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Relationship to Work Questionnaire: Validation Among French Canadian Workers

Geneviève Fournier[1] · **Lise Lachance**[2] · **Imane Zineb Lahrizi**[1] · **Simon Viviers**[1]

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Abstract

This study aims to assess the psychometric qualities of the Relationship to Work Questionnaire (RWQ). Confirmatory factor analyses on 845 French–Canadian workers support a six-dimension structure: Absolute centrality of work, Relative centrality of work and work valence, Purposes of work, General expectations regarding working life, Obligations and duties of employers and society to workers, and Obligations and duties of workers to employers and society. Furthermore, configurational, metric, and scalar invariances were observed for age, gender, education, and job qualification. Results also support convergent validity of the examined subdimensions. Discussion focuses on the study's limitations and RWQ's usefulness for research and practice.

Keywords Relationship to work · Questionnaire validation · Factorial validity · Convergent validity · Invariance measurement

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✉ Geneviève Fournier
genevieve.fournier@fse.ulaval.ca

Lise Lachance
lachance.lise@uqam.ca

Imane Zineb Lahrizi
imane-zineb.lahrizi@fse.ulaval.ca

Simon Viviers
simon.viviers@fse.ulaval.ca

[1] Centre de recherche et d'intervention sur l'éducation et la vie au travail, Pavillon des Sciences de l'Éducation, Université Laval, 2320, Rue des Bibliothèques, Québec, QC G1V 0A6, Canada

[2] Département d'Éducation et Pédagogie, Université du Québec à Montréal, P.O. Box 8888, Station Centre-Ville, Montréal, QC H3C 3P8, Canada

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Résumé

Questionnaire sur les relations au travail : Validation auprès de travailleurs canadiens français. Cette étude vise à évaluer les qualités psychométriques du *Relationship to Work Questionnaire* (RWQ). Des analyses factorielles confirmatoires sur 845 travailleurs et travailleuses québécois·e·s soutiennent une structure à six dimensions: Centralité absolue du travail, Centralité relative du travail et valence du travail, Buts du travail, Attentes générales concernant la vie professionnelle, Obligations et devoirs des employeurs et employeuses et de la société envers les travailleurs et travailleuses, et Obligations et devoirs des travailleurs et travailleuses envers les employeurs et employeuses et la société. Par ailleurs, des invariances configurationnelles, métriques et scalaires ont été observées pour l'âge, le sexe, l'éducation et la qualification professionnelle. Les résultats soutiennent également la validité convergente des sous-dimensions examinées. La discussion porte sur les limites de l'étude et sur l'utilité du RWQ pour la recherche et la pratique.

Zusammenfassung

Relationship to Work Questionnaire: Validierung unter französisch-kanadischen Arbeitnehmern. Die vorliegende Studie zielt darauf ab, die psychometrischen Eigenschaften des Relationship to Work Questionnaire (RWQ) zu bewerten. Konfirmatorische Faktoranalysen an 845 französisch-kanadischen Arbeitnehmenden unterstützen die Struktur aus sechs Dimensionen: absolute Zentralität der Arbeit, relative Zentralität der Arbeit und Arbeitsvalenz, Ziele der Arbeit, allgemeine Erwartungen hinsichtlich des Arbeitslebens, Verpflichtungen von Arbeitgebenden und Gesellschaft gegenüber Arbeitnehmenden und Verpflichtungen von Arbeitnehmenden gegenüber Arbeitgebenden und Gesellschaft. Darüber hinaus wurden konfigurationelle, metrische und skalare Invarianzen hingehend Alter, Geschlecht, Bildung und Berufsqualifikation untersucht. Die Ergebnisse weisen auf eine konvergente Validität der untersuchten Teilbereiche hin. Die Diskussion konzentriert sich auf die Limitationen der Studie und die Nützlichkeit des RWQ für Forschung und Praxis.

Resumen

Cuestionario de relación con el trabajo: Validación en trabajadores franco-canadienses. Este estudio tiene como objetivo evaluar las cualidades psicométricas del Cuestionario de Relación con el Trabajo (RWQ). Los análisis factoriales confirmatorios de 845 trabajadores franco-canadienses respaldan una estructura de seis dimensiones: Centralización absoluta del trabajo, Centralización relativa del trabajo y valencia del trabajo, Propósitos del trabajo, Expectativas generales con respecto a la vida laboral, Obligaciones y deberes de los empleadores y la sociedad hacia los trabajadores, y Obligaciones y deberes de los trabajadores hacia los empleadores y la sociedad. Además, se observaron invariancias configuracionales, métricas y escalares para la edad, el género, la educación y la calificación laboral. Los resultados también respaldan la validez convergente de las subdimensiones examinadas. La discusión se centra en las limitaciones del estudio y la utilidad de RWQ para la investigación y la práctica.

Introduction

Over the last 20 years, many authors have been interested in conceptualizing and measuring different facets of the relationship to work. Among these, some have received particular attention from the scientific community. Numerous works have thus focused on the general meaning of work (Morin, 2008; Rosso et al., 2010; Steger et al., 2012), on work centrality (Gavriloaiei, 2016; Harpaz & Fu, 1997), on the value and goals of work (Rosso et al., 2010; Lips-Wiersma & Wright, 2012), on work and job involvement or affective commitment (Jiang & Johnson, 2018; Kanungo, 1982; Schaufeli et al., 2006), on work motivation (Amabile et al., 1994; Gagné et al., 2010; Tremblay et al., 2009), and on job satisfaction (Fouquereau & Rioux, 2002; Judge et al., 2017; Özpehlivan & Acar, 2015).

Despite the undeniable interest in these works, few of them, except those carried out by the Meaning of Working International Research Team (MOW, 1987), 35 years ago, have focused specifically on the conceptualization and measurement of the relationship to work, defined as a multidimensional construct in which each of the dimensions, complementary to each other, expresses a particular facet of the relationship and attachment of the person to work in general and to his or her professional life specifically. Given that our team conducted a first study among a population of workers from a francophone university in the province of Quebec.[1] Its objectives were to grasp more precisely the different dimensions and sub-dimensions of the relationship to work, to define them conceptually, to operationalize them, to develop a multidimensional questionnaire to assess the relationship to work, and to proceed to an initial validation of each of its dimensions (Fournier et al., 2019). The main results of this first study showed a globally acceptable factor structure and relatively satisfactory psychometric qualities for each of the dimensions and sub-dimensions of the questionnaire analyzed separately. However, these results also indicated that the questionnaire still includes a very large number of items (141) and sub-dimensions (36) and has some weaknesses on specific dimensions of the conceptual model, which led us to reformulate and add items. These results allow our team to proceed with a second study with another sample involving different sectors of the labor market instead of a single institution, while maintaining the cultural and linguistic characteristics of the participants of the first study, as strongly suggested by Cabrera-Nguyen (2010, p. 99). This approach allows for further analysis of the psychometric properties of the questionnaire and to obtain a sufficiently robust measure before proceeding to its cross-cultural validation.

The actual study, which is the direct sequel of the first one, have three objectives: (1) strengthen certain dimensions of the conceptual model, reduce the length of the questionnaire on the relationship to work, and confirm the factorial structure of the

[1] Quebec is the second most populous province in Canada, with a population that is predominantly French speaking and the only province to have French as the sole official and working language. In 2021, 93.7% of the Quebec population understands French and 85.5% speak it at home (Statistics Canada, 2022, pp. 6–7). Traditionally, French-speaking communities in Canada have been studied separately from English-speaking ones, except for some comparative studies, which is not the purpose of this study.

whole model; (2) test the invariance of the measurement (configural, metric, and scalar) of the questionnaire, according to age, gender, education, and job qualification; and (3) support its convergent validity.

Theoretical background

Measurements of the relationship to work as a multidimensional construct

Since the early 2000s, the relationship to work, from the angle of the meaning of work, has been studied by many researchers in occupational psychology (e.g., Dik et al., 2013). Seen overall as a multidimensional construct, the meaning of work refers to people's perceptions of what they do at work, what they are at work, and the importance they give to work (Wrzesniewski et al., 2003). Numerous tools have been developed to evaluate this construct. Among the most important, there is the Work and Meaning Inventory (WAMI, Steger et al., 2012). From the authors' perspective, the meaning of work refers to both the significance that people give to their work and the positive value that it holds for them. It is directly associated with the concept of vocation (Dik & Duffy, 2009) and is thus closely linked with the meaning that people give to their lives. The WAMI comprises three dimensions (10 items): (a) Positive meaning in work, (b) Meaning making through work, and (c) Greater good motivations. Seen by the scientific community as a benchmark tool due to its psychometric qualities, it is widely used throughout the world (e.g., de Crom & Rothmann, 2018; Işık et al., 2019; Martela & Riekki, 2018).

Another noteworthy tool is the Comprehensive Meaningful Work Scale (CMWS, Lips-Wiersma & Wright, 2012). As in the preceding tool, the meaning of work is considered as a personal, subjective, and existential phenomenon. The authors developed a model that integrates seven goals which help give meaning to work. The CMWS is made up of two parts. The first consists of four dimensions (17 items): (a) Developing and becoming self, (b) Unity with others, (c) Expressing full potential, and (d) Serving others. The second part brings together three dimensions (11 items): (a) Self versus other and Being versus doing, (b) Inspiration, and (c) Reality. The CMWS is recognized for its convergent validity with the Work Engagement Scale (Schaufeli et al., 2006) and the Neoclassical Calling Scale (Bunderson & Thompson, 2009).

As it is the case with the preceding tools, the conceptualization of the Meaning of Work Inventory (MWI, Arnoux-Nicolas et al., 2016) is based on a subjective experience reflecting the personal significance that work holds for people. Starting with the postulate that the meaning that people give to work depends on their culture and takes roots in social values, the authors wished to create a tool adapted to French society. The MWI contains four dimensions (15 items): (a) Importance of work; (b) Understanding of work; (c) Direction of work; and (d) Purpose of work. The tool presents satisfactory reliability and validity coefficients. It is notably correlated with the WAMI (Steger et al., 2012), the Professional Life Satisfaction Scale (PLSS, Fouquereau & Rioux, 2002), and the Satisfaction with Life Scale (SWLS, Diener et al., 1985).

As for the Characteristics of Meaningful Work Questionnaire (CMWQ, Morin & Dassa, 2006), it allows to evaluate, based on three components, the characteristics of meaningful work: (1) the *Sensus*, that is, the significance, representations, and values accorded to work; (2) the *Sumo*, namely the goals pursued in work and that guide its actions; and (3) the Phenomenology, that is, the coherence between the characteristics of day-to-day work and the expectations and values sought there. The CMWQ comprises five dimensions (20 items): (a) Social purpose, (b) Moral correctness, (c) Learning and development, (d) Autonomy, and (e) Quality of work relationships. It was validated with Canadian workers and presents satisfactory psychometric properties (Forest et al., 2011; Morin & Dassa, 2006).

All these tools make a unique contribution to the understanding of the meaning of work and its measurement. Their development was based on original and rigorous conceptualizations of the meaning of work. This concept was primarily understood from the perspective of the significance of work, of what helps give it meaning and, more generally, of what gives meaning to life. Their psychometric qualities have likewise been attested in several studies. Nonetheless, these tools only consider a few of the facets of the people's relationship to work and working life. For example, the question of the centrality of work compared to the other life spheres, which would seem to be fundamental in the assessment of the relationship to work, is not very present. Moreover, these tools primarily evaluate the meaning and value that people give to their current work, which makes it difficult to grasp people's relationship to work when they are unemployed or they have temporary jobs (e.g., short-term contracts). This attests to the relevance of focusing on the conceptualization and operationalization of the relationship to work using broader dimensions than those comprised in the meaning of work. Based on the literature reviewed, the questionnaire developed by the Meaning of Working International Research Team (MOW, 1987) is the most exhaustive in this regard.

The MOW model comprises five central dimensions: (a) Centrality of working as a life role, defined as "The general belief about the value of working in one's life"; (b) Societal norms about working, broken down into two general categories of standards, namely "Entitlement work norms" and "Obligation work norms"; (c) Valued working outcomes, defined as the value that people attach to the results expected from their work (e.g., status and prestige); (d) Importance of work goals, defined as the degree of importance attached to goals in one's working life (e.g., good job security); and (e) Work role identification, defined as the work roles that people think are important (e.g., product or service identification with working).

Initially developed in 1987, the tool has since been validated several times (e.g., Harpaz & Fu, 2002; Harpaz & Meshoulam, 2004). It is still being used today, in whole or in part, in research conducted in various cultural contexts (e.g., Ardichvili, 2009; Manuti et al., 2018; Peterson & Ruiz-Quintanilla, 2003; Sharabi & Harpaz, 2013). However, given that occupational and life contexts have significantly changed since the 1980s, the operationalization of certain dimensions needs to be re-examined, sub-dimensions need to be added, and items need to be reformulated or created to better accurately reflect the present-day situations that workers face. It is in this context that a multidimensional questionnaire was developed to evaluate people's relationship to work while taking into account their new work and life situations in

an earlier study (Fournier et al., 2019). The objectives of the later were to build the conceptual model from which we designed a questionnaire on people's relationship to work and to proceed to its initial validation.

The development process of the questionnaire and the initial validation of the factorial structure of each of its dimension were divided into four stages (for details, see Fournier et al., 2019). In the first stage, the dimensions and sub-dimensions of the conceptual model were delimited and theoretically defined based on an in-depth review of the scientific literature on the most common dimensions associated with the relationship to work. The second stage involved operationalizing the dimensions (7) and sub-dimensions (31) and developing an initial bank of items based on the scientific literature review, several validated scales and tools and, importantly, on the discourse of various populations of workers who were interviewed for research projects conducted in the past 25 years (e.g., unemployed young people aged 16–25, workers of all ages in non-standard work, workers undergoing vocational retraining, unemployed senior workers). In creating the items, care was taken to capture as accurately as possible the nuances found in the respondents' answers regarding their work situation and lives. Upon completion of this stage, there were 295 items, seven dimensions, and 33 sub-dimensions in the questionnaire. The third stage consisted of examining the face and content validity of the dimensions and sub-dimensions and assessing the clarity as well as the quality of the items to create a preliminary version of the questionnaire. To this end, the latter was submitted to review and comments to 17 international experts (Brazil, Burkina Faso, Cameroun, Canada, France, Switzerland, and Italy) in the field of work and psychometrics. For most items, an Interrater Agreement Index value greater than .80 and a Content Validity Index value greater than .90 were obtained. The questionnaire ended with 201 items, 7 dimensions, and 32 sub-dimensions. The fourth and final stage consisted of assessing some psychometric properties of the preliminary version of the questionnaire (201 items) and proceeding to the initial validation of the conceptual model's structure, in accordance with several authors' recommendations regarding the creation of a new tool (Byrne, 2001; Cabrera-Nguyen, 2010; Roberts, 2007; Worthington & Whittaker, 2006). An online questionnaire was used to collect data from people working at a large French-speaking Canadian university. A total of 550 workers were included in the study (179 men and 311 women), ranging in age from 21 to 83 years old ($M = 42.7$ years, $SD = 11.8$). Three quarters of respondents ($n = 368$, 76%) worked full time. To validate the initial questionnaire's factor structure, an exploratory factor analysis was conducted (Tabachnick & Fidell, 2012). The results provided reasonable evidence that the preliminary questionnaire had construct validity (Cohen, 1988; Tabachnick & Fidell, 2012) and allowed its length to be significantly reduced (141 items), while keeping most of its factorial structure (7 dimensions and 36 sub-dimensions). Therefore, the objectives of the actual study were to confirm the factorial structure of the questionnaire, to test measurement invariance, and to support its convergent validity.

Conceptual model underlying the relationship to work questionnaire (RWQ)

In order to capture the different facets of a person's connection and attachment to work in general and to his or her working life, the conceptual model underlying the relationship to work questionnaire (RWQ) included seven dimensions. Their theoretical and operational definitions are briefly mentioned here.

Dimension 1: absolute centrality of work

This dimension is defined as the value that people give to work independently of their other activities and life roles and as the degree of general importance that they attribute to work in their life (e.g., Harpaz & Fu, 1997; Hirschfeld & Feild, 2000; Mannheim, 1975; MOW, 1987). This dimension can be at least partially associated with the concept of "Work meaningfulness" as developed by Rosso et al. (2010), which is defined as the amount of significance attached to work, or with Kanungo's (1982) concept of work involvement, which is defined as a person's psychological identification with work in general. It has certain conceptual affinities with several notions that are part of the definition of the meaning of work, such as "Sensus" (Morin, 2006), the "Centrality of working as a life role" (MOW, 1987), the "Positive meaning in work" (Steger et al., 2012), and the "Importance of work" (Arnoux-Nicolas et al., 2016). In general, studies show that more meaningful and valuable the work is to individuals, the more engaged they feel in their work role (Hattrup et al., 2007), the greater their sense of accomplishment, and the more work contributes to their personal identity and development (Arvey et al., 2004; Blustein, 2011; Tziner et al., 2014). Finally, numerous studies reveal that the importance given to work constitutes a stable dimension of the relationship to work throughout the life course (e.g., Ardichvili, 2005; Samuel & Harpaz, 2004; Saunders & Nedelec, 2014).

The Absolute centrality of work was conceptualized and operationalized using two sub-dimensions with four items each a) the Ideological value of work, which corresponds to the importance of work in human existence (sample item: "Work contributes to human dignity") and b) the Existential value of work, which refers to the importance of work in a person's life (sample item: "Work is at the center of my life").

Dimension 2: relative centrality of work and work valence

The Relative centrality of work refers to work's place or relative value in comparison to people's other spheres of activity and the place occupied by their role as a worker in relation to their other life roles (e.g., Ardichvili, 2009; Snir & Harpaz, 2005). It also refers to the degree to which people identify with their work (England, 1991; MOW, 1987) and their commitment to their role as a worker as compared to their other activities and commitments in life (Sverko et al., 2008; Warr, 2008). This dimension has theoretical similarities with the concept of job involvement suggested by Kanungo (1982), which refers to the value of work in comparison to other spheres in life and with the notion of "Decision orientation about preferred life spheres," developed by MOW (1987).

As for the Work valence, it refers to the way in which people subjectively experience work and to the extent to which the significance they attribute to work is positive or not (e.g., a source of pleasure and commitment). Work valence shares several conceptual affinities with the notion of "Work meaningfulness" as developed by Rosso et al. (2010).

The Relative centrality and valence of work were conceptualized and operationalized using four sub-dimensions with four items each: the Primary importance and positive valence of work (sample item: "Work is my priority in life and it is what most defines me as a person"), the Primary importance and negative valence of work (sample item: "Even though work plays a central role in relation to my other activities, what I do at work does not give me much personal satisfaction"), the Secondary importance and positive valence of work (sample item: "Even though work plays a secondary role in relation to my other life activities, I like what I do"), and the Secondary importance and negative valence of work (sample item: "Work plays a secondary role in relation to my other life activities and I do not feel very personally involved in it").

Finally, as work conducted by MOW (1987), Sharabi and Harpaz (2011, 2013), and Highhouse et al. (2010) on the Lottery Question, which is seen as an indirect measure of the Relative centrality of work, a sub-dimension was created that is Ideal levels of involvement in the different activities and life roles. In the questionnaire, the participants indicate to what extent, if they had the choice, they would change their level of commitment to the 12 proposed life activities (e.g., work, family, support and care, culture and art, training).

Dimension 3: purposes of work

This dimension refers to the goals and results that people are primarily aiming to achieve through work and to the values they wish to actualize (Ardichvili, 2009; Consiglio et al., 2016; Duffy, 2010). It is conceptually similar to the notion of "Valued working outcomes" developed by the MOW team (1987) and shares some affinities with the notion of work orientation (*Sumo*) put forward by Morin (2006), with the "Greater good motivations" developed by Steger et al. (2012), as well as the conception of "Meaningful work" proposed by Lips-Wiersma and Wright (2012). Overall, studies have shown that the achievement of those goals that are most important for people plays a determining role in their satisfaction at work (Duffy & Sedlacek, 2007), their motivation at work (Merriman, 2017), their life satisfaction and well-being (Eid & Diener, 2004; Robert, 2007), as well as the meaning given to their work (Lips-Wiersma & Wright, 2012; Rosso et al., 2010; Shea-Van Fossen & Vredenburgh, 2014; Steger et al., 2012) and to their lives (Bernaud et al., 2015; Patillon et al., 2015). Finally, the Purposes of work dimension is considered to be relatively independent of occupational and life circumstances (e.g., Mercure & Vultur, 2010; Saunders & Nedelec, 2014).

Defined as the personal goals that people try to obtain through work, this dimension has seven sub-dimensions comprising four items each, namely Work as a source of self-fulfillment and well-being (sample item: "… fulfill myself"), as a source of social usefulness (sample item: "… make a difference in society"), as a source of

social contact (sample item: "… create connections with people"), as a source of financial independence (sample item: "… feel financially secure"), as a source of social identity and status (sample item: "… have some social influence"), as a source of occupation (sample item: "… do something with my time"), and as a source of occupational identity (sample item: "… be acknowledged by people who are in the same occupation or profession as I am").

Dimension 4: general expectations regarding working life

General expectations regarding working life are rarely treated separately from the purposes or values of work in the scientific literature. The MOW team (1987) operationalized this distinction, adding to the "Valued working outcomes" dimension the "Importance of work goals" dimension, which refers to the importance that people attribute to these values in the framework of their working life. Warr (2008) examined the relationships between people's work values and the importance attributed to their worker role and to some concrete characteristics of work (e.g., good income; possibility of meeting people). Morin and Forest (2007) likewise defined the concept of "Work that has meaning" based on 29 work characteristics that represent concrete expectations that people may have for their working life. Finally, the dimension General expectations regarding working life is considered as relatively dependent on people's occupational and life circumstances as well as on their concrete experiences both within and outside work.

Defined as the concrete and priority benefits that people expect to withdraw from their working life, this dimension has eight sub-dimensions, with four items each: Professional and personal development (sample item: "… do work that has meaning for me"), Usefulness of work (sample item: "… carry out tasks that are useful to others"), Ethical work environment (sample item: "… work in an environment in which the workers are treated with respect"), Autonomy (sample item: "… have a word to say about how my daily work is done"), Interpersonal relationships (sample item: "… work with people who have interests similar to mine"), Recognition of skills and work accomplished (sample item: "… receive positive comments about my work"), Workload and life balance (sample item: "… have a work schedule that allows me to maintain life balance"), and Job security and income (sample item: "… earn a wage that corresponds to my qualifications"). Note that besides scoring the importance of the proposed expectations, the participants have to indicate to what extent their working life allows them to meet each of them.

Finally, based on the coherence concept developed by Morin (2006) as well as on Vinopal's (2012) approach regarding the subjective quality of working life (SQWL), a score of "Meaningful working life" was created. More specifically, Vinopal (2012) proposes to take into account simultaneously the importance that people attribute to certain characteristics of their working life (e.g., income, relationship with others) and their satisfaction with those they consider to be most important. The "Meaningful working life" score represented the coherence between the importance of people's expectations regarding their working life and their perceptions about what they actually achieve through it. The greater is this coherence and the greater the meaning of working life (Morin, 2006), the more it contributes to satisfaction (Vinopal,

2012), well-being, and psychological health (e.g., Denis, 2003; Morin, 2006; Potvin, 2007).

Dimensions 5, 6, and 7: mutual obligations and duties of employers, society, and workers and decent work

The last three dimensions refer to normative representations of work. They specifically refer to the representations that workers have about their rights and duties and what characterizes decent work.

Dimension 5: obligations and duties of employers and society to workers

Based on work by MOW (1987) and, to a lesser extent, literature concerning the psychological contract between employers and employees (e.g., Lester et al., 2002; McDonald & Makin, 2000; Turnley & Feldman, 1999), this dimension was defined as people's representation of the obligations and duties that employers and society have toward workers. Overall, research shows that this representation is not strongly correlated with sociobiographical and contextual factors (Coyle-Shapiro & Neuman, 2004; Guerrero, 2005; Harpaz & Meshoulam, 2004).

In the questionnaire, this dimension has six sub-dimensions comprising three items each: Job security and benefits (sample item: "… ensure that all workers have a pension plan that will allow them to meet their main retirement needs"), Support well-being and work-life balance (sample item: "… ensure conditions for all workers that promote work-life balance"), Support a healthy work environment (sample item: "… ensure that all workers have a working environment free of any form of discrimination and abuse"), Income (sample item: "… ensure that all workers have income that allows them to be financially independent"), Professional development support (sample item: "… ensure that all workers have the opportunity to develop their professional skills and to participate in training activities"), and Participation support (sample item: "… allow workers to participate in important decisions that directly concern their work").

Dimension 6: obligations and duties of workers to employers and society

Based on the same body of research as for the preceding dimension and drawing from the work of Mercure and Vultur (2010), this dimension was defined as the representations that people have of workers' obligations and duties to employers and society.

This dimension is composed of 11 items grouped into three sub-dimensions: Commitment and responsibility to society (sample item: "… contribute to society by working"), Commitment and responsibility to the organization (sample item: "… adhere to the values and objectives of their employer"), and Contribution to the success and development of the organization (sample item: "… carry out their work in a responsible manner").

Dimension 7: decent work

The question of decent work has been the subject of much attention in the international research community dedicated to occupational psychology and guidance (Blustein et al., 2016; Di Fabio & Kenny, 2019; Di Ruggiero et al., 2015; England et al., 2020; Masdonati et al., 2019). Recently, Duffy et al. (2017) developed the Decent Work Scale (DWS), which assesses workers' perception whether they have a decent job or not. This five-dimension scale was validated in eight countries (Duffy et al., 2019). Up until now, however, no scales have specifically focused on the characteristics that workers attribute to what they consider a decent work. A dimension aiming to evaluate these representations and based primarily on indicators of the International Labour Organization (1990) was therefore created. Decent work is defined as work that provides people with work conditions and income that ensures their well-being, a just and dignified treatment, respect for their physical and psychological health, and recognition and appreciation for their skills.

In the questionnaire, this dimension is composed of four sub-dimensions of four items each: Income and work conditions (sample item: "… in which workers can be promoted"), Justice (sample item: "… in which the worker is treated without discrimination"), Dignity and respect (sample item: "… in which workers are treated with dignity"), and Recognition and appreciation (sample item: "… in which the work done is recognized for its true value").

After presenting the conceptual model underlying the relationship to work questionnaire (RWQ) and reviewing the literature, these correlations were expected: (1) Absolute centrality of work dimension will correlate positively with work involvement; (2) Relative centrality of work and work valence dimension will correlate positively with job involvement; (3) Positive valence of work will be associated with greater job satisfaction, life satisfaction, and well-being, as well as decreased psychological distress; (4) Negative valence dimension will be related with higher levels of psychological distress, with lower levels of job and life satisfaction; and (5) Higher "Meaningful working life" score will be positively correlated with job satisfaction, occupational satisfaction, life satisfaction, and well-being and negatively associated with psychological distress.

Correlations between the relationship to work dimensions with some sociodemographic variables

Several studies have examined the relationship between sociobiographical variables and dimensions of the relationship to work. Some of them have been analyzed more systematically, notably gender, age, level of education, and level of job qualification. Thus, regarding age, older people tend to consider work as more central to their lives than younger ones (Schmidt & Lee, 2008). Likewise, research generally shows that young people attribute a slightly lower relative importance to work than their elders (e.g., Delay, 2008; Mercure et al., 2012; Singh, 2013; Twenge et al., 2010). The intrinsic purposes of work such as self-fulfillment are also more important to older people (e.g., Malenfant & Côté, 2013; Ueda & Ohzono, 2012; Vultur et al., 2020). Additionally, they place greater emphasis on occupational learning and development

than do younger workers, who are more concerned with life balance (Bendassolli et al., 2016; Hansen & Leuty, 2012; Wray-Lake et al., 2011). Finally, few studies stated that young workers attribute less importance on loyalty and adherence to organizational norms than their elders (Loriol, 2017a; Pralong, 2010; Vultur et al., 2020).

Concerning gender, some studies revealed no differences in the absolute importance attributed to work by men and women (Arnoux-Nicolas et al., 2016; Cohrs et al., 2006; Jiang & Johnson, 2018). Similarly, results regarding gender differences in the relative importance to work are inconclusive. There has been some evidence showing that men attach greater importance to work than women relative to other activities of life (Highhouse et al., 2010; Warr, 2008), whereas others suggest work is not valued differently by women and men (Sharabi & Harpaz, 2011). Diverging results have also been observed regarding the link between the purposes of work and gender. According to some studies, there is no difference between genders (e.g., Kuchinke et al., 2008; Steger et al., 2012). Others indicate that women place more emphasis on the intrinsic purposes of work than men (e.g., Duffy & Sedlacek, 2007; Lips-Wiersma & Wright, 2012), whereas others have found the opposite (e.g., Ueda & Ohzono, 2012). Finally, a few studies have revealed that men have greater expectations in terms of autonomy, promotion, and good pay than women, whose expectations lean toward interpersonal relationships and convenient working hours (Sharaby & Harpaz, 2013; Warr, 2008).

For education level, workers that are less educated attach generally a slightly lower level of relative importance to their work than do those with higher educational levels (e.g., Allan et al., 2014; Duffy et al., 2014). Furthermore, people with higher educational or financial levels tend to attach greater importance to the intrinsic purposes of work, such as self-fulfillment than others (e.g., Malenfant & Côté, 2013; Ueda & Ohzono, 2012; Vultur et al., 2020). Finally, other studies indicate that workers with higher levels of education have greater expectations about the usefulness of their work than those with lower education levels. In contrast, the latter place a greater emphasis on revenue and work conditions (Warr, 2008).

Finally, workers who have professional or managerial jobs tend to consider work as more central to their lives than those with technical ones (Vultur et al., 2020). Likewise, according to the results of Mercure and Vultur (2010), people who are in higher socio-occupational categories attribute greater importance to their commitment and personal investment in their work than do those in lower socio-occupational categories.

In sum, even though the results presented in this section show many significant correlations between several dimensions of the relationship to work and the four sociobiographical variables studied, the fact remains that these correlations are usually weak or very weak, as many have pointed out (e.g., Allan et al., 2014; Arnoux-Nicolas et al., 2016; Gavriloaiei, 2016; Jiang & Johnson, 2018; Steger et al., 2012; Vultur et al., 2020). Consequently, low or very low amplitude effects are expected between the dimensions of the RWQ and the sociobiographical variables retained in the present study.

Purposes of the present study

The objectives of the present study were to reduce the length of the experimental questionnaire on the relationship to work developed in the first study (Fournier et al., 2019), to confirm its factorial structure, to test measurement invariance according to age, gender, education, and job qualification as well as to support its convergent validity. As suggested by Cabrera-Nguyen (2010, p. 99), a new sample was used.

Method

Participants

A convenience sample was composed of 845 participants aged 18 to 76 ($M = 38.7$ years old, SD = 13). Half were women (51.3%) and a little over half had a university degree (55.4%). More than two-thirds had a permanent contract (70.7%) or a full-time job (69.3%). Slightly more than half had professional (e.g., architect) or management (e.g., financial services director) type of jobs (53.6%), whereas others had technical (e.g., dental technician) (16.7%), semi-specialized (16.7%) (e.g., heavy equipment operator), or non-specialized (13.0%) (e.g., cashier) jobs. Finally, the participants' perception of their socio-economic level was distributed as follows: low (10.5%), mid-low (21.7%), middle (42.6%), mid-high (20.9%), and high (4.3%).

Procedure

The data collection was carried out using an online survey tool, Lime Survey. To reach a greater diversity of workers, people from different fields were contacted, including numerous associations and unions, professional associations, professional, technical, and university training sectors, community organizations, job integration organization, etc. Likewise, social media were used to contact, for example, more informal worker groups. Generally, recruitment was carried out by sending an email inviting people to fill out the questionnaire anonymously and confidentially.

Instruments

The purpose of this section is to describe the experimental version of the RWQ, as well as the tools used to study its convergence and construct validity.

The experimental questionnaire (RWQ) included 141 items divided into 7 dimensions and 35 sub-dimensions. A 5-point Likert scale was used for the whole questionnaire. For the first two dimensions (Absolute centrality of work and Relative centrality of work and work valence) and for the "Meaningful working life" score, the participants had to indicate their level of agreement with each item, on a scale going from *do not at all agree* (1) to *completely agree* (5). For the other dimensions, except Ideal involvement profile in the different activities and roles of life, as

mentioned above, the participants indicated the level of importance given to each of the proposed items, on a scale going from *not at all important* (1) to *very important* (5).

Neveu's versions (1996) of Kanungo's (1982) Work Involvement Scale (WIQ) (six items) and Job Involvement Scale (JIQ) (10 items) were selected to evaluate the absolute centrality of work, the degree of psychological identification with work, and the relative centrality of work with respect to other spheres of activity. The unidimensional structure of the scales and their internal consistency have been demonstrated in several studies (e.g., Neveu, 1996; Perrot, 2005). The response scale for the two instruments ranges from *completely disagree* (1) to *completely agree* (5). In the present study, the alpha coefficients are, respectively, .76 (WIQ) and .88 (JIQ).

In the actual study, the Brief Job Satisfaction Measure II (Judge et al., 1998), which was composed of five items, was subjected to a back translation and was used to evaluate job satisfaction. The response scale ranges from *strongly disagree* (1) to *strongly agree* (5). The instrument's psychometric qualities have been demonstrated several times (e.g., Fields, 2002; Judge et al., 2000). An exploratory factor analysis supported its unidimensional structure (explaining 65% of the variance). In the present study, the alpha coefficient was .87.

The French–Canadian version (Blais et al., 1989) of the Satisfaction with Life Scale (SWLS; Diener et al., 1985) was used to evaluate satisfaction with life in general. The answers given for the five items varied from *strongly disagree* (1) to *strongly agree* (7). Instrument validation studies attested to its reliability and validity (Blais et al., 1989). In the present study, the alpha coefficient was .87.

The Échelle de satisfaction de vie professionnelle (ÉSVP, satisfaction with occupational life scale) (Fouquereau & Rioux, 2002), composed of five items, is an adaptation of Blais et al.'s (1989) Satisfaction with Life Scale. The answers provided for the items ranged from *strongly disagree* (1) to *strongly agree* (7). The instrument's psychometric qualities are robust (e.g., Fouquereau & Rioux, 2002). In the present study, the alpha coefficient was .84.

The Francophone version (Vézina et al., 2011) of the Kessler Psychological Distress Scale K6 (Kessler et al., 2003) contains six items evaluating psychological distress. Answers could vary from *none of the time* (0) to *all of the time* (5). The construct validity and reliability of the K6 have been demonstrated in various studies (e.g., Green et al., 2010; Nguyen et al., 2012; Statistics Canada, 2015). In the present study, the alpha coefficient was .81.

The 5-item World Health Organization Well-Being Index (WHO-5), which is available in 30 languages and validated internationally (Topp et al., 2015), evaluates five aspects of well-being. The response scale ranges from *at no time* (0) to *all of the time* (5). In the present study, the alpha coefficient was .85.

Analytic procedure

IBM SPSS Statistics Version 28.0 (IBM Corp. Armonk, NY, USA) was used to compute descriptive statistics and exploratory factor analyses. No missing data was found in the questionnaire, and assumptions of factor analyses were appropriately

met. Confirmatory factor analyses and multigroup factor analysis testing were conducted with Mplus version 8.7 (Muthén & Muthén, 2017) using robust maximum-likelihood estimator.

The analyses were conducted in three main stages. The aim of the first one was to reduce the length of the RWQ and to confirm its factorial structure. Following the model revisions made during its initial validation (Fournier et al., 2019), the overall sample ($n = 845$) was randomly divided into two (sample 1, $n = 422$; sample 2, $n = 423$) to examine the viability of its conceptual model structure (7 dimensions, 36 sub-dimensions, 141 items).

Firstly, exploratory factor analyses (i.e., principal axis factoring with an orthogonal varimax rotation) were conducted with sample 1 on each dimensions (Pett et al., 2003). When the factorial structure of a dimension corresponded to what was conceptually expected, several criteria, inspired by Worthington and Whittaker (2006), have been used to identify the optimal items to retain: (a) absolute factor loadings > .40 on only one factor, (b) cross-loadings < .20, (c) communalities > .40, and (d) the inclusion of at least 3 items on a given factor. When a factor still contained more than the desired number of items, two additional criteria were considered: (a) having the strongest association with a given factor and (b) having the highest conceptual complementarity with other items of a factor. In cases where the dimension's factorial structure showed differences from the conceptual model (e.g., saturation of an item on a different factor than conceptually expected; saturation coefficients less than .40), changes were made to the conceptual model (e.g., sub-dimensions merging; items withdrawal). The factorial solution adopted for each dimension was then cross-validated with sample 2 before proceeding with the confirmatory factor analysis.

Secondly, confirmatory factor analyses were carried out on the entire sample as well as according to age, gender, education, and job qualification to test, respectively, the factorial structure of each dimension and of the entire RWQ. As proposed by several authors (e.g., Byrne, 2001; Hu & Bentler, 1999; Kline, 2016; Roussel et al., 2002; Schumacker & Lomax, 2004; Tabachnick & Fidell, 2012), three types of indices were used to evaluate the adjustment quality of the tested model: (1) absolute fit indices: chi-square (χ^2), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA) (Steiger, 1990); (2) incremental indices: comparative fit index (CFI) and Tucker–Lewis index (TLI) (Bentler & Bonett, 1980); and 3) parsimony fit indices: normed chi-square and ratio of chi-square to the number of degrees of freedom corresponding to χ^2/df (Roussel et al., 2002). The recommended thresholds for satisfactory fit of the model must be greater than .90 for the CFI and TLI. A value smaller than .05 for the SRMR indicates a good model fit, while RMSEA is acceptable when it is lower than .08, but optimal below .05 (Hu & Bentler, 1999). Moreover, a normed chi-square value below 5 is satisfactory whereas a value below 3 is thought to be optimal (Jöreskog & Sörbom, 1993). Finally, the internal consistency has been estimated with both alpha and omega coefficients. As suggested by Kalkbrenner (2021), values greater than .70 and .65 are, respectively, considered acceptable for the alpha and the omega coefficients.

During the second stage, the whole conceptual model was tested for measurement invariance according to age, gender, education, and job qualification. Three

steps were involved in this analysis stage: (1) configural invariance (equivalence in the structure of the latent factors); (2) metric invariance (equivalence of factor loadings); and (3) scalar invariance (equivalence of item intercepts). The residual invariance (equivalence of items' residuals) has not been verified because this step is not necessary for interpreting latent mean differences (Cheung, 2008; Cheung & Lau, 2012; Vandenberg & Lance, 2000) and many researchers recommend ignoring it (Putnick & Bornstein, 2016). Analysis of the change in fit indices at each step was used to determine invariance. As recommended by Chen (2007) as well as Cheung and Rensvold (2002), the difference between the comparative fit index (ΔCFI) as well as Tucker–Lewis index (ΔTLI) should not exceed .01 and the change in the root mean square error of approximation (ΔRMSEA) should be less than .015 and the standardized root mean square residual (ΔSRMR) less than .030 for metric invariance or less than .015 for scalar invariance. Moreover, the RMSEA value of the previous model should be included in the 90% confidence interval of the new model. Furthermore, chi-square tests have been reported even if many researchers recommend not reporting them because of their sensitivity to sample size (Cheung & Rensvold, 2002). Finally, after testing for configural, metric, and scalar invariance, the group means on the latent factors were compared by constraining the mean of the latent factors for the first group to 0 and estimating them for the second group. Therefore, in the second group, the estimated mean parameter reflects the difference between the two groups (Putnick & Bornstein, 2016).

The third and final analysis stage aimed to test convergent validity. This was done by studying Pearson correlations between some sub-dimensions and other tools evaluating similar constructs. According to Cohen (1988), the effect size is low if the value of r varies around |.10|, medium if r varies around |.30|, and large if r varies more than |.50|.

Results

This section is divided into three parts. Firstly, results drawn from exploratory and confirmatory factor analyses as well as the internal consistency analyses are presented. Secondly, measurement invariance testing and differences on latent factors, both according to four sociobiographic variables (age, gender, education, and job qualification) are reported. Lastly, convergent validity analysis results are exposed.

Part 1. Factorial structure, correlations, and internal consistency

The results of the exploratory factor analyses conducted with the 1st sample showed that three dimensions out of seven corresponded to those that were conceptually expected (Absolute centrality of work, Relative centrality and work valence, Purposes of work). For parsimonious purposes, 11 items have been removed. The results also indicate that the dimensions General expectations regarding working life/Expectations met, Obligations and duties of employers and society to workers, Obligations and duties of workers to employers and society, and Decent work

showed some differences with the conceptual model. More specifically, concerning the General expectations regarding working life/Expectations met dimension, three sub-dimensions could not be reproduced clearly. Indeed, the analyses showed that several items did not load mainly on the expected factor or loaded strongly on more than one factor. Particularly, Professional and personal development and Ethical work environment sub-dimensions were inextricably linked to Autonomy and Recognition of skills and work accomplished. The Relationship with others merged with the Usefulness of the work. The analysis process ultimately led to the selection of five sub-dimensions (Usefulness of work, Autonomy, Recognition of skills and work accomplished, Work-life balance, Work conditions) of three items each.

Similarly, regarding Obligations and duties of employers and society to workers, the results led to adopting a factor solution with three sub-dimensions rather than six, by merging the Job security and benefits and Incomes sub-dimensions (renamed Support working conditions), Support healthy work environment, and Support well-being and work-life balance (renamed Support well-being and work-life balance), as well as Professional development support and Participation support (renamed Support occupational development and participation). Likewise, concerning Obligations and duties of workers to employers and society, the results led to adopting a factor solution with two sub-dimensions rather than three (Contribution to the development of society and to the organization and Commitment and responsibility to the organization). Finally, for the Decent work dimension, results showed that the Justice sub-dimension was inextricably linked to Dignity and respect sub-dimension. Consequently, they have been combined and renamed Social Justice. At the end of the exploratory analyses, the questionnaire included 7 dimensions, 26 sub-dimensions, and 80 items.

The results of the confirmatory analyses, first performed on each dimension using data from the overall sample and various sub-groups (age, gender, education, and job qualification), showed satisfactory or very satisfactory fit indices (see Table 1). The confirmatory analysis then carried out on the entire conceptual model also revealed acceptable fit indices. However, it also highlighted that the Decent work sub-dimensions were very strongly correlated to the Obligations and duties of employers sub-dimensions, which led to the decision to remove the Decent work dimension for the sake of parsimony and to avoid redundancies. In sum, the final version of the questionnaire includes 6 dimensions, 23 sub-dimensions, and 71 items. Table 1 presents the fit indices of the final global conceptual model.

Moreover, as indicated in Table 2, the item loadings for the RWQ ranged from .46 to .91. Regarding internal consistency, alpha and omega coefficients of the sub-dimensions varied, respectively, from .69 to .91 and from .70 to .91.

Concerning correlations between the sub-dimensions of distinct dimensions, the data in Table 3 reveal weak to moderate correlations, except for one correlation that appears to be particularly high. It concerns the sub-dimensions Primary importance and positive valence of work (Relative centrality of work and work valence, factor 2.1) and Existential value of work (Absolute centrality of work, factor 1.2) ($r = 0.72$, $p < .001$). Finally, and as expected, the examination of the correlation matrix between the sub-dimensions of a same dimension highlighted to significant, but generally moderate correlations. Nonetheless, a few higher correlations

Table 1 Fit indices for the seven dimensions and the entire conceptual model of the questionnaire

Sample	*N*	χ^2	df	χ^2/df	*p*	CFI	TLI	SRMR	RMSEA
1. Absolute centrality of work									
Full sample	845	31.29	8	3.91	.0001	.985	.972	.031	.059
18–39 years	487	28.19	8	3.52	.0004	.976	.955	.035	.072
40 years and more	349	11.66	8	1.46	.1669	.995	.990	.029	.036
Women	425	18.15	8	2.27	.0201	.986	.975	.035	.055
Men	403	17.64	8	2.20	.0241	.988	.977	.028	.055
Without a university degree	373	18.70	8	2.34	.0165	.984	.971	.029	.060
With a university degree	464	22.51	8	2.81	.0040	.983	.968	.037	.063
Management/professional jobs	379	16.23	8	2.03	.0392	.988	.978	.035	.052
Technical/semi- or non-specialized jobs	328	13.04	8	1.63	.1106	.991	.983	.024	.044
2. Relative centrality of work and work valence									
Full sample	845	372.73	71	5.25	.0000	.961	.950	.037	.063
18–39 years	487	23.24	71	3.24	.0000	.957	.945	.045	.068
40 years and more	349	174.48	71	2.46	.0000	.957	.945	.039	.065
Women	425	199.10	71	2.80	.0000	.958	.946	.044	.065
Men	403	176.11	71	2.48	.0000	.963	.952	.039	.061
Without a university degree	373	197.39	71	2.78	.0000	.951	.937	.046	.069
With a university degree	464	190.14	71	2.68	.0000	.966	.956	.038	.060
Professional/management	379	155.52	71	2.19	.0000	.970	.962	.036	.056
Technical/semi- or non-specialized	328	197.54	71	2.78	.0000	.945	.930	.048	.074
3. Purposes of work									
Full sample	845	525.65	168	3.13	.0000	.954	.943	.041	.050
18–39 years	487	359.78	168	2.14	.0000	.957	.946	.045	.048
40 years and more	349	368.79	168	2.20	.0000	.941	.926	.048	.059
Women	425	354.54	168	2.11	.0000	.952	.940	.045	.051
Men	403	336.22	168	2.00	.0000	.954	.943	.043	.050
Without a university degree	373	307.80	168	1.83	.0000	.960	.950	.043	.047
With a university degree	464	392.12	168	2.33	.0000	.947	.933	.046	.054
Professional/management	379	321.82	168	1.92	.0000	.954	.942	.047	.049
Technical/semi-or non-specialized	328	317.65	168	1.89	.0000	.950	.937	.046	.052
4. Expectations met in working life									
Full sample	845	269.15	80	3.36	.0000	.973	.965	.040	.053
18–39 years	487	242.34	80	3.03	.0000	.960	.948	.046	.065
40 years and more	349	123.27	80	1.54	.0014	.986	.981	.039	.039
Women	425	203.07	80	2.54	.0000	.970	.960	.037	.060
Men	403	201.24	80	2.52	.0000	.960	.948	.049	.061
Without a university degree	373	152.44	80	1.91	.0000	.978	.972	.041	.049
With a university degree	464	246.73	80	3.08	.0000	.955	.941	.042	.067
Professional/management	379	196.58	80	2.46	.0000	.960	.947	.043	.062
Technical/semi-or non-specialized	328	141.94	80	1.77	.0000	.971	.962	.046	.049

Table 1 (continued)

Sample	*N*	χ^2	df	χ^2/df	*p*	CFI	TLI	SRMR	RMSEA
5. Obligations and duties of employers and society to workers									
Full sample	845	73.72	24	3.07	.0000	.983	.975	.023	.050
18–39 years	487	58.29	24	2.43	.0001	.978	.968	.027	.054
40 years and more	349	62.13	24	2.59	.0000	.972	.958	.033	.067
Women	425	72.66	24	3.03	.0000	.967	.950	.030	.069
Men	403	36.63	24	1.53	.0476	.991	.986	.023	.036
Without a university degree	373	48.81	24	2.03	.0020	.982	.974	.026	.053
With a university degree	464	41.51	24	1.73	.0146	.989	.983	.023	.040
Professional/management	379	52.39	24	2.18	.0007	.979	.968	.031	.056
Technical/semi-or non-specialized	328	59.39	24	2.47	.0001	.968	.952	.032	.067
6. Obligations and duties of workers to employers and society									
Full sample	845	24.33	8	3.04	.0020	.992	.985	.027	.049
18–39 years	487	13.15	8	1.64	.1067	.995	.991	.027	.036
40 years and more	349	16.54	8	2.07	.0352	.990	.981	.034	.055
Women	425	21.15	8	2.64	.0068	.987	.976	.032	.062
Men	403	14.38	8	1.80	.0723	.993	.987	.030	.044
Without a university degree	373	24.61	8	3.08	.0018	.983	.968	.042	.075
With a university degree	464	12.31	8	1.54	.1380	.995	.991	.024	.034
Professional/management	379	10.84	8	1.35	.2112	.996	.993	.025	.031
Technical/semi-or non-specialized	328	18.74	8	2.34	.0163	.986	.973	.041	.064
7. Decent work									
Full sample	845	54.70	24	2.28	.0030	.986	.979	.028	.039
18–39 years	487	27.25	24	1.14	.2929	.997	.996	.023	.017
40 years and more	349	49.40	24	2.06	.0017	.975	.963	.040	.055
Women	425	62.03	24	2.58	.0000	.967	.950	.046	.061
Men	403	26.35	24	1.10	.3355	.998	.997	.024	.016
Without a university degree	373	40.67	24	1.69	.0181	.984	.976	.029	.043
With a university degree	464	48.37	24	0.98	.0023	.979	.968	.034	.047
Professional/management	379	46.71	24	1.95	.0036	.975	.963	.035	.050
Technical/semi-or non-specialized	328	42.21	24	1.76	.0122	.976	.964	.034	.048
Conceptual model after removing Decent work dimension									
Full sample	845	3898.65	2161	1.80	.0000	.943	.935	.034	.031
18–39 years	487	3393.92	2161	1.57	.0000	.930	.920	.041	.034
40 years and more	349	3201.86	2161	1.48	.0000	.922	.910	.044	.037
Women	425	3380.68	2161	1.56	.0000	.923	.912	.042	.036
Men	403	3093.72	2161	1.43	.0000	.934	.925	.041	.033
Without a university degree	373	3055.44	2161	1.41	.0000	.936	.927	.042	.033
With a university degree	464	3480.77	2161	0.98	.0000	.921	.909	.041	.036
Professional/management	379	3925.47	2161	1.82	.0000	.916	.903	.043	.037
Technical/semi-or non-specialized	328	3157.97	2161	1.46	.0000	.912	.899	.046	.038

CFI comparative fit index, *TLI* Tucker–Lewis index, *SRMR* standardized root mean square residual, *RMSEA* root mean square error of approximation

were observed. This is specifically the case for Relative centrality of work and work valence (e.g., $r = 0.67$, $p < .001$), General expectations regarding working life (e.g., $r = .58$, $p < .001$), and Obligations and duties of employers and society to workers (e.g., $r = .58$ and .61, $p < .001$) dimensions.

Part 2. Measurement invariance testing and latent mean differences

The results of the invariance tests are shown in Table 4. The configural model (unconstrained model) presents an acceptable fit. In addition, the changes in the fit indices (ΔCFI, ΔTLI, ΔSRMR, ΔRMSEA) were also within acceptable limits and supported metric as well as scalar invariance of the RWQ. Moreover, the RMSEA values of the previous model were included in the 90% confidence interval of the new model. Data presented in Table 4 also indicate that the RWQ essentially produces comparable results across age (18–39 vs. 40 and more), gender (women vs. men), education (without vs. with a university degree), and job qualification (professional and management vs. technical, semi-or non-specialized).

Based on the establishment of the scalar invariance across age, gender, education, and job qualification, the latent mean differences across these groups were then compared. Overall, the analyses reveal many significant differences ($p < .05$) among the 23 latent factors: age ($n = 8$), gender ($n = 15$), education ($n = 11$), and job qualification ($n = 16$). However, the effect size of these differences (d) ranged only from .07 to .29. Cohen (1988) defined a d value of .20 as small and 0.5 as medium. Few results concerning three of the four sociobiographical variables showed effect sizes greater than or equal to .20. Thus, women gave more importance to work as a source of self-fulfillment and well-being ($d = .20$) than men. Participants with a university degree scored lower on the secondary importance and negative valence of work ($d = .22$) compared to those without a university degree. They also gave more importance to work as a source of social usefulness ($d = .26$) and less to work as a source of occupation ($d = .24$) than participants without a university degree. Similarly, those having professional or management jobs scored lower on the secondary importance and negative valence sub-dimension ($d = .29$) compared to those occupying technical, semi-specialized, or non-specialized jobs. They also attributed more importance on work as a source of social usefulness ($d = .24$) and less importance on work as a source of occupation ($d = .24$) than other participants. The latter's expectations regarding their autonomy at work ($d = .27$) are less fulfilled in their work life than those of participants with professional or managerial jobs.

Part 3. Convergent validity: correlations with related constructs

As expected, the results revealed positive correlations ranging from moderate to strong between the sub-dimensions Ideological value of work and Existential value of work, and the WIQ (respectively, $r = .42$, $p < .001$ and $r = .55$, $p < .001$). A similar observation was noted between the sub-dimension Primary importance and positive valence of work and the WIQ ($r = .60$, $p < 0.001$) and the JIQ ($r = .70$, $p < .001$). The results also indicated that the positive valence of work (Primary and Secondary

Table 2 Final Item loadings from confirmatory factor analysis, alpha and omega coefficients, and means and standard deviation for each item of the relationship to work questionnaire ($n = 845$)

Dimensions	Factor loadings
1. Absolute centrality of work	
Ideological value of work ($\alpha = .69$; $\omega = .70$)	Factor 1.1
Work allows human beings to become the masters of their own lives. ($M = 3.49$; SD = 1.03)	.71
Work contributes to human dignity ($M = 3.76$; SD = 1.01)	.75
Human beings need work to find their place in society ($M = 3.56$; SD = 1.10)	.52
Existential value of work ($\alpha = .81$; $\omega = .82$)	Factor 1.2
Without work, my life has no meaning ($M = 2.43$; SD = 1.23)	.68
My work defines me ($M = 2.68$; SD = 1.14)	.84
Work is at the center of my life ($M = 3.06$; SD = 1.16)	.80
2. Relative centrality of work and work valence	
Primary importance and positive valence ($\alpha = .91$; $\omega = .91$)	Factor 2.1
Work plays a central role in my life and it is my favorite life activity ($M = 2.45$; SD = 1.11)	.83
Work is the most important activity in my life. It is the one I devote the most energy to ($M = 2.68$; SD = 1.17)	.84
Work is my main activity in life and it brings me much more personal satisfaction than all my other activities ($M = 2.25$; SD = 1.17)	.82
Work is my priority in life and it is what most defines me as a person ($M = 2.39$; SD = 1.25)	.86
Primary importance and negative valence ($\alpha = .79$; $\omega = .79$)	Factor 2.2
Even though work plays a central role in relation to my other activities, what I do at work does not give me much personal satisfaction ($M = 1.91$; SD = 1.08)	.75
Even though work plays a central role in relation to my other life activities, I do not get much pleasure out of what I do at work ($M = 1.87$; SD = 1.09)	.75
Even though work plays a central role in my life in relation to my other life activities, what I do there is not very important to me personally ($M = 1.81$; SD = 1.06)	.66
Even though work plays a central role in relation to my other life activities, what I do there does not contribute much to making me the person I am ($M = 2.08$; SD = 1.12)	.62
Secondary importance and positive valence ($\alpha = .83$; $\omega = .83$)	Factor 2.3
Even though work plays a secondary role in relation to my other life activities, I like what I do ($M = 3.63$; SD = 1.20)	.75
Even though work plays a secondary role in relation to my other life activities, what I do at work still contributes to defining me as a person ($M = 3.34$; SD = 1.15)	.74
Even though work plays a secondary role compared to my other activities, it is still a source of personal satisfaction for me ($M = 3.57$; SD = 1.20)	.87
Secondary importance and negative valence ($\alpha = .86$; $\omega = .87$)	Factor 2.4
Work plays a secondary role in relation to my other life activities and I do not feel very personally involved in it ($M = 1.89$; SD = 1.04)	.71
Work plays a secondary role in relation to my other life activities, and what I do at work does not bring me much personal satisfaction ($M = 1.87$; SD = 1.07)	.75
Work plays a secondary role in relation to my other life activities and I don't like what I do at work very much ($M = 1.79$; SD = 1.10)	.52

Table 2 (continued)

Dimensions	Factor loadings
3. Purposes of work	
Work as a source of self-fulfillment and well-being ($\alpha = .77$; $\omega = .79$)	Factor 3.1
Achieve my goals ($M = 4.38$; SD = 0.77)	.73
Be proud of myself ($M = 4.43$; SD = 0.78)	.69
Fulfill myself ($M = 4.21$; SD = 0.86)	.80
Work as a source of social usefulness ($\alpha = .87$; $\omega = .87$)	Factor 3.2
Help improve our society ($M = 3.54$; SD = 1.09)	.83
Feel like I contribute to society ($M = 3.68$; SD = 1.10)	.78
Make a difference in society ($M = 3.54$; SD = 1.13)	.89
Work as a source of social contacts ($\alpha = .82$; $\omega = .83$)	Factor 3.3
Meet people ($M = 3.73$; SD = 1.08)	.81
Create connections with people ($M = 3.88$; SD = 0.96)	.86
Make some friends ($M = 3.29$; SD = 1.10)	.69
Work as a source of financial independence ($\alpha = .83$; $\omega = .83$)	Factor 3.4
Feel financially secure ($M = 4.47$; SD = 0.71)	.79
Have enough money to achieve my main goals in life ($M = 4.49$; SD = 0.68)	.75
Be financially independent ($M = 4.54$; SD = 0.65)	.83
Work as a source of social identity and social status ($\alpha = .80$; $\omega = .80$)	Factor 3.5
Gain social prestige ($M = 2.79$; SD = 1.14)	.79
Have a good social status ($M = 3.11$; SD = 1.14)	.82
Have some social influence ($M = 2.84$; SD = 1.17)	.67
Work as a source of occupation ($\alpha = .80$; $\omega = .80$)	Factor 3.6
Keep busy ($M = 3.35$; SD = 1.13)	.84
Give structure to my days ($M = 3.26$; SD = 1.16)	.69
Avoid boredom ($M = 2.66$; SD = 1.27)	.73
Work as a source of occupational identity ($\alpha = .82$; $\omega = .82$)	Factor 3.7
Feel that I belong to a group of workers who are in the same occupation or profession as I am ($M = 3.38$; SD = 1.11)	.74
Be acknowledged by people who are in the same occupation or profession as I am ($M = 3.51$; SD = 1.10)	.76
Identify myself with people who are in the same occupation or profession as I am ($M = 3.16$; SD = 1.13)	.83
4. Expectations met in working life	
Usefulness of work ($\alpha = .78$; $\omega = .78$)	Factor 4.1
Carry out tasks that are useful to others ($M = 4.01$; SD = 0.95)	.75
Do work that makes people's lives easier ($M = 3.75$; SD = 1.04)	.71
Be of service to other people ($M = 4.00$; SD = 0.97)	.75
Autonomy ($\alpha = .81$; $\omega = .81$)	Factor 4.2
Have a word to say about how my daily work is done ($M = 3.76$; SD = 1.06)	.79
Take part in decisions concerning how my work is organized ($M = 3.60$; SD = 1.19)	.76
Receive positive comments about my work ($M = 3.89$; SD = 1.02)	.80
Recognition of skills and work accomplished ($\alpha = .88$; $\omega = .88$)	Factor 4.3
Be recognized for the quality of my work ($M = 3.77$; SD = 1.03)	.85

Table 2 (continued)

Dimensions	Factor loadings
Be recognized for the effort I put into my work ($M = 3.60$; SD = 1.05)	.88
Receive positive comments about my work ($M = 3.70$; SD = 1.07)	.84
Work-life balance ($\alpha = .88$; $\omega = .88$)	Factor 4.4
Have a workload that leaves me time for activities outside work ($M = 3.83$; SD = 1.13)	.81
Have a work schedule that allows me to plan activities outside of work ($M = 3.90$; SD = 1.08)	.87
Have a work schedule that allows me to maintain life balance ($M = 3.84$; SD = 1.10)	.89
Work conditions ($\alpha = .75$; $\omega = .77$)	Factor 4.5
Have social benefits (e.g., pension plan) (N/A) ($M = 3.48$; SD = 1.41)	.46
Earn a salary that corresponds to the work I do ($M = 3.60$; SD = 1.17)	.91
Earn a wage that corresponds to my qualifications ($M = 3.54$; SD = 1.14)	.91
5. Obligations and duties of employers and society to workers	
Support working conditions ($\alpha = .76$; $\omega = .77$)	Factor 5.1
Ensure that all workers have social protections (e.g., paid sick leave). ($M = 4.37$; SD = 0.80)	.67
Ensure that all workers have job security ($M = 4.34$; SD = 0.87)	.73
Ensure that all workers have income that allows them to be financially independent ($M = 4.12$; SD = 0.99)	.75
Support well-being and work-life balance ($\alpha = .73$; $\omega = .73$)	Factor 5.2
Ensure that all workers have a job that fosters their personal well-being ($M = 4.36$; SD = 0.75)	.62
Ensure conditions for all workers that promote work-life balance ($M = 4.37$; SD = 0.79)	.77
Ensure that all workers have a work environment that is conducive to good mental health (e.g., reasonable work load) ($M = 4.61$; SD = 0.63)	.69
Support occupational development and participation ($\alpha = .81$; $\omega = .81$)	Factor 5.3
Allow workers to participate in important decisions that directly concern their work ($M = 4.21$; SD = 0.86)	.72
Ensure that all workers have the opportunity to develop their professional skills and to participate in training activities ($M = 4.27$; SD = 0.81)	.77
Ensure that all workers have the right conditions to progress in their career ($M = 4.19$; SD = 0.83)	.81
6. Obligations and duties of workers to employers and society	
Contribution to the development of society and to the organization ($\alpha = .85$; $\omega = .85$)	Factor 6.1
Do good quality work ($M = 4.72$; SD = 0.51)	.71
Be trustworthy in the way they carry out their work ($M = 4.71$; SD = 0.50)	.88
Carry out their work in a responsible manner ($M = 4.73$; $SD = 0.50$)	.85
Commitment and responsibility to the organization ($\alpha = .79$; $\omega = .79$)	Factor 6.2
Defend their employer's image ($M = 3.62$; SD = 1.00)	.73
Adhere to the values and objectives of their employer ($M = 3.67$; SD = 0.99)	.80
Be loyal to their employer ($M = 4.01$; SD = 0.96)	.70

α Cronbach's coefficient alpha, ω McDonald's coefficient omega

Table 3 Correlation matrix for the sub-dimensions of the relationship to work questionnaire ($n = 845$)

		1.1	1.2	2.1	2.2	2.3	2.4	3.1	3.2	3.3	3.4	3.5	3.6	3.7	4.1	4.2	4.3	4.4	4.5	5.1	5.2	5.3	6.1	6.2
1	1.1	–																						
	1.2	.46	–																					
2	2.1	.43	.72	–																				
	2.2	−.09	−.09	−.06	–																			
	2.3	.06	−.08	−.13	−.22	–																		
	2.4	−.22	−.26	−.29	.67	−.24	–																	
3	3.1	.28	.24	.24	−.24	.16	−.34	–																
	3.2	.17	.17	.21	−.08	.06	−.18	.50	–															
	3.3	.12	.07	.03	−.00	.15	−.01	.30	.29	–														
	3.4	.17	.12	.06	.02	.07	−.01	.27	.15	.11	–													
	3.5	.24	.28	.22	−.04	.08	−.07	.30	.38	.27	.29	–	–											
	3.6	.27	.31	.27	.06	.03	.00	.27	.15	.24	.19	.20	.30	–										
	3.7	.27	.27	.25	−.07	.12	−.16	.35	.31	.43	.16	.44	.12	.26	–									
4	4.1	.22	.19	.22	−.24	.20	−.32	.28	.21	.22	.07	.14	−.04	.09	.47	–								
	4.2	.16	.14	.23	−.37	.24	−.44	.25	.15	.06	.04	.12	.07	.17	.50	.58	–							
	4.3	.13	.11	.18	−.30	.23	−.35	.20	.09	.08	.08	.15	.17	.11	.37	.39	.37	–						
	4.4	.11	−.02	.01	−.22	.22	−.22	.13	.10	.15	−.01	.05	−.01	.05	.26	.31	.36	.33	–					
	4.5	.09	.06	.12	−.12	.13	−.16	.05	−.01	.03	.08	.07	.19	.20	.12	.00	−.01	.06	.02	–				
5	5.1	.05	−.03	−.10	.07	.12	.08	.13	.16	.22	.29	.11	.07	.14	.18	.06	.07	.11	−.02	.61	–			
	5.2	−.02	−.13	−.17	−.05	.17	.03	.22	.17	.26	.18	.04	.05	.20	.20	.21	.09	.05	.04	.58	.61	–		
	5.3	.06	−.03	.02	−.06	.15	−.07	.27	.32	.23	.16	.12	.08	.11	.21	.18	.12	.09	.05	.30	.39	.39	–	
6	6.1	.11	.07	.05	−.25	.12	−.26	.33	.23	.08	.25	.04	.25	.23	.26	.23	.20	.18	.09	.30	.25	.37	.33	–
	6.2	.23	.22	.20	−.13	.12	−.19	.26	.21	.13	.17	.14												

Table 3 (continued)

1 = Absolute centrality of work; 1.1 = Ideological value of work; 1.2 = Existential value of work; 2 = Relative centrality of work and work valence; 2.1= Primary importance and positive valence; 2.2 = Primary importance and negative valence; 2.3 = Secondary importance and positive valence; 2.4 = Secondary importance and negative valence; 3 = Purposes of work; 3.1 = Work as a source of self-fulfillment and well-being; 3.2 = Work as a source of social usefulness; 3.3 = Work as a source of social contacts; 3.4 = Work as a source of financial independence; 3.5 = Work as a source of social identity and social status; 3.6 = Work as a source of occupation; 3.7 = Work as a source of occupational identity; 4 = Expectations met in working life; 4.1 = Usefulness of work; 4.2 = Autonomy; 4.3 = Recognition of skills and work accomplished; 4.4 = Work-life balance; 4.5 = Work conditions; 5 = Obligations and duties of employers and society to workers; 5.1 = Support working conditions; 5.2 = Support well-being and work-life balance; 5.3 = Support occupational development and participation; 6 = Obligations and duties of workers to employers and society; 6.1 = Contribution to the development of society and to the organization; 6.2 = Commitment and responsibility to the organization

Table 4 Tests of measurement invariance according to age, gender, education, and job qualification

Model tested	Model fit measures						
	χ^2	df	χ^2/df	CFI	TLI	SRMR	RMSEA (90% CI)
Age ($n=836$)							
Model 1: Configural	6595.78	4322	1.53	.927	.915	.042	.035 (.034–.037)
Model 2: Metric	6668.95	4370	1.53	.926	.915	.044	.035 (.034–.037)
Model 3: Scalar	6799.29	4418	1.54	.923	.913	.045	.036 (.034–.038)
Gender ($n=828$)							
Model 1: Configural	6474.40	4322	1.50	.929	.918	.041	.035 (.033–.036)
Model 2: Metric	6552.39	4370	1.50	.928	.918	.044	.035 (.033–.036)
Model 3: Scalar	6713.33	4418	1.52	.924	.914	.045	.035 (.034–.037)
Education ($n=837$)							
Model 1: Configural	6536.21	4322	1.52	.928	.917	.041	.035 (.033–.037)
Model 2: Metric	6639.79	4370	1.53	.926	.916	.044	.035 (.034–.037)
Model 3: Scalar	6903.14	4418	1.56	.919	.909	.045	.037 (.035–.038)
Job qualification ($n=707$)							
Model 1: Configural	6453.44	4322	1.49	.914	.901	.044	.037 (.035–.039)
Model 2: Metric	6538.34	4370	1.50	.913	.901	.047	.037 (.036–.039)
Model 3: Scalar	6751.29	4418	1.53	.906	.894	.048	.039 (.037–.040)

Model tested	Model differences				
	ΔCFI	ΔTLI	ΔSRMR	ΔRMSEA	Decision
Age ($n=836$)					
Model 2 vs 1	−.001	.000	.002	.000	Accepted
Model 3 vs 2	−.003	−.002	.001	.001	Accepted
Model 3 vs 1	−.004	−.002	.003	.001	Accepted
Gender ($n=828$)					
Model 2 vs 1	−.001	.000	.003	.000	Accepted
Model 3 vs 2	−.004	−.004	.001	.000	Accepted
Model 3 vs 1	−.005	−.004	.004	.000	Accepted
Education ($n=837$)					
Model 2 vs 1	−.002	−.001	.003	.000	Accepted
Model 3 vs 2	−.007	−.007	.001	.002	Accepted
Model 3 vs 1	−.009	−.008	.004	.002	Accepted
Job qualification ($n=707$)					
Model 2 vs 1	−.001	.000	.003	.000	Accepted
Model 3 vs 2	−.007	−.007	.001	.002	Accepted
Model 3 vs 1	−.008	−.007	.004	.002	Accepted

CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation; CI =Confidence Interval; Δ = Change. Age (18-39 vs. 40 and more), Gender (women vs. men), Education (without vs. with a university degree) and Job qualification (professional and management vs. technical, semi or non-specialized)

importance) was positively associated with measures of job satisfaction (Brief Job Satisfaction Measure II; respectively, $r = .26$ and .30, $p < .001$) and of occupational satisfaction (ÉSVP, respectively, $r = .32$ and .26, $p < .001$). The sub-dimension Secondary importance and positive valence was also positively correlated to satisfaction with life (SWLS, $r = .28$, $p < .001$) and well-being (WHO-5, $r = .21$, $p < .001$) and negatively associated with psychological distress (K6, $r = -.15$, $p < .001$). Conversely, a negative correlation was observed between the negative valence of work (Primary and Secondary importance) and the JIQ (respectively, $r = -.12$ and $-.32$, $p < .001$), all measures of satisfaction (Brief Job Satisfaction Measure II; respectively, $r = -.46$ and $-.58$, $p < .001$; ÉSVP, respectively, $r = -.42$ and $-.51$, $p < .001$; SWLS $r = -.31$ and $-.33$, $p < .001$), and well-being (WHO-5, $r = -.17$ and $-.20$, $p < .001$). Furthermore, a positive correlation has been found with the negative valence of work (Primary and Secondary importance) and psychological distress (K6, $r = .29$ and $-.28$, $p < .001$). Finally, the Meaningful working life score[2] was positively correlated with job satisfaction ($r = .51$, $p < .001$), occupational satisfaction ($r = .57$, $p < .001$), life satisfaction ($r = .43$, $p < .001$), and well-being ($r = .33$, $p < .001$), whereas it was negatively correlated with psychological distress ($r = -.35$, $p < .001$).

Discussion

This study is the continuation of the research begun in 2015 that focused on the development and initial validation of the Relationship to Work Questionnaire (RWQ, Fournier et al., 2019). Its objectives were to reduce the length of the RWQ, to confirm its factorial structure, to test measurement invariance according to age, gender, education and job qualification, as well as to support its convergent validity.

Overall, the analyses helped to shorten the questionnaire, eliminate redundancies and confirm satisfactorily its psychometric qualities (Hu & Bentler, 1999; Kline, 2016; Roussel et al., 2002; Tabachnick & Fidell, 2012). More precisely, the results of exploratory factor analyses showed that three dimensions out of seven corresponded to those that were conceptually expected (Absolute centrality of work, Relative centrality and work valence, Purposes of work). Otherwise, the results also revealed some differences in the factorial structure for the four other dimensions. Regarding the Working life general expectations/Expectations met dimension, the number of sub-dimensions has been reduced from eight to five due to the overlap of some of them. The choice of the five retained sub-dimensions was made on the basis of the following two conceptual arguments: (a) the sub-dimension presented a greater theoretical differentiation with some sub-dimensions of the Purposes of the work and (b) the sub-dimension was of a particularly concrete nature in accordance with the theoretical definition of General expectations toward working life (i.e., concrete and priority benefits that people expect to withdraw from their working

[2] Meaningful working life score was evaluated by calculating the difference between the degree to which expectations were actually attained and the importance of the expressed expectations (alpha = .88).

life). Thus, Professional development and Relationship with others were withdrawn due to their proximity, respectively, with Work as a source of self-fulfillment and well-being and Work as a source of social contacts sub-dimensions. Finally, Ethical work environment was removed because it corresponded less to the concrete and specific expectations that one seeks to achieve in his or her working life. In addition, this dimension is also less integrated in other related tools. Concerning Obligations and duties of employers, the results led to adopting a factor solution with three sub-dimensions rather than six. Indeed, due to their close conceptual proximity and to eliminate redundancies, sub-dimensions have been combined and renamed in order to properly reflect the integration of the whole content in the sub-dimension created. For example, Income and job security and Social benefits sub-dimensions have been renamed Working conditions. Concerning the Obligations and duties of workers dimension, results led to merge Commitment and responsibility to society sub-dimension with Contribution to the success and the development of organization sub-dimension. Thus, Contribution to the development of society and to the organization sub-dimension have been created by keeping only the items that expressed both workers' contributions to the development of society and the organization in which they work. Finally, as Justice sub-dimension and Dignity and respect sub-dimension shared theoretical affinities and as for the sake of parsimony, they have been merged and renamed Social Justice.

Once the adjustments were made to the RWQ, the confirmatory factor analyses conducted with the whole sample, as well as according to age, gender, education, and job qualification, showed acceptable fit indices and supported the factorial structure of each dimension. However, confirmatory factor analysis for the whole RWQ revealed very strong correlations between Decent work sub-dimensions and Obligation of employers sub-dimensions. These results can be explained by important conceptual convergences between them. Indeed, they both refer to the general work conditions intended to protect workers. In accordance with the literature concerning the psychological contract between employers and employees (e.g., Lester et al., 2002; McDonald & Makin, 2000; Turnley & Feldman, 1999), the Obligation and duties of employers dimension have been retained to preserve complementarity with Obligation and duties of workers dimension. Thus, the fit indices found for the entire RWQ based on the full sample and according to age, gender, education, and job qualification are generally acceptable and support rather well its factorial structure of 6 dimensions, 23 sub-dimensions, and 71 items.

Regarding internal consistency, the alpha and omega coefficients ranged, respectively, from .69 to .91 and .70 to .91. Approximately two-thirds of them (15/23) were more than .80. Such results are satisfactory, considering that most of the sub-dimensions contain only three items (Cortina, 1993). Finally, as to construct validity, the analyses showed weak to moderate correlations (Cohen, 1988) between the sub-dimensions of each of the distinct dimensions except for one of them. The latter concerned the sub-dimensions Existential value of work (Absolute centrality of work) and Primary importance and positive valence of work (Relative centrality of work). These results are not that surprising given that these sub-dimensions, while distinct, share some conceptual affinities. Indeed, while both evaluate the importance of work in people's lives, one focuses more on the importance of

work in relation to the other life spheres. Moreover, the absence of high correlations between the other sub-dimensions of absolute and relative work centrality supports the relevance of measuring these two dimensions separately. Finally, the analyses between the sub-dimensions of the same dimension generally displayed moderate correlations except for Relative centrality of work and work valence, General expectations regarding working life, and Obligations and duties of employers and society to workers dimensions. Nevertheless, the highest correlations (r from .58 to .67) were below the threshold (.80) at which co-linearity problems occur (Field, 2009, p. 224) and support the decision to keep and to measure them separately. Nevertheless, more in-depth studies on the relationships found between these variables would be useful to enrich the conceptual model underlying the RWQ.

Overall, the exploratory and confirmatory analyses led to the achievement of the first objective of the study. These analyses made it possible to provide a tool that was both shorter and more parsimonious. Moreover, the factorial structure of the RWQ tested for the entire sample was reproduced according to four sociobiographical variables. The only slightly less conclusive data concern CFIs and TLIs according to job qualification level. These findings suggest further research should be conducted on other professional context factors likely to influence an individual's relationship to work, such as the type of employment contract.

With regards to measurement invariance testing, findings supported configural, metric, and scalar invariance on the same sociobiographic variables, that is, to say age, gender, education, and job qualification. Consequently, the latter results on the final version of the RWQ suggest that the number of factors and their items are consistent across these variables, that the factor loadings and intercepts are invariant between groups, and that the scores can be directly compared among these sociodemographic variables. By testing measurement invariance, the second objective of the study was achieved.

Moreover, the magnitude of the difference on the RWQ sub-dimensions according to these sociobiographical variables were generally weak, in agreement with other studies (e.g., Allan et al., 2014; Arnoux-Nicolas et al., 2016; Gavriloaiei, 2016; Jiang & Johnson, 2018; Steger et al., 2012; Vultur et al., 2020). For example, as found in previous studies (Duffy & Sedlacek, 2007; Lips-Wiersma & Wright, 2012), women tried more than men to achieve purposes related to self-fulfillment and well-being. In addition, people without a university degree or who worked in technical, semi-specialized, or non-specialized jobs had a more negative subjective work experience than those holding a university degree or having a professional or management level job. The latter, moreover, attributed more importance on work as a source of social usefulness and less importance on work as a source of occupation than other participants. These results are corroborated by those of other studies (e.g., Allan et al., 2014; Duffy et al., 2014; Vultur et al., 2020; Warr, 2008). Further studies are necessary to better understand the effect of sociobiographical variables and their interactions on the relationship to work. In sum, although many statistically significant differences were found, they have limited practical significance (Balkin & Lenz, 2021).

In relation to convergent validity, the observed correlations are in accordance with those expected. More specifically, the results show moderate to strong

correlations between Ideological value of work and Existential value of work sub-dimensions (Absolute centrality of work) and the WIQ. They also revealed strong correlations between the Primary importance and positive valence of work sub-dimension and the JIQ and the WIQ and a negative but rather moderate relationship between the Secondary importance and the negative valence of work sub-dimension and the JIQ. This last result can be explained by the unidimensional structure of the JIQ, which broadly evaluates the relative centrality of work in people's lives and its importance in their existence. Consequently, the more that work is a priority and is the highest sphere of commitment, the more it is a source of self-fulfillment and a gratifying experience, and the more people identify with their work as compared to other activities (England, 1991; MOW, 1987). This operationalization makes it more difficult to take into account some of the new realities of people's work and life. For example, work can be a sphere of life of primary importance compared to other spheres, while nevertheless representing an activity of limited engagement and a generally disappointing experience. Work can also be of relatively secondary importance in life while still being a meaningfully engaging activity and a rewarding experience. This result supports the idea that the Primary importance and positive valence of work and the Secondary importance and negative valence of work do not represent two opposite poles on the same continuum. It also heightens the interest in distinguishing the relative importance attributed to work from the subjective experienced of it. In addition, as expected, the results showed positive correlations between the two sub-dimensions linked to the positive valence of work with occupational and life satisfaction as well as with general well-being scales, which is consistent with those obtained by other studies (Arnoux-Nicolas et al., 2016; Morin, 2006; Steger et al., 2012). Nevertheless, results also indicated that these correlations were somewhat stronger between the positive valence of work and the indicators of occupational satisfaction than with those of life satisfaction or general well-being. Based on these results, it appears that a person's well-being and life satisfaction are not so clearly related to his/her work experience. Studies on the interdependence of experiences at work with that of life outside of work, and on the way in which they interfere with each other, would be interesting to deepen our understanding of this question, particularly in the context of the new realities of the labor market. Finally, consistent with other studies (Morin, 2006; Potvin, 2007; Vinopal, 2012), positive correlations, from moderate to strong, were noted between the Meaningful working life score and the occupational satisfaction, life satisfaction, and well-being. Overall, these first results attest to the tool's acceptable convergent validity concerning some important sub-dimensions. They also allowed to achieve the third objective of the study. Further studies concerning other dimensions (e.g., Purposes of work) could nevertheless be necessary in order to deepen the understanding of the subject.

Findings indicated that the relationship to work can be broken into 6 dimensions and 23 sub-dimensions. All of them demonstrated adequate dimensionality and internal consistency. The 71-item tool offers several practical advantages over the previously used scales.

Firstly, the RWQ is highly relevant in the context of career development interventions. Indeed, today's career paths are now going through many transitions, often unpredictable. This leads workers, at different stages of their lives, to question

themselves in depth about their relationship to work. For instance, the recent pandemic has given rise to an abundance of scientific literature examining the meaning workers assign to work and the relative place it occupies in relation to their other activities (e.g., De becdelièvre and Grima, 2020). Professionals who accompany workers in transition need tools to help them make informed choices and get through these often destabilizing periods of life. The RWQ can be highly relevant in providing practitioners with nuanced and targeted data on different facets of their clients' relationship to work. This data can thus be used as a basis for the practitioner and the client to initiate a process of reflection that could lead to the development of significant professional projects and the making of consequent personal decisions.

Moreover, compared to other tools that usually only offer a single scale and two to five sub-dimensions, the RWQ has the advantage of including six scales and 34 sub-dimensions, while having a relatively small number of items (71). This facilitates its administration while preserving its nuances. In addition, the factor structure of each of the scales and their sub-dimensions was also confirmed separately. Consequently, as another substantial advantage, the tool is versatile and can be used in part or in whole according to the user's objectives and the information sought. As an example, depending on the pursued objectives, one researcher might be specifically interested in gathering data about the absolute and relative values of work in a sample. In contrast, another might place more emphasis on expectations about working life. Similarly, one practitioner might choose to primarily incorporate information about the relative value and valence of work of its client as part of his intervention plan. However, another might find it useful to administer the full version of RWQ to obtain a more complete portrait, for example, during an early career transition. Moreover, the RWQ can be used in the context of organizational interventions, major corporate restructurings, or employee retention programs. For instance, when planning an intervention strategy, a human resource management consultant may find it useful to obtain information on employees' perceptions of employers' and employees' obligations and duties, as well as the "Meaningful Working Life" score. In summary, the great flexibility of the RWQ according to users' needs, its comprehensiveness combined with a relatively small number of items, as well as the plurality of professional contexts in which it can be used seem to constitute concrete and significant practical advantages compared to existing tools.

Limits and future studies

Despite the interest of the RWQ, some limitations must be taken into account and suggest research avenues. First of all, while the sample included a sizable number of participants, a little more than half of them had a university degree and worked in a relatively privileged professional context, i.e., a permanent, professional, or management job. Other studies of more diversified populations should be conducted so as to better understand the role played by certain professional (e.g., type of work contract) and familial (e.g., with or without children, age of children if applicable) factors in the relationship people have with work, particularly for the dimensions that evaluate their subjective experience of work and whether or not they find meaning in it. Next,

the tool was validated with a population of French–Canadian workers, which limits the generalization of the results and provides little information about the influence of culture in the development of the relationship to work. Intercultural studies would be useful, on the one hand, to better understand this influence and, on the other, to test the equivalence of the RWQ structure in different social and cultural contexts. Moreover, new confirmatory analysis with new samples would be beneficial to continue the work of validating the tool and also concerning its discriminant validity and its test–retest reliability.

Finally, as mentioned above, the convergent validity of all the sub-dimensions of the RWQ have not been examined in this study. New researches comparing other sub-dimensions of the RWQ with recent scales, such as the Work and Meaning Inventory (WAMI, Steger et al., 2012), the Work Engagement Scale (WES, Schaufeli et al., 2006), the Characteristics of Meaningful Work-life Questionnaire (CMWQ, Morin & Dassa, 2006), or even the Swiss Psychological Contract Questionnaire (SPCQ, Raeder et al., 2009) would provide greater support for its validity.

Furthermore, the study does not shed light on how significant life events can shape the relationship to work. Longitudinal research on major turning points would help to better understand when and in which conditions these events lead people to modify their relationship to work and to identify the relevant dimensions that are most involved in this transition. At the same time, these studies would help to evaluate to what extent the Absolute centrality and the Purposes of work dimensions are relatively independent of occupational and life circumstances and whether the Relative centrality and work valence, and Expectations would seem to be more affected by these circumstances, as proposed in the conceptual model (Fournier et al., 2019) and by other researchers (e.g., Ardichvili, 2005; Bal & Kooij, 2011; Blustein, 2006, 2011; Harpaz & Fu, 2002).

Conclusion

This study was able to demonstrate the psychometric qualities (e.g., factorial validity, invariance measurement, internal consistency, convergent validity) of the Relationship to Work Questionnaire (RWQ). This 71-item questionnaire is easy to administer and provides a comprehensive view and nuanced information about several aspects of relationship to work (e.g., absolute and relative centrality of work, purposes of work, expectations regarding working life, obligations and duties of employers vs. workers), whether people are employed or not. From a more applied perspective, the RWQ constitutes a very useful tool for self-reflection when people find themselves at major life turning points, such as unexpected economic layoffs, serious work accidents, the birth of a child, or perhaps the loss of a loved one. Indeed, it is during these significant moments in one's life course that people are most likely to reconsider their occupational priorities and, at the same time, need support and guidance. Finally, analyses are being conducted to establish distinct profiles of work relationships that can be used as the basis for more targeted interventions tailored to the needs of people at different stages of their lives. These profiles

could also provide clues to practitioners about the potential risks of mental health problems associated with some of them.

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