



# The role of passion for work and need satisfaction in psychological adjustment to retirement<sup>☆</sup>



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## ABSTRACT

Two studies tested a model in which passion for work predicts psychological adjustment to retirement through the satisfaction of basic psychological needs. With a sample of 103 French-Canadian retirees from a variety of occupations, the first study used a retrospective cross-sectional design. The second study followed 73 French-Canadian teachers over a 6-year period and examined the relationship between passion for work, assessed when participants were still working, and psychological adjustment to retirement, measured when participants were retired. All participants completed questionnaires on demographics, passion for work, basic psychological needs and psychological adjustment to retirement. Results from structural equation modeling confirmed the hypothesized model, such that both studies confirmed the mediating role of basic psychological need satisfaction in the passion–psychological adjustment to retirement relationship. Need satisfaction significantly mediated the relationship between harmonious passion for work and psychological adjustment to retirement in Studies 1 and 2. The mediation was also confirmed between obsessive passion and psychological adjustment to retirement in Study 1, but not in Study 2. These findings suggest that passion for work matters in psychological adjustment to retirement. Being passionate about work can thus lead to positive or negative outcomes in retirement, depending on whether the passion is harmonious or obsessive, respectively.

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“Retirement is the ugliest word in the language.” ~Ernest Hemingway

## 1. Introduction

Retiring from the workforce can represent a significant change for many individuals. Changes can be felt on a financial, social and emotional level and can influence new retirees' standard of living, daily activities, social networks and well-being (Wang, Henkens, & van Solinge, 2011). Although there has been extensive research on retirement adjustment, results have been inconsistent and thus remain inconclusive regarding the nature of the impact of retirement. On the one hand, retirement has been found to have beneficial effects (e.g., Mein, Martikainen, Hemingway, Stansfeld, & Marmot, 2003; Wang, 2007). On the other hand, some studies suggest that

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retirement has important negative effects (e.g., Dave, Rashad, & Spasojevic, 2008). Thus, a better understanding of this adjustment process would provide a clearer picture of the outcomes, that is, the challenges and costs that it generates at an individual and societal level.

We propose that employees' experience at work, and more specifically, the type of passion they have for their work, will influence their psychological adjustment to retirement. We present two studies that examined the relationship between harmonious passion and obsessive passion and psychological adjustment to retirement. The first study investigated retrospectively how passion for work is associated to psychological adjustment to retirement. The second study used longitudinal data over a 6-year period to examine how passion for work predicts psychological adjustment to retirement.

## 2. Passion for work

Passion is defined as a strong inclination toward an activity (e.g., work) that one loves and finds important, that is self-defining, and in which significant time and energy are invested (Vallerand & Houliort, 2003; Vallerand et al., 2003). Two types of passion are possible: harmonious passion and obsessive passion. When work is highly valued, is meaningful and has been freely accepted as important by the person, it will be internalized in the person's identity and self in an autonomous fashion, leading to a harmonious passion (Vallerand, Houliort, & Forest, 2014; Vallerand et al., 2003). This type of internalization emanates from the intrinsic and integrative tendencies of the self (Deci & Ryan, 2000; Ryan & Deci, 2003) and solicits the authentic integrating self. Personal endorsement and a sense of volition in pursuing the activity are experienced. The passionate activity occupies a significant but not overpowering space in the person's identity. Hence, workers with a harmonious passion for work can partake in their professional activities in a flexible, mindful (Brown, Ryan, & Creswell, 2007) and open manner that is conducive to positive experiences (Hodgins & Knee, 2002; see Vallerand et al., 2014). In such a case, the passionate activity is in harmony with other life spheres.

However, when work is attached to certain contingencies, such as self-esteem, feelings of social acceptance or a sense of excitement that is uncontrollable, it will still be internalized in the person's identity and self, but in a controlled way, leading to an obsessive passion. People with an obsessive passion for work cannot help but engage in their professional activities, reflecting a rigid persistence toward their passionate activity. This dependency on the passionate activity may eventually be experienced because obsessive passion involves ego-invested rather than integrative self processes (Hodgins & Knee, 2002). When invested with an obsessive passion, workers are more likely to experience conflicts with other life spheres, as well as frustration and rumination when not engaging in their professional activities. Having an obsessive passion impedes significant investment in other life activities, and thereby precludes the opportunity to revive and recharge one's cognitive, affective and behavioral repertoire. Hence, the two types of passion are qualitatively different and lead to different outcomes.

According to the dualistic model of passion (DMP – Vallerand et al., 2003), harmonious passion for work leads to more adaptive outcomes than obsessive passion. In fact, harmonious passion was repeatedly found to predict more positive cognitive, affective and behavioral outcomes than obsessive passion (see Vallerand et al., 2014, for a review). For instance, harmonious passion for work was positively related to “flow” (desirable state that people experience when they feel completely immersed in the activity) over a 6-month period (Lavigne, Forest, & Crevier-Braud, 2012), work satisfaction (Carbonneau, Vallerand, Fernet, & Guay, 2008; Vallerand, Paquet, Philippe, & Charest, 2010) and psychological well-being (Carbonneau et al., 2008; Fernet, Lavigne, Vallerand, & Austin, 2014; Forest, Mageau, Sarrazin, & Morin, 2011; Houliort, Philippe, Vallerand, & Ménard, 2014). Passion was also examined in relation to work–life conflict. In two studies involving professional nurses, Vallerand et al. (2010) found that obsessive passion was positively related to work–life conflict, whereas harmonious passion was negatively related to this conflict. Similar results were obtained among teachers (Caudroit, Boiché, Stephan, Le Scanff, & Trouilloud, 2011).

Overall, these findings strongly suggest that passion for work can influence one's professional and personal experiences and their outcomes. Retirement, which represents a significant life stage, is one important outcome of a person's career. It is possible that the passion that once influenced so many cognitive, affective and behavioral outcomes in one's working life can predict valuable outcomes in retirement. Before presenting the theoretical arguments linking passion for work and retirement, the major factors involved in the retirement adjustment process will be briefly presented.

## 3. Psychological adjustment to retirement

Over the last two decades, numerous studies have investigated retirement adjustment with the aim of identifying which factors contribute to general well-being. Although many authors have developed retirement adjustment theories (i.e. role theory, continuity theory, activity theory; Wang, 2007), it appears that the transition to retirement is unique to each individual and is influenced by many factors (i.e. retirees' attributes and environmental features). Such factors include sociodemographics (age, gender, socioeconomic status and education level), contextual factors (perceived health, retirement decision, control and planning) and lastly, psychosocial factors (marital status, social support and work attitudes). Among the psychosocial factors that are particularly relevant to the present studies, researchers have stipulated that one's prior relationship to work is an important factor of retirement adjustment, with the most salient aspect of this relationship being the level of work centrality (Wang et al., 2011). Defined as the degree of importance that work plays in one's life compared to other life roles (Walsh & Gordon, 2008), work centrality has been associated with higher levels of commitment to and satisfaction with one's work and greater difficulty adjusting to retirement (Reitzes & Mutran, 2006; Schaufeli, Taris, & van Rhenen, 2008). However, Wong and Earl (2009) found that a high level of work centrality prior to retirement did not influence retirement adjustment (better or worse), nor did it influence retirees' global level of activity (higher or lower).

Therefore, it appears that it may not be the centrality of one's work per se but rather one's ability to adapt to change that matters in adjusting to retirement.

In a recent study conducted by Kubicek and her collaborators, two personal resources predicted higher levels of well-being in retirement (Kubicek, Korunka, Raymo, & Hoonakker, 2011), namely, retirees' perseverance in pursuing their goals, and retirees' flexibility in adjusting their goals. Given that retirement involves inevitable gains (e.g., more time and freedom) and losses (e.g., reduced income, loss of "worker" identity), these two personal resources promote the maintenance of retirees' well-being. More precisely, by actively pursuing and achieving goals, retirees can tackle the problems or losses that arise. On the other hand, the ability to dismiss unreachable goals and adapt one's personal striving (i.e. flexibility) to life circumstances may foster greater balance in one's life and thus promote a better retirement adjustment. In fact, being self-determined in the pursuit of one's goals while remaining flexible to adjust these goals has been linked to life satisfaction and self-esteem in retirement (Trépanier, Lapierre, Baillargeon, & Bouffard, 2001) and to positive psychological functioning (Kubicek et al., 2011). Thus, both retirees' attitude toward work and their personal resources influence their well-being in retirement.

#### 4. Retirement and passion

In light of the above, it can be suggested that passion for work impacts one's professional and personal life in many different ways that could influence workers' psychological adjustment to retirement. For instance, a passion for work occupies a significant space in the person's self. When an obsessive passion is at play, it can even oppress other aspects of the self. A passionate activity also takes up a lot of one's time. Passionate people invest a significant amount of time in their passion (Vallerand et al., 2003); work becomes more important than other life roles and occupies a central place in their life. Hence, based on Reitzes and Mutran's (2006) and Schaufeli et al.'s (2008) findings that work centrality influences the work–retirement transition, passion for work likely influences adjustment to retirement; passion for work could possibly make this transition very difficult.

Retirement entails a change in or even a loss of identity (Wang et al., 2011). One is no longer a worker, teacher, pharmacist or lawyer. Retirees need to recreate their identity, letting go of their professional identity and integrating their new status. For individuals whose identity was mostly based on their profession and professional activities, like passionate workers, retirement may represent a massive loss (van Solinge & Henkens, 2008). The identity loss entailed by retirement can affect passionate workers through reduced self-esteem. When a positive evaluation of one's self is contingent upon work, as is the case for workers with an obsessive passion, retiring can deny access to the primal source of self-esteem. Previous studies have shown that harmonious passion is positively related to self-esteem, while no significant relationship has been found between obsessive passion and self-esteem (Caudroit, Stephan, Brewer, & Le Scanff, 2010; Vallerand et al., 2008). However, obsessive passion has been found to be positively related to self-esteem contingencies (Mageau, Carpentier, & Vallerand, 2011; Stenseng & Harvold Dalskau, 2010), meaning that high self-esteem is maintained as long as performing the passionate activity is crowned with success. Hence, since the source of self-esteem is no longer available to retirees who were fuelled by an obsessive passion for work, poor adjustment to retirement can be expected.

Retirement typically represents the end of professional activities. Work is no longer available and retirees are expected to engage in various non-work activities. For passionate workers, work cessation can thus prove to be difficult. Previous studies have shown that when individuals who are fuelled by an obsessive passion are prevented from performing their passionate activity, they ruminate about past events related to the passionate activity and the thought of resuming the activity dwells in their mind (Ratelle, Vallerand, Mageau, Rousseau, & Provencher, 2004; Vallerand et al., 2008). Since rumination prevents people from fully engaging in other activities (Carver, 1996), workers with an obsessive passion may be unable to engage in other non-professional activities. Consequently, retirees who were invested with an obsessive passion for work cannot derive psychological well-being from other activity engagement and may even experience negative affect because they are deprived of their major source of psychological investment.

Similarly, it appears that passion for work could influence adjustment to retirement through its effect on one's flexibility. As shown by Trépanier et al. (2001) and Kubicek et al. (2011), flexibility is an important factor in adjustment to retirement. Compared to workers with an obsessive passion, those with a harmonious passion for work are believed to show more flexibility. For example, a harmonious worker will make adjustments to a professional project if leaving it unchanged would lead to negative consequences such as injuries or ill-being, whereas workers with an obsessive passion will pursue the project regardless of any such consequences. Since retirement entails many changes (e.g., investing in other activities, changing one's goals), it is predicted that workers with an obsessive passion for work will have more difficulty adjusting to retirement than workers with a harmonious passion.

##### 4.1. Basic psychological needs as a mediator

Self-determination theory (SDT – Deci & Ryan, 2000) stipulates the existence of three fundamental psychological needs, namely the need for autonomy (having choices and acting on personal values), competence (having an impact on one's environment) and relatedness (being respected and appreciated, as well as respecting and appreciating the people around us). In the same way that water, earth and sun are necessary for plants to grow, the satisfaction of basic psychological needs is essential for human development and well-being. Numerous studies in a variety of domains have confirmed the crucial role of need satisfaction in optimal human functioning (e.g., Ryan, 1995; Sheldon, Ryan, & Reis, 1996; Vansteenkiste et al., 2007). Although no research has investigated the relationship between need satisfaction and psychological adjustment to retirement, it can be hypothesized that a healthy retirement is reliant on the satisfaction of basic needs. Being autonomous and feeling competent, as well as maintaining relatedness could be a challenge in retirement. The reduced income could for example, lessen one's feeling of autonomy: Less money could mean less choice about the activities one will engage in. The need for competence could be difficult to fulfill when leaving one's professional life and engaging

in non-work activities. Finally, work contributes significantly to our social relationships. Hence, the need for relatedness could be difficult to satisfy when one's social circle is significantly reduced. For retirees to function optimally, develop and grow, they likely have to fulfill their basic psychological needs.

Previous research on passion has suggested that passion can help either satisfy or thwart basic psychological needs (Forest et al., 2011). Having a harmonious passion for work helps satisfy the need for autonomy, competence and relatedness, whereas an obsessive passion for work appears to thwart these needs. Flexibility and volition, characteristics of a harmonious passion, as well as the non-controlling nature of this type of passion, provide some of the essential ingredients for the satisfaction of basic psychological needs (Deci & Ryan, 2000). Under an obsessive passion, endeavors are undertaken with rigidity and are pursued in a highly controlled fashion – two determinants leading to need thwarting (Deci & Ryan, 2000). Having experienced need thwarting or need fulfillment throughout one's working life could have long-lasting effect on how well basic psychological needs can be satisfied. Hence, another way in which passion for work can affect psychological adjustment to retirement could be through its influence on basic psychological need satisfaction.

## 5. Research questions and hypothesized model

Can passion for work pave the way to a healthy retirement? Does satisfaction of basic psychological needs mediate the relationship between passion and psychological adjustment to retirement? To date, no studies have investigated how passion for work, the satisfaction of basic psychological needs and adjustment to retirement relate to one another. The purpose of the present research was to test a model in which passion for work predicts psychological adjustment to retirement through the satisfaction of basic psychological needs (see Fig. 1). More specifically, the model predicts that harmonious passion will lead to positive psychological adjustment to retirement, through its positive influence on basic psychological need satisfaction. The opposite is predicted for obsessive passion. The hypothesized model was tested in two studies involving retirees, one using a retrospective cross-sectional design and the second using a longitudinal design over a 6-year period.

## 6. Study 1

### 6.1. Method

#### 6.1.1. Participants

With the help of a Quebec association of elderly individuals (Fédération de l'Âge d'Or du Québec, FADOQ), a non-profit organization for retirees, 103 retirees from the Province of Quebec were recruited. The mean age of our sample was 61.8 years, the mean age at retirement was 56.7 years and the average number of working years was 28.2. Mean yearly income when working was \$35,800 (Canadian) and at retirement was \$24,700. Occupation before retirement varied widely, ranging from technicians to professionals. Data was collected in 2000.

#### 6.1.2. Procedure

Questionnaires were sent directly to the participants and returned directly to the experimenter. The first page of the questionnaire provided a summary of the study, explaining the aims and what participation entailed. A retrospective design was used for this study. To answer items on the Passion Scale, respondents were invited to indicate how they felt when they were working, prior to retirement, while answers on all other scales reflected how respondents felt at the present time. Written informed consent was obtained from all participants and confidentiality of the data guaranteed.

#### 6.1.3. Measures

**6.1.3.1. Passion for work.** The Passion Scale (Marsh et al., 2013; Vallerand & Houliort, 2003; Vallerand et al., 2003) was used to assess harmonious passion and obsessive passion for work. The scale included six items assessing harmonious passion (e.g., "My work was a passion that I still managed to control") and six items assessing obsessive passion (e.g., "My work was the only thing that really turned

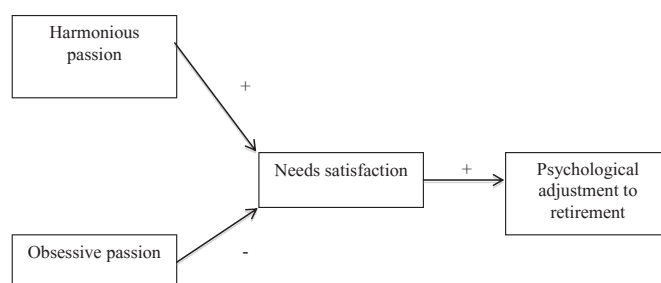


Fig. 1. Hypothesized model.

me on”). Participants rated each item on a seven-point scale ranging from 1 (*do not agree at all*) to 7 (*completely agree*). A factor analysis with varimax rotation was performed and yielded a two-factor solution that accounted for 61.25% of the total variance. Items from each subscale loaded on their respective component. Since participants needed to complete this scale retrospectively, participants were asked to refer to their career peak as a reference point when rating each item in this scale. The Passion Scale was previously used and validated with populations of workers (e.g. Forest et al., 2011; Vallerand & Houliort, 2003).

**6.1.3.2. Basic psychological need satisfaction.** The degree to which the participants' psychological needs were satisfied in their lives was assessed using 15 items from the Basic Need Satisfaction in General Scale (Deci & Ryan, 2000). Seven items assessed satisfaction of the participants' need for autonomy (e.g., “I feel like I am free to decide for myself how to live my life”), four items assessed satisfaction of their need for competence (e.g., “Often I do not feel very competent,” reverse item) and four items assessed satisfaction of their need for relatedness (e.g., “I really like the people I interact with”). Each item was rated on a seven-point scale ranging from 1 (*not at all true*) to 7 (*very true*).

**6.1.3.3. Psychological adjustment to retirement.** To assess the participants' psychological adjustment to retirement, three measures were used to form an index. First, five items from the anxiety subscale (“Have you recently felt constantly under strain?”) and three items from the depression subscale (“Have you recently felt that life isn't worth living?”) of the General Health Questionnaire (Goldberg & Hillier, 1979) were used. Participants were asked to rate these items on a five-point scale ranging from 1 (*never*) to 5 (*always*). Second, Ryan and Frederick's (1997) Vitality Scale (“I feel alive and vital”) was included. Participants were asked to rate the seven items on a seven-point scale ranging from 1 (*not at all true*) to 7 (*very true*). The internal reliability of these scales was good, with Cronbach's alphas ranging from 0.85 to 0.96. The global index of psychological adjustment to retirement was calculated by reverse-scoring the anxiety and depression scales, standardizing all measures, and computing a mean.

## 6.2. Results

Preliminary analyses were performed with SPSS v.22 (I.B.M. Corp, 2013). Table 1 presents means, standard deviations, Cronbach's alphas, and correlations for all the variables. To test the hypothesized model, we conducted a path analysis using AMOS v.22 (Arbuckle, 2012). The hypothesized model comprised two exogenous variables (harmonious passion and obsessive passion at work) and two endogenous variables (basic psychological need satisfaction and psychological adjustment to retirement). The model included indirect paths from harmonious passion and obsessive passion at work to psychological adjustment to retirement through the satisfaction of basic psychological needs in retirement. Covariances were allowed between harmonious passion and obsessive passion. The model was tested using maximum likelihood estimation with robust standard errors (MLR estimation). The goodness-of-fit was assessed using four indices: the Comparative Fit Index (CFI), the Tucker–Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residuals (SRMR). Values above .90 and .95 for the CFI and TLI indicate a satisfactory and excellent fit, respectively (Hoyle, 1995), and values of .08 or less for the RMSEA and SRMR are deemed acceptable (Browne & Cudeck, 1993).

The model provided an excellent fit to the data ( $\chi^2(2) = 1.81, p = .40; CFI = .999; TLI = 1.00; RMSEA = .00; SRMR = .026$ ). Results are summarized in Fig. 2. Results show that harmonious passion and obsessive passion for work positively and negatively predicted psychological adjustment to retirement through satisfaction of basic psychological needs, respectively.

We used bootstrapping to determine whether satisfaction of basic psychological needs in retirement mediated the paths between passion for work (harmonious and obsessive) and psychological adjustment to retirement. Bias-corrected bootstrap 95% confidence intervals were computed from 1000 bootstrap samples. Confidence intervals indicate significant mediation when they exclude zero. Results indicated significant indirect relationships of harmonious passion (bootstrap estimate = .28, SE = .081, CI = .12, .44) and obsessive passion (bootstrap estimate =  $-.32, SE = .057, CI = -.43, -.21$ ) on psychological adjustment to retirement through satisfaction of basic psychological needs. In sum, the results of Study 1 provide support for the hypothesized model. Specifically, harmonious passion for work positively predicted psychological adjustment to retirement, while obsessive passion negatively predicted this adjustment. These relationships were mediated by basic psychological need satisfaction.

Post-hoc analyses were done to examine if age of retirement differed between workers with a harmonious and an obsessive passion, and to investigate the reason why participants retired. No differences were found with respect to age of retirement as a function

**Table 1**

Study 1: Means, standard deviations, and correlations between variables.

	Range	M	SD	1	2	3	4
<i>Retrospectively at work</i>							
1. Harmonious passion	1–7	4.82	1.17	(.88)			
2. Obsessive passion	1–7	3.24	1.36	.54**	(.89)		
<i>Presently in retirement</i>							
3. Psychological adjustment (Z-score)			0.93	.11*	$-.18^*$	(.94)	
4. Basic psychological needs	1–7	5.69	0.86	.16*	$-.27^{**}$	.66**	(.90)

Note. Reliabilities (Cronbach's coefficients) are shown on the diagonal.

\*  $p < .05$ .

\*\*  $p < .01$ .

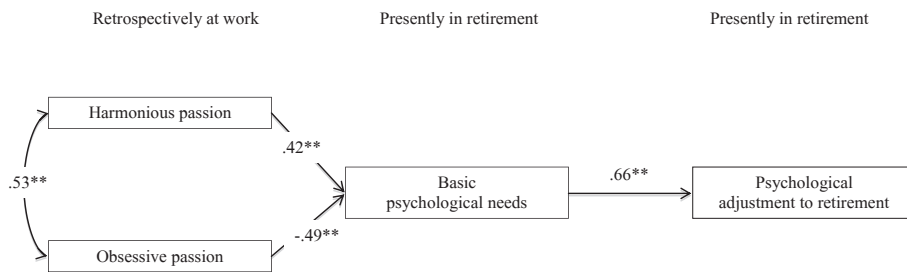


Fig. 2. Final model with significant standardized path coefficients: Study 1. Note: \*\* $p < .01$ .

of passion type (harmonious vs. obsessive). Interestingly, 54.6% of workers with an obsessive passion reported retiring because of health problems, while only 23.3% of harmonious workers did so. Therefore, although obsessive and harmonious workers do not differ in terms of *when* they retire, they seem to differ in terms of *why* they retire.

## 7. Study 2

Although the results of Study 1 confirmed the hypothesized model, it should be underscored that it used a retrospective design. Because such a design entails a methodological weakness, a more rigorous test was thus needed. The goal of the second study was to provide such a test. Specifically, Study 2 used a prospective design over a 6-year period and examined the relationship between passion for work, assessed when participants were still working, and psychological adjustment to retirement, measured when participants were retired. Furthermore, such a design provided the opportunity to test how passion predicted changes in psychological outcomes over the 6-year period. In line with the hypotheses of Study 1, it was hypothesized that harmonious passion would predict increases in life satisfaction and a decrease in psychological distress while the opposite predictions were made with respect to obsessive passion.

### 7.1. Method

#### 7.1.1. Procedure

This study was conducted over a six-year period and comprised two collections of data from French-Canadian teachers in Quebec, Canada. This time lag was chosen to allow us to recruit retirees, as the mean age of participants was 44.1 years at Time 1 (T1). In each study phase, a letter containing an explanation of the study objectives, a questionnaire, and a self-addressed return envelope was sent to the participants. All participants signed an ethical consent form.

#### 7.1.2. Participants

Of the 242 participants who took part in both study phases, 73 were retired at Time 2 (T2). Our sample consisted of 27 men and 46 women. Mean age was 58.5 years ( $SD = 2.4$ ) and average time since retirement was 32 months ( $SD = 25.02$ ). Before retirement, 59.7% of the participants were teachers in elementary schools, 30.6% in high schools and 9.7% in vocational/technical adult programs.

To rule out potential selection bias, a MANOVA was conducted using SPSS v.22 (I.B.M. Corp, 2013) to examine whether retired teachers were equivalent to participants who were still working as teachers. As expected, the two samples differed with regard to age and years of experience (retired teachers were older and had more years of teaching experience). No differences were found for other background variables (gender, level of education) or the study variables at T1 (harmonious passion and obsessive passion, work satisfaction, and psychological distress). These results suggest no selection bias.

#### 7.1.3. Measures

**7.1.3.1. Passion for work.** To minimize the total number of items, the short form (Lafrenière, Vallerand, & Sedikides, 2013) of the Passion Scale (Vallerand et al., 2003) was used in this study. Two three-item subscales assessed harmonious passion and obsessive passion. In the validation study of the short form, CFA analyses supported the construct validity (factor structure and factor structure invariance over gender, age, and language).

**7.1.3.2. Basic psychological need satisfaction.** A short form of the Basic Need Satisfaction in General (Deci & Ryan, 2000; Gagné, 2003) was used to assess satisfaction of the participants' need for autonomy (three items; e.g., "I feel like I am free to decide for myself how to live my life"), competence (three items; e.g., "Often I do not feel very competent," reverse item) and relatedness (three items; e.g., "I really like the people I interact with"). Each item was rated on a seven-point scale ranging from 1 (*do not agree at all*) to 7 (*very strongly agree*).

**7.1.3.3. Psychological adjustment to retirement.** Psychological adjustment to retirement was operationalized as the absence of psychological distress and the presence of life satisfaction. First, psychological distress was assessed using the 14-item Psychiatric Symptom

Index (Ilfeld, 1976). This measure assesses four symptoms experienced during the previous week: anxiety, depression, irritability, and cognitive problems. A sample item is “I felt agitated or nervous” (anxiety). Items were scored on a four-point scale ranging from 1 (*never*) to 4 (*very often*). Second, life satisfaction was assessed using the French–Canadian version (Blais, Vallerand, Pelletier, & Brière, 1989) of the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). This measure includes five items measured on a seven-point scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Since life satisfaction was not assessed at T1, we used work satisfaction as a proxy for life satisfaction. It has been suggested that job and life satisfaction are closely related because, for most people, work is a significant and central aspect of their life (Dubin, 1956). Empirical findings show consistent correlations, ranging from .31 to .44, between job and life satisfaction (see Tait, Padgett, & Baldwin, 1989). A sample item is “In most ways my life [job] is close to my ideal.”

## 7.2. Results

Means, standard deviations, Cronbach's alphas, and correlations are presented in Table 2. To test our hypotheses, we conducted a path analysis using *Mplus* (Muthén & Muthén, 1998–2012). The hypothesized model comprised four exogenous variables (harmonious passion, obsessive passion, psychological distress, and work satisfaction at T1) and three endogenous variables (basic psychological needs, psychological distress and life satisfaction at T2). Specifically, controlling for psychological distress and work satisfaction at T1, the model included direct paths from harmonious passion and obsessive passion at T1 to psychological distress and life satisfaction at T2 as well as indirect paths through satisfaction of basic psychological needs at T2. Covariances were allowed between endogenous variables (harmonious passion and obsessive passion, work satisfaction, and psychological distress at T1) and between the exogenous variables posited as outcomes (psychological distress and life satisfaction at T2). The model was tested using maximum likelihood estimation with robust standard errors (MLR estimation). The goodness-of-fit was assessed using the same indices as in Study 1.

The model provided an excellent fit to the data ( $\chi^2(4) = 4.867$ , CFI = .993, TLI = .973, RMSEA = .054, SRMR = .038). Results are summarized in Fig. 3. Controlling for work satisfaction and psychological distress at T1, the results provide partial support for the hypothesized model. Harmonious passion at T1 negatively predicted psychological distress at T2 and positively predicted life satisfaction at T2 through satisfaction of basic psychological needs. However, obsessive passion at T1 did not predict life satisfaction or psychological distress at T2 through satisfaction of basic psychological needs. Note that none of the four direct paths were significant: Harmonious passion at T1 to psychological distress ( $\beta = -.06$ ) and life satisfaction ( $\beta = .11$ ) at T2 or obsessive passion at T1 to psychological distress ( $\beta = .01$ ) and life satisfaction ( $\beta = -.17$ ) at T2.

To more formally test the hypothesized model, we used bootstrapping to determine whether satisfaction of basic psychological needs at T2 mediated the paths between harmonious passion at T1 and psychological distress and life satisfaction at T2. Bias-corrected bootstrap 95% confidence intervals were computed from 1000 bootstrap samples. Confidence intervals indicate significant mediation when they exclude zero. Results indicated significant indirect relationships of harmonious passion with psychological distress (bootstrap estimate =  $-.16$ ,  $SE = .038$ ,  $CI = -.253, -.091$ ) and life satisfaction (bootstrap estimate =  $.28$ ,  $SE = .078$ ,  $CI = .148, .495$ ) through satisfaction of basic psychological needs. In sum, these findings suggest that the quality of psychological investment in one's work makes a substantial contribution to explaining *why* some individuals ensure that more of their psychological needs are satisfied in retirement and adjust better than others do.

## 8. Discussion

The goal of the present series of studies was to provide a first investigation of the relationship between passion for work and psychological adjustment to retirement. By combining the literature on the adjustment process to retirement and the literature on passion, a hypothesized model in which passion for work predicts psychological adjustment to retirement through the satisfaction of basic psychological needs was tested in two studies, one using a retrospective cross-sectional design and the second using a longitudinal design.

**Table 2**

Study 2: Means, standard deviations, and correlations between variables.

	Range	M	SD	1	2	3	4	5	6	7
<i>Time 1</i>										
1. Harmonious passion	1–7	5.00	1.02	(.80)						
2. Obsessive passion	1–7	2.76	1.45	-.10	(.79)					
3. Psychological distress	1–4	1.69	0.51	-.50**	.33**	(.91)				
4. Work satisfaction	1–7	4.57	1.15	.70**	-.26*	-.56**	(.90)			
<i>Time 2</i>										
5. Basic psychological needs	1–7	5.71	0.78	.58**	-.27*	-.49**	.48**	(.90)		
6. Psychological distress	1–4	1.46	0.46	-.54**	.28*	.58**	-.38**	-.78**	(.92)	
7. Life satisfaction	1–7	5.33	0.91	.46**	-.32**	-.39**	.35**	.66**	-.64**	(.89)

Note. Reliabilities (Cronbach's coefficients) are shown on the diagonal.

\*  $p < .05$ .

\*\*  $p < .01$ .

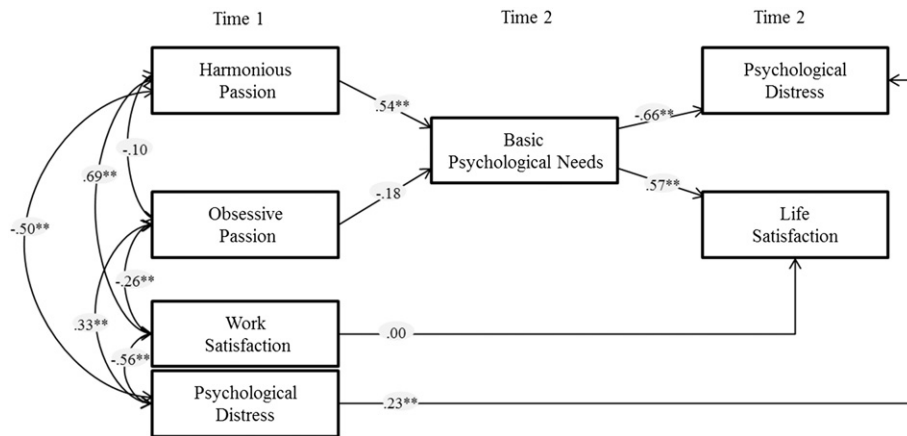


Fig. 3. Final model with significant standardized path coefficients: Study 2. Note: \*\* $p < .01$ .

Both studies confirmed the mediating role of basic psychological need satisfaction in the passion–psychological adjustment to retirement relationship. Need satisfaction significantly mediated the relationship between harmonious passion for work and psychological adjustment to retirement in Studies 1 and 2. The mediation was also confirmed between obsessive passion and psychological adjustment to retirement in Study 1, but not in Study 2. These findings suggest that passion for work matters in psychological adjustment to retirement – especially harmonious passion, because with such a passion individuals can invest and engage in activities that satisfy their basic psychological needs. As far as we could establish, these findings have not been reported before and provide new research avenues to further understand the adjustment to retirement process. Indeed, being passionate about work can lead to positive or negative outcomes in retirement, depending on whether the passion is harmonious or obsessive, respectively. Hence, how one relates to work during one's working life will influence how retirement is experienced. Our research thus confirms both the positive and negative sides to retirement found in the literature: Retirement can lead to positive outcomes, such as in Mein et al.'s (2003) research, or to negative outcomes, hence supporting results of Dave et al. (2008) for instance.

These findings help explain why some workers have a harder time adjusting to retirement than others and extend previous research on workers adjustment to retirement. It appears that obsessive passion for work leads to the thwarting of basic psychological needs in retirement. Forest et al. (2011) found that obsessive passion for work was negatively related to need satisfaction at work. Findings from Study 1 show that obsessive passion for work can pave the way for long-lasting need thwarting. Indeed, engaging in work with an obsessive passion can result in less perceived autonomy, competence and relatedness after retirement. Need thwarting is known to be related to ill-being and non-optimal functioning (Deci & Ryan, 2000; Ryan, 1995). The present results further previous knowledge on self-determination theory (Deci & Ryan, 2000) and adjustment to retirement by demonstrating that when basic psychological needs are thwarted, psychological adjustment to retirement is difficult.

Obsessive passion also leads people to experience insecurity and uncertainty (Vallerand, in press), and low implicit self-esteem (Lafrenière, Bélanger, Sedikides, & Vallerand, 2011). In addition, it has previously been established that obsessive passion is positively related to contingent self-esteem. Hence, retirement may pose a threat to the self for people who embrace an obsessive passion for their work. Since their professional life is the only area of activity that makes them feel happy and provides them with a sense of self-worth, workers with an obsessive passion may have difficulty letting go of their professional identity and activities. A rigid persistence to continue working could be observed.

The latter raises the issue of whether workers invested with an obsessive passion will only retire when forced to do so. Post-hoc analysis of additional data from Study 1 provides some support for this hypothesis. Specifically, while no differences were found with respect to age of retirement as a function of passion type (harmonious vs. obsessive), 54.6% of workers with an obsessive passion reported retiring because of health problems, while only 23.3% of harmonious workers did so. Therefore, although obsessive and harmonious workers do not differ in terms of when they retire, they differ in terms of why they retire. These results concur with previous studies revealing that obsessive passion entails some rigid persistence toward the activity that is conducive to health problems (Rip, Fortin, & Vallerand, 2006; Stephan, Deroche, Brewer, Caudroit, & Le Scanff, 2009) and psychological problems such as burnout (Donahue et al., 2012; Lavigne et al., 2012; Vallerand et al., 2010) and depression (Houliort et al., 2014). Workers who are invested with an obsessive passion are more at risk of physical and psychological ill-being, which might precipitate their retirement and cause them to feel even worse after retirement. There is clearly a need for future research on this topic.

These results also suggest that, while being passionate about work, having a harmonious type of passion can lead to a healthy transition into retirement, hence supporting results from Mein et al. (2003) and Wang (2007) that suggest that retirement leads to positive outcomes. Results from Studies 1 and 2 suggest that harmonious passion for work paves the way for basic need satisfaction in retirement, thus leading to psychological adjustment to retirement. It is possible that the flexibility entailed in harmonious passion leads workers to partake in new activities once they are retired and thus to take advantage of the investment they made in their work. Among these advantages is the fulfillment of basic psychological needs, which leads to increased psychological adjustment to retirement.



We speculate that having a harmonious passion for work provides access to an adaptive self-process that allows workers to modify their identity – by letting go of their professional identity and integrating their new status – and fully engage in new activities when their working life comes to an end. Following retirement, successfully rebuilding a positive identity and being flexible in the pursuit of one's goals – a task that workers with a harmonious passion might undertake more fruitfully – can contribute to a positive psychological adjustment to retirement (Kubicek et al., 2011; Trépanier et al., 2001; Wang & Shultz, 2010).

In addition, having a harmonious passion allows individuals to fully invest in other (non-passionate) activities. Hence, this capacity might open up harmonious workers to alternative, non-professional activities once they are retired. Past research has revealed that workers who identify activities ahead of time and plan how they will spend their time once retired report greater well-being (Noone, Stephens, & Alpass, 2009). It is thus possible that harmonious workers, because of their capacity to be interested in other, non-work-related activities, are more capable than obsessive workers of keeping busy after retirement. Retirees who were once fuelled by a harmonious passion for work may develop a passion for another activity. Future research should investigate this possibility.

### 8.1. Limitations

Both studies had small samples, which limited the effect sizes obtained. The consistent pattern of results using different study designs, samples and measures lend a degree of generalizability to our findings, but it will be important for future studies to replicate them with larger and more representative samples. *Study 1* used a retrospective design. Such a design relies on respondents' capacity to retrieve events, emotions and cognitions that occurred in the past, and thus data collected retrospectively can be biased and inaccurate. Although this clearly constitutes a methodological limitation, the results of *Study 2*, which used a prospective design, yielded similar results to those obtained in *Study 1* and therefore provide additional confidence regarding the proposed relationships between the two types of passion and psychological adjustment to retirement. Another limitation deals with the fact that the instruments used to assess satisfaction of basic psychological needs and psychological adjustment to retirement were standardized on adult populations, but not specifically on retirees. Although we are confident in the instruments used (all showed good psychometric properties), lack of standardization in a retirement context constitutes a methodological limitation.

### 8.2. Future research

This initial investigation of the relationship between passion for work and psychological adjustment to retirement opens up several interesting research avenues. Taking into account need satisfaction certainly provides some explanation as to why passion is related to psychological adjustment to retirement, but considering other factors simultaneously would greatly increase our understanding of this process. Several possible mechanisms were mentioned in the present paper: flexibility, preservation of self-esteem, ability to invest time and energy in other non-passionate activities, ill-being, etc. Now that harmonious passion and obsessive passion have been established to have positive and negative influences on psychological adjustment to retirement, respectively, it is necessary to extend our understanding as to why. Another interesting avenue for research in this domain would be to examine whether passionate workers transpose their passion for work to another activity after retirement. Are harmonious workers more inclined to find another passionate activity in retirement than obsessive workers? When passion is transposed, can it change types (become harmonious when, for example, passion for work was obsessive)? Finally, not all employees are passionate toward their work. Future research should investigate the implications of retirement for people who report neither harmonious passion nor obsessive passion for their jobs.

## 9. Practical implications

In addition to new research avenues, the present research highlights several practical implications. First, organizations should help their employees develop a harmonious passion for their work, instead of an obsessive passion. Developing an organizational culture that promotes collaboration, upholds personal development and values their employees was shown to be related to harmonious passion for work (Houfort & Vallerand, submitted for publication). Facilitating workers' use of their signature strengths (Forest et al., 2012), developing their emotional intelligence (Houfort & Rinfret, 2010) and coaching their leaders to adopt a transformational leadership style (Houfort & Vallerand, submitted for publication) are also organizational factors related to harmonious passion for work.

In terms of psychological adjustment to retirement, the present research also points to the importance of fulfilling basic psychological needs. Hence, organizations can help their employees satisfy their basic psychological needs by providing a work environment that allows employees to enact their personal values, make significant choice, have an impact on their environment and develop respectful relationships.

Workers also need to set the right conditions for retirement. Beyond financial, social planning and maintaining good physical health, workers have to be aware of the possible effect of one's professional life on psychological adjustment to retirement. Passion can be good and uplifting, but it can also lead to poor psychological adjustment to retirement. Pre-retirement training should perhaps include information on passion for work, but also for other activities, basic psychological needs and how to satisfy them.

## 10. Conclusion

For most of us, retirement is inevitable. This transition from work can either be a positive life experience – investing time in non-professional activities with fewer constraints, taking on new challenges, traveling and positively redefining oneself – or it can be negative – losing a sense of identity and psychological well-being. The present studies confirm that passion for work can help us understand why different workers may experience retirement differently: Workers with an obsessive passion have more difficulty adjusting to retirement than workers with a harmonious passion for work. Although future research is needed to further our understanding of how passion influences the process of adjustment to retirement, it is clear that by facilitating the fulfillment of basic need satisfaction, harmonious passion for work paves the way to a healthier and more satisfying retirement.

## References

- Arbuckle, J. L. (2012). *Amos 21 user's guide*. Chicago, IL: SPSS Inc.
- Blais, M. R., Vallerand, R. J., Pelletier, L. G., & Brière, N. M. (1989). L'Echelle de satisfaction de vie: Validation Canadienne-Française du "Satisfaction With Life Scale" [French-Canadian validation of the satisfaction with life scale]. *Canadian Journal of Behavioural Science*, 21, 210–223.
- Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological Inquiry*, 18, 211–237.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Beverly Hills, CA: Sage.
- Carbonneau, N., Vallerand, R. J., Fernet, C., & Guay, F. (2008). The role of passion for teaching in intrapersonal and interpersonal outcomes. *Journal of Educational Psychology*, 100, 977–987.
- Carver, C. S. (1996). Cognitive interference and the structure of behavior. In I. G. Sarason, G. R. Pierce, & B. R. Sarason (Eds.), *The LEA series in personality and clinical psychology. Cognitive interference: Theories, methods, and findings*. (pp. 25–45). Hillsdale, NJ, England: Lawrence Erlbaum Associates.
- Caudroit, J., Boiché, J., Stephan, Y., Le Scanff, C., & Trouilloud, D. (2011). Predictors of work/family interference and leisure-time physical activity among teachers: The role of passion towards work. *European Journal of Work and Organizational Psychology*, 20, 326–344.
- Caudroit, J., Stephan, Y., Brewer, B. W., & Le Scanff, C. (2010). Contextual and individual predictors of psychological disengagement from sport during a competitive event. *Journal of Applied Social Psychology*, 40, 1999–2018.
- Dave, D., Rashad, I., & Spasojevic, J. (2008). The effects of retirement on physical and mental outcomes. *Southern Economic Journal*, 75, 497–523.
- Deci, E. L., & Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268.
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71–75.
- Donahue, E. G., Forest, J., Vallerand, R. J., Lemyre, P. N., Crevier-Braud, L., & Bergeron, É. (2012). Passion for work and emotional exhaustion: The mediating role of rumination and recovery. *Applied Psychology: Health and Well-Being*, 4, 341–368.
- Dubin, R. (1956). Industrial workers' worlds: The 'central life interests' of industrial workers. *Journal of Social Issues*, 3, 131–142.
- Fernet, C., Lavigne, G. L., Vallerand, R. J., & Austin, S. (2014). Fired up with passion: Investigating how job autonomy and passion predict burnout at career start in teachers. *Work & Stress*, 28, 270–288.
- Forest, J., Mageau, G. A., Crevier-Braud, L., Dubreuil, P., Bergeron, E., & Lavigne, G. L. (2012). Harmonious passion as a mediator of the relation between signature strengths' use and optimal functioning at work: Test for an intervention program. *Human Relations*, 65, 1233–1252.
- Forest, J., Mageau, G. A., Sarrazin, C., & Morin, E. M. (2011). "Work is my passion": The different affective, behavioural, and cognitive consequences of harmonious and obsessive passion toward work. *Canadian Journal of Administrative Sciences*, 28, 17–30.
- Gagné, M. (2003). Autonomy support and need satisfaction in the motivation and well-being of gymnasts. *Journal of Applied Sport Psychology*, 15(4), 372–390.
- Goldberg, D. P., & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. *Psychological Medicine*, 9, 139–145.
- Hodgins, H. S., & Knee, R. (2002). The integrating self and conscious experience. In E. L. Deci, & R. M. Ryan (Eds.), *Handbook on self-determination research: Theoretical and applied issues* (pp. 87–100). Rochester, NY: University of Rochester Press.
- Houlfort, N., Philippe, F., Vallerand, R. J., & Ménard, J. (2014). On passion as heavy work investment and its consequences. *Journal of Managerial Psychology*, 29, 25–45.
- Houlfort, N., & Rinfret, N. (2010). Favoriser la satisfaction au travail des directeurs généraux du réseau de la santé et des services sociaux: Impact du style de leadership adopté et de la passion envers le travail [To facilitate the work satisfaction of general managers of health and social services: The impact of leadership style and passion for work]. In D. B. Raveleau, & F. B. Hassel (Eds.), *Management humain des organisations: Grandeurs et misères de la fonction de dirigeant* (pp. 165–185). Paris: Éditions L'Harmattan.
- Houlfort, N., & Vallerand, R. J. (2014n). *Leadership and organizational culture as determinants of passion for work*. (Manuscript submitted for publication).
- Hoyle, R. H. (Ed.). (1995). *Structural equation modeling: Concepts, issues, and applications*. Thousand Oaks, CA: Sage Publications.
- I.B.M. Corp (2013). *IBM SPSS Statistics for Windows, Version 22.0*. Armonk, NY: IBM Corp.
- Ilfeld, F. W. (1976). Further validation of a psychiatric symptom index in a normal population. *Psychological Reports*, 39, 1215–1228.
- Kubicek, B., Korunka, C., Raymo, J. M., & Hoonakker, P. (2011). Psychological well-being in retirement: The effects of personal and gendered contextual resources. *Journal of Occupational Health Psychology*, 16, 230–246.
- Lafrenière, M. -A. K., Bélanger, J. J., Sedikides, C., & Vallerand, R. J. (2011). Self-esteem and passion for activities. *Personality and Individual Differences*, 51, 541–544.
- Lafrenière, M. -A. K., Vallerand, R. J., & Sedikides, C. (2013). On the relation between self-enhancement and life satisfaction: The moderating role of passion. *Self and Identity*, 12, 597–609.
- Lavigne, G. L., Forest, J., & Crevier-Braud, L. (2012). Passion at work and burnout: A two-study test of the mediating role of flow experiences. *European Journal of Work and Organizational Psychology*, 21, 518–546.
- Mageau, G. A., Carpentier, J., & Vallerand, R. J. (2011). The role of self-esteem contingencies in the distinction between obsessive and harmonious passion. *European Journal of Social Psychology*, 41, 720–729.
- Marsh, H. W., Vallerand, R. J., Lafrenière, M. A. K., Parker, P., Morin, A. J. S., Carbonneau, N., et al. (2013). Passion: Does one scale fit all? Construct validity of two-factor passion scale and psychometric invariance over different activities and languages. *Psychological Assessment*, 25, 796–809.
- Mein, G., Martikainen, P., Hemingway, H., Stansfeld, S. A., & Marmot, M. G. (2003). Is retirement good or bad for mental and physical health functioning? Whitehall II longitudinal study of civil servants. *Journal of Epidemiology and Community Health*, 57, 46–49.
- Muthén, L. K., & Muthén, B. O. (1998–2012). *Mplus user's guide* (Seventh Edition). Los Angeles, CA: Muthén & Muthén.
- Noone, J., Stephens, C., & Alpass, F. (2009). Preretirement planning and well-being in later life: A prospective study. *Research on Aging*, 31, 295–317.
- Ratelle, C. F., Vallerand, R. J., Mageau, G. A., Rousseau, F. L., & Provencher, P. (2004). When passion leads to problematic outcomes: A look at gambling. *Journal of Gambling Studies*, 20, 105–119.
- Reitzes, D. C., & Mutran, E. J. (2006). Lingering identities in retirement. *The Sociological Quarterly*, 47, 333–359.
- Rip, B., Fortin, S., & Vallerand, R. J. (2006). The relationship between passion and injury in dance students. *Journal of Dance Medicine & Science*, 10, 14–20.
- Ryan, R. M. (1995). Psychological needs and the facilitation of integrative processes. *Journal of Personality*, 63, 397–427.
- Ryan, R. M., & Deci, E. L. (2003). On assimilating identities of the self: A self-determination theory perspective on internalization and integrity within cultures. In M. R. Leary, & J. P. Tangney (Eds.), *Handbook of Self and Identity* (pp. 253–272). New York: Guilford.
- Ryan, R. M., & Frederick, C. M. (1997). On energy, personality and health: Subjective vitality as a dynamic reflection of well-being. *Journal of Personality*, 65, 529–565.
- Schaufeli, W. B., Taris, T. W., & van Rhenen, W. (2008). Workaholism, burnout, and work engagement: Three of a kind or three different kinds of employee well-being? *Applied Psychology: An International Review*, 57, 173–203.

- Sheldon, K. M., Ryan, R. M., & Reis, H. T. (1996). What makes for a good day? Competence and autonomy in the day and in the person. *Personality and Social Psychology Bulletin*, 22, 1270–1279.
- Stenseng, F., & Harvold Dalskau, L. (2010). Passion, self-esteem, and the role of comparative performance evaluation. *Journal of Sport and Exercise Psychology*, 32, 881–894.
- Stephan, Y., Deroche, T., Brewer, B. W., Caudroit, J., & Le Scanff, C. (2009). Predictors of perceived susceptibility to sport-related injury among competitive runners: The role of previous experience, neuroticism, and passion for running. *Applied Psychology: An International Review*, 58, 672–687.
- Tait, M., Padgett, M. Y., & Baldwin, T. T. (1989). Job and life satisfaction: A re-examination of the strength of the relationship and gender effects as a function of the date of the study. *Journal of Applied Psychology*, 74, 502–507.
- Trépanier, L., Lapierre, S., Baillargeon, J., & Bouffard, L. (2001). Ténacité et flexibilité dans la poursuite de projets personnels: Impact sur le bien-être à la retraite. *Canadian Journal on Aging/La Revue Canadienne du vieillissement*, 20, 557–576.
- Vallerand, R. J. (2015s). *The psychology of passion*. New York: Oxford University Press (in press).
- Vallerand, R. J., Blanchard, C. M., Mageau, G. A., Koestner, R., Ratelle, C., Léonard, M., et al. (2003). Les passions de l'âme: On obsessive and harmonious passion. *Journal of Personality and Social Psychology*, 85, 756–767.
- Vallerand, R. J., & Houliort, N. (2003). Passion at work: Toward a new conceptualization. In S. W. Gilliland, D. D. Steiner, & D. P. Skarlicki (Eds.), *Emerging perspectives on values in organizations* (pp. 175–204). Greenwich, CT: Information Age Publishing.
- Vallerand, R. J., Houliort, N., & Forest, J. (2014). Passion for work: Determinants and outcomes. In M. Gagné (Ed.), *The Oxford handbook of work engagement, motivation, and self-determination theory* (pp. 85–105). Oxford: Oxford University Press.
- Vallerand, R. J., Ntoumanis, N., Philippe, F. L., Lavigne, G., Carbonneau, N., Bonneville, A., et al. (2008). On passion and sports fans: A look at football. *Journal of Sport Sciences*, 26, 1279–1293.
- Vallerand, R. J., Paquet, Y., Philippe, F. L., & Charest, J. (2010). On the role of passion in burnout: A process model. *Journal of Personality*, 78, 289–312.
- van Solinge, H., & Henkens, K. (2008). Adjustment to and satisfaction with retirement: Two of a kind? *Psychology and Aging*, 23, 422–434.
- Vansteenkiste, M., Neyrinck, B., Niemiec, C. P., Soenens, B., De Witte, H., & Van den Broeck, A. (2007). On the relations among work value orientations, psychological need satisfaction, and job outcomes: A self-determination theory approach. *Journal of Occupational and Organizational Psychology*, 80, 251–277.
- Walsh, K., & Gordon, J. R. (2008). Creating an individual work identity. *Human Resource Management Review*, 18, 46–61.
- Wang, M. (2007). Profiling retirees in the retirement transition and adjustment process: Examining the longitudinal change patterns of retirees' psychological well-being. *Journal of Applied Psychology*, 92, 455–474.
- Wang, M., Henkens, K., & van Solinge, H. (2011). Retirement adjustment: A review of theoretical and empirical advancements. *American Psychologist*, 66, 204–213.
- Wang, M., & Shultz, K. S. (2010). Employee retirement: A review and recommendations for future investigation. *Journal of Management*, 36, 172–206.
- Wong, J. Y., & Earl, J. K. (2009). Towards an integrated model of individual, psychosocial, and organizational predictors of retirement adjustment. *Journal of Vocational Behavior*, 75, 1–13.