissances qui tendent à voir le burnout, le stress traumatique secondaire, le traumatisme vicariant, la fatigue de compassion ainsi que la dépression et l'anxiété comme faisant partie d'une même famille pointant vers une réalité similaire, ou du moins entretenant des liens très étroits (Adams et al., 2001; Adams et al.,

2006; Bianchi et al., 2019; Bride et al., 2004; Coetzee & Laschinger, 2018; Elhai et al., 2011; Farhood et al., 2016; Flory & Yehuda, 2015; Jenkins & Baird, 2002).

Bien qu'apparement contradictoires, les résultats des deux approches se complètent parfaitement puisqu'ils permettent d'avancer d'une part que le bien-être psychologique en relation d'aide vu à partir des différents principaux concepts sus évoqués semble indiquer une seule et même réalité (approches centrées sur les personnes et sur les variables), mais que cette réalité peut tout de même se caractériser en trois grandes facettes étroitement liées (approche centrée sur les variables).

Le dernier élément très intéressant de cet article se base sur la distribution de l'anxiété et de la dépression sur les deuxième et troisième dimensions. En effet, bien qu'ils aient été retenues pour la troisième dimension, la dépression et l'anxiété étaient présentes presqu'au même degré dans les deuxième et troisième dimensions. Ceci apporte un éclairage sur la discussion actuelle quant à la distinction entre la dépression et le burnout ainsi que sur celle entre la dépression et le stress posttraumatique. Les résultats indiquent qu'il y a effectivement une partie de la dépression qui est rattachée à l'épuisement, et une autre au traumatisme mais, qu'en dehors de cela, il y a une certaine hétérogénéité entre ces concepts. Autrement dit, la dépression partagerait à la fois des symptômes avec le traumatisme vicariant et le burnout, mais ces deux derniers auraient d'autres manifestations qui permettent de les distinguer de la dépression. Ceci a déjà été rapporté par plusieurs études et par la description symptomatologique de certains de ces troubles dans le DSM-5 (APA, 2013). Le stress post-traumatique partage par exemple avec la dépression et l'épuisement professionnel les symptômes d'anhédonie, perturbation du sommeil, difficultés de concentration, et partage

avec l'anxiété les symptômes d'évitement, d'irritabilité et aussi de perturbation de sommeil (APA, 2013 ; Koutsimani et al., 2019). Le stress posttraumatique présente également une grande comorbité avec la dépression et l'anxiété (Flory and Yehuda, 2015, Neria and Bromet, 2000, Farhood et al., 2016, Elhai et al., 2011). Quant au burnout, en plus des symptômes partagés avec la dépression et le stress post-traumatique, plusieurs études relèvent qu'il est associé à de hauts niveaux d'anxiété (Barnes et al., 2018; Ding & Liu, 2019; Koutsimani et al., 2019; Mark & Smith, 2012). Ces liens étroits entre ces problématiques peuvent aussi expliquer la forte corrélation entre les dimensions deux et trois de la variable intégratrice du bien-être psychologique en relation d'aide ainsi que le débat entre ceux qui militent pour leur similitude et ceux qui militent pour leur distinction (Bianchi et al., 2015; Bianchi et al., 2019; Farhood et al., 2016; Flory & Yehuda, 2015; Messias & Flynn, 2018; Messias & Flynn, 2019).

Aux vues des résultats ci-dessus, il est possible d'avancer que le bien-être psychologique en relation d'aide vu à partir des concepts de fatigue de compassion, burnout, stress traumatique secondaire, stress post-traumatique, dépression et anxiété, représente une réalité globale mais tridimensionnelle. Ces résultats soutiennent de façon empirique le modèle de Stamm (2010) sur le bien-être psychologique en relation d'aide, à travers le concept de qualité de vie professionnelle. À notre connaissance, c'est la première fois qu'une telle validation est réalisée.

5.1.3 Principaux résultats de l'article 3

Le troisième et dernier article était destiné à investiguer les liens postulés entre l'environnement de travail, l'empathie, et le bien-être psychologique en relation d'aide tel que

défini dans l'article deux. Le modèle proposait aussi l'exploration de la modération du stress sur ces liens.

Dans un souci de réduction des variables dans nos analyses, notre première préoccupation a été de regrouper les sept facteurs en lien avec l'environnement de travail, créant ainsi un seul index avec une cohérence interne de 0,87. Les sept facteurs impliqués dans le calcul de l'index de l'environnement de travail étaient l'attachement à l'organisation, le sens du travail, les relations avec collègues et superviseur, l'adhérence aux normes des collègues, l'ajustement à son travail (rôle), et finalement les exigences (demandes) du milieu de travail. Les exigences du milieu de travail ciblaient la surcharge de travail, l'exténuement au travail, la surcharge sociale, la pression au travail, le manque de reconnaissance sociale, l'insatisfaction au travail, l'isolement social, les tensions sociales, la pression pour la performance au travail, la pression de performance dans les relations sociales, la tendance à s'inquiéter du travail. Bien que chacune de ces variables de l'environnement de travail ait eu une corrélation significative (0,40 à 0,93) avec l'index créé, c'est la variable exigences du travail qui a émergé comme facteur le plus proéminent avec une corrélation de 0,93 avec cet index. Cet exercice n'a pu être fait pour l'empathie compte tenu des faibles corrélations entre ses différentes sous-échelles et de la faible valeur d'alpha de Cronbach obtenue (.32).

L'analyse du modèle a permis de relever que l'environnement de travail semble jouer un rôle majeur dans le bien-être psychologique en relation d'aide, avec un effet significatif sur chacune de ses trois dimensions. Ainsi un bon environnement de travail est en lien avec une meilleure satisfaction de compassion et un meilleur sentiment d'efficacité au travail tout en réduisant les risques d'épuisement et de trauma. Ces résultats sont tout à fait cohérents avec la

vaste littérature scientifique documentant les liens entre l'environnement de travail et les conséquences de ce dernier sur le bien-être psychologique des travailleurs (Cordes & Dougherty, 1993; Cunningham, 2003; Marchand, Blanc, & Durand, 2015; Maslach, 2017; Maslach & Leiter, 2017; Maslach et al., 2001; Schaufeli et al., 2009; Sprang et al., 2007). Ce qui est encore plus intéressant c'est que l'article montre que l'effet protecteur de l'environnement de travail est modéré par le stress des travailleurs. Ainsi plus les intervenants perçoivent du stress dans leur environnement, plus le lien entre l'environnement de travail et le bien-être psychologique est fort. Ce résultat apporte un angle intéressant dans la façon d'appréhender le stress en lien avec le développement des problématiques de santé mentale au travail. En effet, basé sur le modèle transactionnel de Lazarus et Folkman (1984), le stress est intensément étudié soit comme médiateur entre l'environnement de travail et la santé mentale des travailleurs ou directement comme facteur prédictif (Folkman, 2008; Gibbons, 2010; Goh, Sawang, & Oei, 2010; Kim & Choi, 2020). Plusieurs programmes d'amélioration du bien-être psychologique au travail se basent sur ces études pour viser la réduction de ce stress à travers la méditation et d'autres techniques (Galvin et al., 2006; Richardson & Rothstein, 2008; Szanton et al., 2011). En regardant le stress comme modérateur, le présent article apporte un nouvel angle de vue. En effet, placer le stress en modérateur permet de partir de l'existant, et de voir ce qui dans l'environnement peut-être bénéfique ou nocif sur le bien-être psychologique des professionnels en lien avec le niveau de stress perçu. Cet angle permet donc de voir qu'est-ce qu'il faudrait renforcer comme élément de l'environnement en cas de stress important chez les employés.

Du côté de l'empathie, les résultats de cet article tendent aussi à confirmer les liens déjà documentés dans la littérature, notamment sur sa contribution tantôt bénéfique tantôt

adverse sur le bien-être psychologique en relation d'aide (Chikovani et al., 2015; Cuff, 2016; Thirioux et al., 2016). Ces résultats divergents ont été attribués à la multidimensionnalité de l'empathie dont la littérature relève deux dimensions : émotionnelle et cognitive (Cuff, 2016; Thirioux et al., 2016). Dans la présente étude utilisant l'instrument Interpersonal Reactivity Index, l'empathie émotionnelle était mesurée par les sous-échelles de souci empathique et détresse personnelle et l'empathie cognitive par les sous-échelles de prise de perspective et fantaisie (Gilet et al., 2013). Le souci empathique s'est révélé bénéfique pour le bien-être psychologique en relation d'aide à l'inverse de la détresse personnelle, illustrant l'ambivalence des liens entre empathie et bien-être (Thirioux et al., 2016). Du côté de la dimension cognitive, seule l'échelle de fantaisie s'est révélée être un facteur de risque par rapport au bien-être psychologique en relation d'aide, plus précisément l'épuisement et le trauma. Ce lien avait déjà été documenté dans la littérature et plus précisément avec le stress traumatique secondaire (Bride et al., 2004; Franco et al., 2020; Fülöp et al., 2011). Aucun lien n'a pas pu être mis en évidence entre la prise de perspective et le bien-être psychologique dans notre échantillon. Cette sous-dimension de l'empathie cognitive a été plusieurs fois associée positivement à la satisfaction de compassion ainsi qu'à l'efficacité, et négativement au burnout (Franco et al., 2020, Day and Chambers, 1991, Lamothe et al., 2014, Paro et al., 2014, Lopes and Nihei, 2020, Sturzu et al., 2019, Fülöp et al., 2011, Farina et al., 2020). La présente thèse n'est cependant pas la première étude à ne pas pouvoir retrouver ces liens (Lietz et al., 2011; Tei et al., 2014).

Le stress s'est aussi révélé modérateur du lien entre certaines dimensions de l'empathie et celles de bien-être psychologique en relation d'aide notamment entre le souci empathique et l'épuisement, de même qu'entre la détresse personnelle et le trauma. Les résultats permettent

ainsi d'observer qu'en cas de stress perçu élevé, manifester un souci empathique est encore plus protecteur pour le professionnel et semblerait encore plus le protéger contre l'épuisement. Ceci n'est pas le cas pour la détresse empathique qui en cas de stress perçu élevé, augmenterait encore plus le risque de vivre un trauma chez le professionnel. Quelques études sur l'effet d'interaction du stress et de l'empathie émotionnelle sur le bien-être psychologique et plus précisément sur le burnout ont documenté un lien positif, montrant que cette interaction exacerbait le risque de burnout (Khalaila, 2022; Picard et al., 2016). Cet article apporte une précision supplémentaire en faisant ressortir les aspects spécifiques bénéfiques ou nocifs de l'empathie émotionnelle.

5.2 Implications pour la recherche

Les résultats de cette thèse ont de nombreuses implications au niveau de la recherche. Tout d'abord au niveau de l'évaluation de la qualité de vie professionnelle par le ProQOL-5, la thèse fournit une version réduite valide, deux fois moins longue, avec de bonnes propriétés psychométriques similaires à l'originale. Ce besoin avait été relevé dans la littérature et deux récentes études ont fait ce pas en proposant des versions réduites à 20 items à partir d'un échantillon de 1615 infirmières australiennes (Lazăr et al., 2022) et 21 items à partir d'un échantillon de 533 travailleurs sociaux roumains (Heritage et al., 2018). Notre version réduite est la première proposée pour un échantillon francophone et a le bénéfice d'arriver à moins d'items tout en répondant aux critères de validité. En effet la version proposée dans cette thèse apporte une réponse aux critiques de la version originale portant notamment sur la validité de construit du ProQOL-5 (Hemsworth et al., 2018; Keesler & Fukui, 2020; Samson et al., 2016), par une sélection d'items se distribuant mieux au niveau factoriel.

La version réduite de cet outil est aussi intéressante puisque les résultats montrent qu'elle pourrait comme l'échelle originale être utilisée pour mesurer de façon globale la qualité de vie des professionnels en relation d'aide, sans rien enlever à sa tridimensionnalité (Geoffrion et al., 2019; Heritage et al., 2018). Autant les milieux cliniques que de recherche pourraient donc profiter de cette version du ProQOL-FR16 avec seulement 16 items pour sonder l'état psychologique des professionnels. Dans un milieu où la surcharge de travail et le manque de temps sont présents, une réduction de moitié du temps de passation sera certainement bienvenue. La thèse réitère cependant le bémol déjà apporté par plusieurs études sur l'utilisation seule de la sous-échelle du burnout (Galiana et al., 2017; Hemsworth et al., 2018; Heritage et al., 2018).

Finalement, sur ce point portant sur le ProQOL-5, la thèse va plus loin en suggérant que l'échelle du ProQOL-5 devrait être révisée pour mieux évaluer les aspects reliés à l'exposition autant directe qu'indirecte aux expériences traumatiques. Elle pourrait ainsi donner une image plus complète du bien-être psychologique en relation d'aide.

Un deuxième apport de cette thèse au niveau scientifique est en regard des enjeux entourant la définition de bien-être psychologique en relation d'aide. Elle apporte une synthèse théorique des principaux points issus des études portant sur les concepts reliés à ce bien-être notamment la satisfaction de compassion, la fatigue de compassion, le burnout, le stress traumatique secondaire, le traumatisme vicariant et introduit même deux problématiques importantes avec lesquels certains de ces concepts entretiennent une comorbidité à savoir la dépression et l'anxiété (Bianchi et al., 2019; Figley, 1995; Messias & Flynn, 2019; Pearlman & Saakvitne, 1995a; Stamm et al., 2002). La thèse a permis par exemple de resituer

chronologiquement l'apparition des principaux différents concepts en lien avec les enjeux scientifiques du temps et de mieux comprendre leur chevauchement. L'exercice s'est clôturé par des analyses empiriques qui ont permis de tirer l'essence du bien-être psychologique en relation d'aide tel que vu par ces concepts. Une variable empirique intégratrice qui permet de mieux saisir ce que vivent les professionnels de la santé et des services sociaux a pu ainsi être dégagée. Un apport majeur dans ce sens en lien avec la recherche est que ces résultats représentent une validation empirique, probablement la première, du modèle théorique de Stamm (2010) sur la qualité de vie professionnelle composée de trois dimensions. Les résultats de la présente thèse proposent ainsi que lorsque vient le temps d'évaluer le bien-être psychologique des professionnels en relation d'aide, pour avoir un portrait plus complet, il faudrait évaluer trois aspects à savoir la satisfaction qu'ils retirent du travail, l'épuisement qui en découle, mais aussi les symptômes de trauma éventuels qui peuvent surgir. Ceci nous rappelle que s'il est bon de se centrer sur les effets positifs du travail comme y tendent les nouvelles approches (Diener et al., 2010; Maslach, 2017; Maslach & Leiter, 2017), il ne serait pas judicieux de perdre de vue ses effets négatifs, et vice versa. L'article pave aussi la voie à l'exploration de nouveaux outils pour atteindre cet objectif ou tout simplement comme suggéré plus haut envisager une version améliorée du ProQOL-5 en ce sens.

Notre travail de thèse a aussi permis d'apporter quelques éléments de réponse sur certains débats scientifiques, par exemple autour de la distinction entre la dépression, l'anxiété, le burnout, et le stress post-traumatique (Bianchi et al., 2019; Elhai et al., 2011; Farhood et al., 2016; Flory & Yehuda, 2015; Messias & Flynn, 2019). La thèse suggère que l'épuisement autant que le trauma comportent des éléments de dépression et d'anxiété et partagent d'ailleurs en ce sens des symptômes communs. Ceci est d'ailleurs déjà bien

documenté dans la symptomatologie de ceux qui sont inclus dans le DSM-5 (APA, 2013). La thèse relève aussi une corrélation très élevée (0,84) entre les deux facteurs de bien-être psychologique en relation d'aide auxquels appartiennent ces concepts, faisant encore état de leur grande proximité qui n'en fait toutefois pas une réalité monolithique.

Le troisième apport qui nous semble tout aussi important est sans doute la proposition et la validation d'un modèle mettant en lien le bien-être psychologique en relation d'aide, l'environnement de travail et l'empathie. Ce modèle a premièrement permis de valider avec une modélisation plus poussée du bien-être en relation d'aide, certains liens déjà documentés dans la littérature entre l'environnement de travail ou l'empathie, et des problématiques telles que le burnout, la fatigue de compassion, le stress traumatique secondaire et le trauma. Il représente également en ce sens une validation empirique partielle du modèle de Stamm (2010) en lien avec les facteurs contribuant au développement du bien-être psychologique au travail. Un autre apport non négligeable a été le positionnement du stress en tant que modérateur pour investiguer ce qui dans l'environnement peut stimuler ou nuire au bien-être psychologique des professionnels en présence de stress.

5.3 Implications pour la pratique

Les résultats de cette thèse sont tout aussi pertinents pour la pratique puisque le bien-être psychologique des professionnels de santé et des services sociaux est un véritable enjeu pour la santé des professionnels et pour le maintien et la qualité de services dans ce secteur. Au niveau du professionnel, en plus des problématiques psychologiques documentées dans cette thèse, la santé physique peut aussi être affectée. En effet, le stress chronique au travail, et l'épuisement professionnel ont été associés avec le risque d'accidents cardio-vasculaires,

d'hypertension, de douleurs musculaires, de maux de tête, d'insomnie, des troubles respiratoires et gastro-intestinaux (Felton, 1998; Kivimaki et al., 2012). En plus d'être dommageable pour le professionnel, un piètre bien-être psychologique au travail entraine aussi au niveau organisationnel des effets d'absentéisme, présentéisme et de roulement de personnel qui ont un effet sur la qualité et le fonctionnement même des services de santé (Dewa et al., 2004; Evans et al., 2006). Dans un milieu d'intervention auprès de personnes en difficultés tel qu'un Centre Jeunesse, il a déjà été enregistré un taux annuel de 17% d'intervenants absents du travail pendant plus d'une semaine, dont la moitié pour raisons de troubles d'adaptation reliés au travail (Geoffrion 2015). L'épuisement en relation d'aide peut aussi entrainer chez le professionnel, des biais cognitifs, un risque d'altération du jugement clinique et porter ainsi préjudice à la clientèle (Canfield, 2008). Avoir des connaissances spécifiques et à jour permettra certainement d'apporter un plus grand soutien aux équipes de professionnels.

En ce sens, le fait de bien définir l'impact du travail en relation d'aide sur les professionnels, de bien cerner ses facettes comme le propose cette thèse permet une avancée au niveau de la définition du problème en vue d'une meilleure prise en charge au niveau préventif et curatif.

Dans un premier temps, le ProQOL-FR16 proposé dans le cadre de cette thèse, sans être un outil diagnostic, pourra permettre d'évaluer le niveau global de la qualité de vie professionnelle en 16 questions qui donneront un portrait à la fois des impacts positifs et négatifs de la relation d'aide sur les professionnels. Compte tenu de la brièveté de cette mesure, elle pourrait être incluse comme indicateur régulier du capital humain d'une

organisation comme le centre jeunesse pour veiller sur la santé psychologique de ses intervenants au cours du temps et intervenir au besoin.

Le deuxième apport pour la pratique réside dans la confirmation des trois facettes en lien avec le bien-être psychologique en relation, soit la satisfaction et sentiment d'efficacité, le degré d'épuisement, et enfin le niveau de trauma. Cette confirmation conceptuelle peut aiguiller les équipes qui veulent faire une investigation un peu plus approfondie du niveau de bien-être psychologique d'un milieu de pratique, dans le choix d'outils adaptés à l'évaluation de ces trois facettes.

Un autre apport au niveau de la pratique se trouve certainement en lien avec le modèle exploré. En ce sens, si la thèse n'apporte pas une nouveauté par rapport aux facteurs déjà documentés en lien avec le bien-être psychologique des professionnels en relation d'aide, elle permet cependant de réaffirmer leurs liens avec chacune des trois facettes de ce bien-être. Il en ressort donc que les interventions en bien-être psychologique en relation d'aide devraient à la fois viser l'environnement de travail et des facteurs liés à la relation d'aide en l'occurrence l'empathie. Pour ce qui a trait à l'empathie, cette thèse fournit des éléments un peu plus affinés sur quelle dimension de l'empathie il serait intéressant de cibler pour améliorer l'une ou l'autre des facettes du bien-être psychologique en relation d'aide. Ainsi, en se basant sur les résultats de la présente thèse, un milieu qui voudrait réduire le risque de trauma chez ses professionnels pourrait décider de cibler en plus de l'environnement de travail, la détresse personnelle reliée à l'empathie ainsi que la tendance à se projeter dans les personnages des récits, même si cela paraît incongru.

Le bénéfice supplémentaire de la thèse est qu'elle a permis d'inclure dans un même modèle, les facteurs liés à l'environnement de travail et l'empathie. Ceci a permis de ressortir les liens différentiels de chacun avec le bien-être psychologique en relation d'aide. La thèse présente ainsi un modèle qui fournit des données permettant de comparer le poids de l'environnement de travail à celui de l'empathie. Les résultats semblent indiquer que sans rien enlever à l'apport de l'empathie, l'environnement de travail joue un rôle majeur dans le bien-être psychologique au travail et qu'une attention particulière devrait y être apportée.

Le dernier apport de cette thèse est le fait qu'elle apporte un excellent point sur les aspects à renforcer en cas de stress. Il arrive à toutes les équipes ou organisations de vivre à un moment ou un autre une période de stress un peu plus élevé qu'à l'habituel. Les résultats de la thèse indiquent les éléments qui pourraient être renforcés en prévision ou en réaction à un tel moment notamment la qualité de l'environnement de travail et le souci empathique. Ils indiquent aussi que dans une telle situation, il faudrait fournir des outils pour faire face à la détresse empathique, qui elle pourrait augmenter les risques de trauma.

5.4 Implications pour la psychoéducation

La psychoéducation est pleinement concernée par les résultats de cette thèse qui pourrait avoir des répercussions dans le processus de formation des futurs psychoéducateurs en plus de permettre une meilleure prise en compte des soins à apporter à ceux qui sont déjà en activité. Premièrement, les psychoéducateur(trice)s en tant que professionnels en relation d'aide font partie de la population directement visée par cette thèse et d'ailleurs plusieurs sont en emploi dans les centres de santé et de services sociaux et font également partie de l'échantillon utilisé. Ils sont donc non seulement à risque de développer une problématique

reliée à l'épuisement en relation d'aide, mais aussi d'expérimenter les bénéfices reliés à ce type d'emploi. En ce sens, ils profiteront des retombées de cette thèse en tant que professionnels.

Un des facteurs de risque relevé et bien documenté dans la littérature est l'âge et l'ancienneté dans le travail, ce facteur révèle que les jeunes psychoéducateur(trice)s sont encore plus vulnérables. Il est à notre avis un devoir pour les institutions de formation de bien les préparer à cette réalité qui les attend sur le terrain. Les résultats de la présente thèse pourraient dont être bénéfiques pour la formation des psychoéducateur(trice)s. Celle-ci pourrait inclure des aspects spécifiques visant une meilleure connaissance des impacts potentiels de la relation d'aide sur le bien-être psychologique, des outils et stratégies pour maximiser leur intégration en milieu de travail et finalement une bonne exploration de leurs habiletés empathiques en lien avec les répercussions sur leur bien-être psychologique. Les p**r**éparer à une meilleure gestion du stress leur permettrait aussi de mieux négocier le lien entre les environnements adverses qu'ils risquent de rencontrer au cours de leur carrière et leur bien-être psychologique.

Par ailleurs, considérant que l'empathie est un des schèmes relationnels au cœur de la psychoéducation, et compte tenu des impacts autant positifs que négatifs que cela entraine sur la santé des intervenants, les résultats de cette thèse apportent sans aucun doute un éclairage important sur les meilleures avenues pour développer ce schème en tant que professionnel sans s'exposer à l'épuisement. Ce résultat pourrait d'ailleurs inspirer la mise sur pieds de programmes d'intervention ciblés pour les intervenants et professionnels en général, et les psychoéducateur(trice)s en particulier.

5.5 Limites de l'étude doctorale

La présente thèse comporte plusieurs limites qui pourraient permettre de nuancer ses résultats. Les limites spécifiques à chaque article ont déjà été soulignées dans chacun d'entre eux. Nous nous limiterons dans cette section aux principales limites plus générales de la thèse.

L'échantillon de la présente étude est composé d'intervenants jeunesse du Centre intégré universitaire de santé et de services sociaux du Centre-sud de l'Île-de-Montréal. En ce sens, les résultats ne peuvent être généralisés à d'autres milieux qu'avec la plus grande prudence et nécessiteraient d'être répliqués avec d'autres populations. Les résultats pourraient par exemple être différents pour une population d'infirmières ou de médecins. L'échantillon en est également un de convenance puisqu'au sein des équipes, les intervenants étaient libres de participer à l'étude ou non. Toutefois, 80% des personnes contactées ont accepté de participer à l'étude générale.

L'échantillon populationnel utilisé dans la présente thèse était à 80% composé de femmes. Or, plusieurs études soulignent le fait que le sexe peut être une variable confondante puisque des résultats différentiels ont été trouvés sur certaines problématiques de bien-être psychologique selon le sexe (Maslach et al., 2001; Mengist et al., 2021; Vitale & Casolaro, 2021). Maslach et al. (2001) souligne par exemple des résultats montrant un plus haut niveau d'épuisement émotionnel chez les femmes et par contre, un plus haut niveau de dépersonnalisation (cynisme) chez les hommes. De façon générale, la littérature relève une tendance des femmes à être plus à risque de burnout (McPeek-Hinz et al., 2021; Mengist et al., 2021; Vitale & Casolaro, 2021), mais ces résultats ne sont pas toujours reproduits (LaFaver et al., 2018; Maslach et al., 2001). De plus, les différences associées au sexe pourraient être liées

tout simplement au type d'emploi (Maslach et al., 2001). Ceci dit, plusieurs études documentent la « féminisation » des professions reliées à la relation d'aide et y notent dans différents pays, des ratios élevés de femmes par exemple pour la psychologie (King, 2012; Olos & Hoff, 2006). Cet élément pourrait donc jouer en faveur d'une généralisation des résultats de la présente thèse dans ce milieu.

Une autre limite est le fait que les données utilisées dans la présente thèse ont été collectées uniquement à partir de questionnaires auto-rapportés. Cette méthode est plus à risque de biais tels que la désirabilité sociale (désir de se montrer sous son meilleur jour) ou encore l'effet halo (juger l'ensemble d'une situation à partir d'un élément particulier). Il aurait été intéressant d'aller chercher d'autres sources d'informations sur le bien-être des intervenants, comme par exemples des données administratives du département des ressources humaines, et des marqueurs biologiques tels que le niveau de cortisol.

En lien avec l'analyse du modèle, le fait que l'étude soit transversale ne permet pas une évaluation optimale de la modération. De plus, une plus grande taille d'échantillon aurait permis d'inclure directement dans le modèle testé, les différents indicateurs de l'environnement de travail et d'avoir un portrait plus affiné de l'apport de ces différents aspects reliés à l'environnement de travail.

5.6 Futures études

Les résultats de la présente thèse pointent évidement sur des développements futurs souhaitables. Il serait tout d'abord indiqué de faire des études de validité sur le ProQOL-FR16 avec d'autres populations et dans d'autres langues. Ceci permettrait de consolider sa validité, et d'affiner l'outil au besoin.

Un deuxième développement souhaitable est certainement une étude qui permettrait à partir des résultats obtenus avec la variable empirique intégratrice, soit d'améliorer le ProQOL pour qu'il puisse mesurer de façon plus complète les trois facettes du bien-être psychologique en relation d'aide, soit de proposer un outil qui pourrait directement les mesurer. Cet outil pourrait être développé soit en mettant à profit les outils déjà validés, ou par la création d'une nouvelle échelle. Bien évidement avant d'arriver à ce développement, il serait indiqué que plusieurs études puissent répliquer les résultats obtenus dans cette thèse en lien avec l'essence du bien-être psychologique en relation d'aide. Il serait d'ailleurs intéressant de savoir si en utilisant d'autres échelles mesurant le même concept, on arrive à la même répartition tridimensionnelle du bien-être psychologique en relation d'aide.

5.7 Conclusion

Le bien-être psychologique en relation d'aide est un enjeu moderne qui affecte non seulement les professionnels, mais aussi les institutions et les bénéficiaires de soin. Trouver des solutions à cette problématique rendrait certainement un grand service à toute la société. La présente thèse se proposait de faire un pas vers une meilleure redéfinition du bien-être psychologique en relation d'aide. Bien qu'il reste encore du travail à faire et malgré les limites inhérentes à cette thèse, plusieurs questions ont été répondues à savoir la proposition d'un outil réduit pour la mesure de la qualité de vie professionnelle, la clarification du concept de bien-être psychologique en relation d'aide et la proposition d'un modèle tenant compte à la fois de l'environnement de travail et de l'empathie. Les résultats permettront certainement d'éclairer un peu plus les enjeux touchant à cette réalité, une étude à la fois.

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