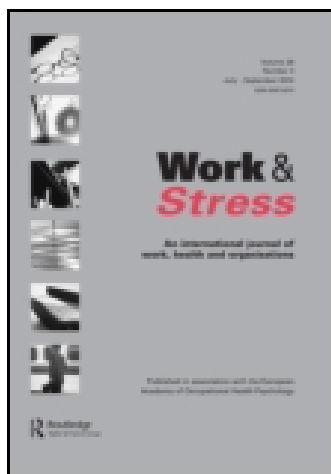


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### Fired up with passion: Investigating how job autonomy and passion predict burnout at career start in teachers

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## Fired up with passion: Investigating how job autonomy and passion predict burnout at career start in teachers

Claude Fernet<sup>a\*</sup>, Geneviève L. Lavigne<sup>b</sup>, Robert J. Vallerand<sup>c</sup> and Stéphanie Austin<sup>a</sup>

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This study examines a motivational premise of burnout: in order to burn out, an employee must first be fired up. Based on the dualistic model of passion, we propose that the types of passion – harmonious or obsessive – that drive novice teachers differentially affect the three components of burnout. We further propose that job autonomy (i.e. decision latitude) differentially predict the two types of passion for work. These hypotheses are tested in two studies conducted in Canada in teachers with five years' or less experience. Study 1, using a cross-sectional design, showed that job autonomy positively predicted harmonious passion but negatively predicted obsessive passion. Harmonious passion negatively predicted all three components of burnout, whereas obsessive passion positively predicted emotional exhaustion and depersonalization. A second, 12-month longitudinal study revealed unidirectional effects of job autonomy on the two types of passion. The results also showed unidirectional effects of harmonious passion on professional efficacy and obsessive passion on emotional exhaustion. Neither type of passion predicted cynicism over time. These findings suggest that a more nuanced understanding of passion is required to predict burnout at career start. Implications for theory and further research on burnout and passion for work are discussed.

**Keywords:** burnout; job autonomy; passion; career start; teachers; dualistic model of passion

### Introduction

Teachers who are fired up about their work are widely thought to be vulnerable to burnout. But is that really the case? Early research on burnout was based on this very premise: in order to burn out, employees must first be strongly psychologically invested in their work. Psychological investment may manifest as devotion (Farber, 1983), involvement (Lodahl & Kejner, 1965), commitment (Meyer, Allen, & Smith, 1993) or engagement (Schaufeli, Salanova, González-Romá, & Bakker, 2002). This is an intriguing assumption, given that, despite some conceptual differences, these concepts share the notion that psychological investment in an activity is generally adaptive, such that it produces more positive than negative consequences.

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Recently, Vallerand et al. (2003) proposed two types of passion – harmonious and obsessive – that concern the degree to which psychological investment in an activity is internalized within the identity. Defined as a strong inclination towards an activity that people like, find important, and in which they invest time and energy, passion is harmonious when the activity is under the control of the individual, whereas passion is obsessive when the activity controls the individual. This dual conceptualization of passion further proposes differential relationships between types of passion and psychological outcomes. With respect to burnout, a study by Carbonneau, Vallerand, Fernet, and Guay (2008) among 494 experienced teachers (mean years of experience = 15.8) showed that harmonious passion lessened burnout (i.e. exhaustion and depersonalization) over a three-month period, whereas obsessive passion predicted burnout cross-sectionally only. Whereas this study and extant literature provide valuable insights into the nature of passion and its broad effects, some theoretical and empirical gaps remain in our understanding of the workplace factors liable to influence passion for teaching, as well as the precise pathways by which harmonious and obsessive passion impact burnout at career start. Narrowing this gap is important given that teachers are particularly at risk for burnout (Schaufeli & Enzmann, 1998), career start may be a critical period in the development and persistence of burnout (Ashforth & Lee, 1997), and burnout may degrade the quality of teaching and school functioning (Chang, 2009). Although the present study was designed to investigate burnout in novice teachers, it could serve as a springboard to a deeper understanding of how passion predicts burnout at career start in other at-risk occupational groups, such as emergency rescue workers and health-care professionals.

Drawing on the dualistic model of passion (Vallerand et al., 2003), we propose that to answer the question of whether teachers who are fired up about their work become vulnerable to burnout, we must account for the quality of passion. As described in detail below, we propose that one type of passion (obsessive) is likely to foster burnout, whereas another type (harmonious) is likely to prevent it. We also propose that job autonomy (also called decision latitude), which plays a major role in teacher motivation as well as the experience of stress and burnout (Pearson & Moomaw, 2006), has a significant effect on the internalization of passion for work.

The present study contributes to the research on burnout in three ways. First, we depart from the common assumption that passion for work is mainly an adaptive construct leading to favourable outcomes (e.g. Cardon, Gregoire, Stevens, & Patel, 2013). We examine whether passion, when operationalized as either harmonious or obsessive, differentially affects teacher burnout at career start (Vallerand, 2010, Vallerand et al., 2003). This provides a deeper understanding of why strong psychological investment in work contributes (or not) to burnout. Second, as suggested by Maslach, Schaufeli, and Leiter (2001), we consider the individual and contextual correlates of burnout simultaneously. Specifically, we attempt to extend knowledge on psychological mechanisms by examining the role of passion in relation to job autonomy and burnout using a longitudinal design. Thus, we examine whether the effects observed in a cross-sectional study are reproducible over time, a significant concern in burnout research (Schaufeli, 2003). Third, burnout research to date has largely neglected newly hired employees (Dunford, Shipp, Boss, Angermeier, & Boss, 2012). However, although burnout is thought to be relatively stable in experienced teachers (e.g. Carbonneau et al., 2008), psychological processes leading to burnout may differ according to career stage (experienced versus novice teachers). In practical terms, this study therefore aims to

advance understanding of how to prevent burnout and avoid the associated long-term psychological and organizational costs. In the next sections, we present the concept of burnout, the dualistic model of passion and our study.

### *The dynamic nature of burnout*

Burnout is characterized by emotional exhaustion, depersonalization and reduced personal accomplishment (Maslach, 1982; Schaufeli, Leiter, Maslach, & Jackson, 1996). *Emotional exhaustion* refers to the feeling of being emotionally overextended and exhausted at work. *Depersonalization* (also termed *cynicism*) refers to negative, cynical or excessively detached responses to other people at work. *Reduced personal accomplishment* (also termed *loss of professional efficacy*) refers to the feeling of lack of achievement and productivity at work. Although emotional exhaustion is the acknowledged hallmark of burnout, research suggests that each component should be examined separately in order to capture critical aspects of the burnout syndrome (Schaufeli & Taris, 2005).

Despite the fact that the components of burnout are expected to evolve, most studies have used a cross-sectional design to investigate them. This is a serious limitation, as burnout refers to the employee's psychological response to prolonged exposure to stress at work (Maslach, 1982), a response that evolves with time. Surprisingly, the research on burnout shows that effects observed in cross-sectional studies are not generally reproduced in longitudinal studies (Schaufeli, 2003). The temporal stability of burnout components, correlation coefficients for which typically exceed .50 over a year-long period, has been proposed as an explanation.

Moreover, most of the burnout research has been conducted in samples of experienced workers. For example, in Lee and Ashforth's (1996) meta-analysis, employees' average age was 45.3 years, with 17.8 years of organizational tenure on average. Based on this stability premise, it would appear critical to investigate early predictors of burnout and their effects in order to minimize psychological costs that could persist throughout an entire career. Recently, Dunford et al. (2012) empirically demonstrated the dynamic nature of burnout at career start in health-care workers. Using random coefficient modelling, they found much greater emotional exhaustion and depersonalization in newcomers than in job changers (e.g. employees who had been promoted or made lateral moves) and organizational insiders (i.e. job incumbents). Albeit informative, these studies have not directly addressed predictive factors for burnout at career start, such as strong psychological investment at the outset, which may manifest as passion for work.

### *The dualistic model of passion*

The dualistic model of passion (DMP; Vallerand, 2010; Vallerand et al., 2003) proposes that people may invest in an activity not only to various degrees – a quantifiable aspect – but also in one of two ways – a qualitative aspect in which passion may be either harmonious or obsessive. The quality of passion can be distinguished in terms of how the passionate activity has been internalized into one's identity. Harmonious passion is characterized by strong psychological investment in a passionate activity that has been autonomously internalized within the identity. This passion type develops when an activity becomes part of the individual's identity, with no associated constraints or

contingencies, and when it has been freely chosen as highly important for oneself (Deci & Ryan, 2000; Vallerand et al., 2003). Furthermore, the activity remains under the individual's control, even though it occupies a dominant place in that individual's life. An example of harmonious passion would be a teacher who loves and highly values teaching, and volitionally engages in the work without generating conflicts with other important life spheres. Consequently, the teacher derives pleasure and self-actualization from teaching, but not at the expense of personal life.

Although harmonious passion shares similarities with several job attitudes (e.g. job involvement, organizational commitment) and motivational constructs (e.g. job engagement), the concept of harmonious passion cannot be reduced to any of these, for at least two reasons. First, being internalized, passion is a central aspect of the individual's identity, (Vallerand et al., 2003). Whereas job involvement refers to the degree of identification with one's work (Lodahl & Kejner, 1965) and organizational commitment refers to the degree of attachment to, or identification with, the organization (Meyer et al., 1993), these concepts do not take into consideration the extent to which the employee recognizes and accepts the underlying value of this identification. Although work engagement appears to be a broader concept, in the sense that it refers to "a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption" (Schaufeli et al., 2002, p. 74), it remains unclear whether engaged employees have internalized the activity into their identity. Moreover, as for the other concepts, work engagement is expected to lead to positive outcomes only. Yet Halbesleben, Harvey, and Bolino (2009) found that through investment in extra-role behaviours, work engagement positively predicts work interference with family, which would be inconsistent with harmonious passion.

Obsessive passion, the second passion type proposed by the DMP (Vallerand, 2010; Vallerand et al., 2003), results from controlled internalization of an activity within the individual's identity. Specifically, controlled internalization originates from intra- and/or interpersonal contingencies associated with the activity, such as contingent self-esteem, social acceptance or high performance. Such internalization process leads to the development of obsessive passion for the activity. There is also love for the activity and strong investment. However, the investment gets out of the individuals' control. The activity starts to control the person to the point where obsessively passionate people cannot help but invest in the activity, even when such investment is ill-advised. Obsessive passion generates conflict between the passionate activity and other life domains, resulting in rigid psychological investment and persistence (Séguin-Lévesque, Laliberté, Pelletier, Blanchard, & Vallerand, 2003). An example of obsessive passion would be a teacher who loves teaching but becomes so invested in the work that it becomes the sole source of self-esteem. Obsessive passion shares similarities with workaholism: both are characterized by high investment in the work and drive (Spence & Robbins, 1992). However, in the case of obsessive passion an employee may still enjoy the work, which is not necessarily the case with workaholism.

In terms of psychological consequences, harmonious passion has been associated with the flow experience, positive emotions, low levels of negative emotions, decreased burnout and high psychological health (see Vallerand, 2010, for a review). Conversely, obsessive passion has been associated with negative emotions during an activity, high rumination when people are prevented from investing in an activity, investment in the activity even when it is ill-advised (e.g. when the risks of injury are higher), and low psychological and physical health (see Vallerand, 2010). In addition, obsessive passion

has been positively related to greater emotional exhaustion (Lavigne, Forest, & Crevier-Braud, 2012).

In a first attempt to assess the differential effects of harmonious and obsessive passion on each burnout component in novice teachers, we propose the following hypotheses:

*Hypothesis 1:* Harmonious passion will be negatively related to emotional exhaustion (H1a) and depersonalization/cynicism (H1b) and positively related to personal accomplishment/professional efficacy (H1c).

*Hypothesis 2:* Obsessive passion will be positively related to emotional exhaustion (H2a) and depersonalization/cynicism (H2b) and negatively related to personal accomplishment/professional efficacy (H2c).

### ***Antecedents of passion***

Few studies have investigated the determinants of passion. To our knowledge, only one study has examined how the social context can influence passion (Mageau et al., 2009). In that research, the results of a series of studies showed that, for experts and novices in an activity (sports and musical training), autonomy support by a parent or significant adult (e.g. coaches and teachers) predicted harmonious passion, whereas a more controlled environment predicted obsessive passion. Thus, it seems that being surrounded by significant individuals who value self-initiation and encourage choice and participation fosters harmonious passion. Conversely, being surrounded by significant individuals who allow little autonomy, or who apply control and pressure, fosters obsessive passion. However, Mageau et al.'s (2009) study examined only passionate individuals' perceptions of autonomy-supportive behaviours by parents or significant adults, and self-reported autonomy support by these adults.

However, autonomy and freedom of action at work could also influence the type of passion for the work. For instance, in the workplace, where external controls such as deadlines and mandatory tasks are inevitable, employees' perceptions of autonomy can influence their passion for the job. Job autonomy (also called decision latitude) refers to the extent to which an occupation or activity provides opportunities to make decisions and exercise control over the tasks to be accomplished (Karasek, 1985). In line with an organismic perspective (e.g. Deci & Ryan, 2000), the DMP posits that autonomy-supportive conditions facilitate the internalization process (acquisition and acceptance of values and goals) that results in employees becoming more autonomously (and less controllingly) regulated to engage in behaviours that express these values and goals. In other words, job autonomy would facilitate an autonomous internalization process whereby teachers would tend to willingly invest in their work, in a job that they like and is in accordance with their sense of self. Thus, job autonomy should facilitate harmonious passion.

Conversely, low job autonomy would foster controlled internalization, due to lack of opportunities to make choices in a job that is otherwise liked and valued, thus forcing teachers to comply with and deal with external contingencies that are not necessarily in line with their goals and values. This process would be likely to disrupt the inherent harmony between self-elements and create conflicts between internalized elements, thereby producing obsessive passion. Although no studies to our knowledge have directly addressed the role of job autonomy in relation to passion for work, there is plenty of evidence that job autonomy plays a significant role in teacher motivation and the

experience of stress and burnout (see Pearson & Moomaw, 2006). Based on this theoretical rationale and the available empirical evidence, we propose the following hypotheses:

*Hypothesis 3:* Job autonomy will be positively related to harmonious passion (H3a) and negatively related to obsessive passion (H3b).

It is implicit in the first three hypotheses and in our research model that job autonomy is related to burnout through the two types of passion for work. The explicit mediation relationships may be stated as the following predictive hypotheses:

*Hypothesis 4:* Job autonomy will predict emotional exhaustion (H4a), depersonalization/cynicism (H4b) and personal accomplishment/professional efficacy (H4c) through harmonious passion.

*Hypothesis 5:* Job autonomy will predict emotional exhaustion (H5a), depersonalization/cynicism (H5b) and personal accomplishment/professional efficacy (H5c) through obsessive passion.

### The present study

This study had two main goals. The first was to gain insights into how passion predicts burnout in novice teachers. The second was to assess the differential role of job autonomy in relation to harmonious and obsessive passion. We tested our research model (Figure 1) in two samples of teachers with five years' or less experience. In Study 1, we proposed that passion for teaching mediates the relationship between job autonomy and burnout. In Study 2, using a cross-lagged panel design over a 12-month period, we examined the effect of job autonomy on passion and the effect of passion on burnout. Note that we used different measures of the variables in the two studies to allow a more robust test of the hypotheses.

## Study 1

### Method

#### Procedure and participants

Data were collected as part of a research project on the psychological health of school teachers in the province of Quebec, Canada. A letter containing an explanation of the study objectives (i.e. examining the role of motivational factors in psychological health),

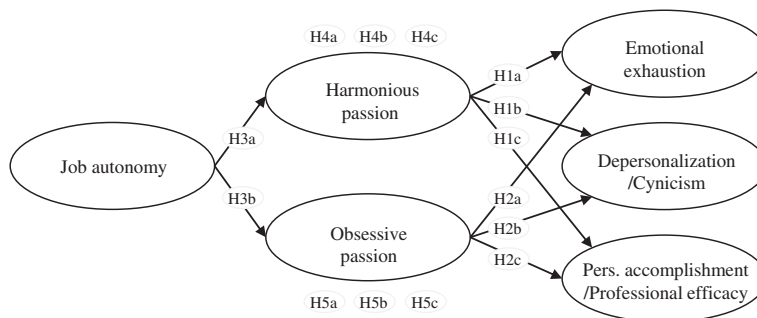


Figure 1. The research model. H = Hypothesis; pers. = personal.



a questionnaire and a self-addressed return envelope were sent to teachers in two school boards. Of the 246 novice teachers (five years' or less experience) approached, 175 completed the questionnaire, for a 71% response rate.

Participants were French-Canadians (144 women, 31 men) teaching in elementary school (61%), high school (25%) or vocational/technical adult programmes (14%). Participants' mean age was 31.2 years ( $SD = 1.2$ ) and mean years of experience was 3.6 ( $SD = 1.9$ ). Of the participants, 52% were full-time permanent teachers, 19% were full-time non-permanent teachers and 19% were substitute teachers.

### Measures

*Passion for teaching.* The Passion Scale (Vallerand et al., 2003), which was originally validated in French, was used to assess passion for teaching. The scale contains two sections.

The first assesses the degree of passion for teaching, measured as the mean of the four criterion items: activity valuation, time investment, love for the activity and passion for the activity. Teachers were judged as passionate if they scored an average of four or more on the sum of the four items. Of the sample, 94% was found to be passionate. Excluding the 11 non-passionate teachers, all analyses are based on a sample of 164 participants. Note that additional analyses indicate that the inclusion of non-participant passionate teachers yielded essentially the same results.

The second section assesses harmonious and obsessive passion on two six-item subscales. A sample item of the harmonious subscale is, "My work is in harmony with other activities in my life", and for the obsessive subscale, "I have difficulty controlling my urge to work". Items were scored on a seven-point scale ranging from 1 (*do not agree at all*) to 7 (*very strongly agree*). For each construct, we computed two balanced parcels based on factor loadings by pairing higher- with lower-loading items (see Little, Cunningham, Shahar, & Widaman, 2002). The Passion Scale has demonstrated high construct validity (factor structure, reliability, and convergent and discriminant validity; see Marsh et al., 2013).

*Job autonomy.* The French-Canadian version (Brisson et al., 1998) of the Job Content Questionnaire (JCQ; Karasek, 1985) was used to assess teacher autonomy. Specifically, we used the three items of the decision latitude subscale (e.g. "This work allows me to make a lot of decisions on my own"). Each item was rated on a scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*) to indicate the latent construct of job autonomy. The French version of the JCQ has demonstrated adequate construct validity (factor structure, discriminant validity and reliability; Brisson et al., 1998).

*Burnout.* The French-Canadian version (Dion & Tessier, 1994) of the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1986) was used to assess the three burnout components (emotional exhaustion, depersonalization and personal accomplishment) on a scale from 0 (*never*) to 6 (*every day*). Emotional exhaustion comprised nine items (e.g. "I feel emotionally drained by my work"). Five items assessed depersonalization (e.g. "I've become more callous toward people since I took this job"). Personal accomplishment was assessed by eight items (e.g. "I have accomplished many worthwhile things at this job"). High scores on exhaustion and depersonalization and low scores on personal

accomplishment indicate burnout. Two balanced parcels were constructed to indicate each burnout component. The properties of the French version of the MBI are similar to those of the original version (Maslach et al., 2001).

### Statistical analyses

Model adequacy was assessed by structural equation modelling (SEM) using EQS software (version 6.1; Bentler, 2004). All models were tested with standardized coefficients obtained using maximum likelihood estimation. To ascertain the model fit, we used the comparative fit index (CFI), the non-normed fit index (NNFI) and the root-mean-square error of approximation (RMSEA). The CFI and NNFI vary along a 0-to-1 continuum, where values greater than .90 indicate an adequate fit, greater than .95 being ideal. RMSEA values below .05 indicate a close fit, whereas values up to .08 represent acceptable errors of approximation (Hu & Bentler, 1999). In this study, we calculated Hancock's coefficient (also called coefficient *H*) to determine the reliability of the measures (Hancock & Mueller, 2001). Computed from standardized factor loadings, this coefficient estimates the stability of the latent construct across multiple observed variables. As presented in Table 1, coefficient *H* ranged from .79 to .95, satisfying the .70 cut-off criterion (Hancock & Mueller, 2001).

## Results: study 1

### Preliminary analyses

A measurement model was tested and provided a satisfactory fit to the data ( $\chi^2(75) = 109.535$ , CFI = .971, NNFI = .959, RMSEA = .053 [.029, .073]). Correlations between latent variables were in the expected directions (see Table 1), with the exception of two non-significant relationships (harmonious and obsessive passion; obsessive passion and personal accomplishment).

Table 1. Study1: means, standard deviations and correlations between latent variables.

	Score range	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Job autonomy	1–4	3.76	0.40	(.84)					
2. Harmonious passion	1–7	5.18	0.93	.32**	(.79)				
3. Obsessive passion	1–7	2.48	0.95	-.20**	-.14	(.89)			
4. Emotional exhaustion	0–6	5.54	1.36	-.31**	-.58**	.39**	(.95)		
5. Depersonalization	0–6	1.28	1.00	-.33**	-.42**	.34**	.75**	(.86)	
6. Personal accomplishment	0–6	4.64	0.77	.41**	.53**	-.12	-.50**		(.81)

Notes: Reliabilities (coefficient *H*) are shown on the diagonal.

\*\**p* < .01.

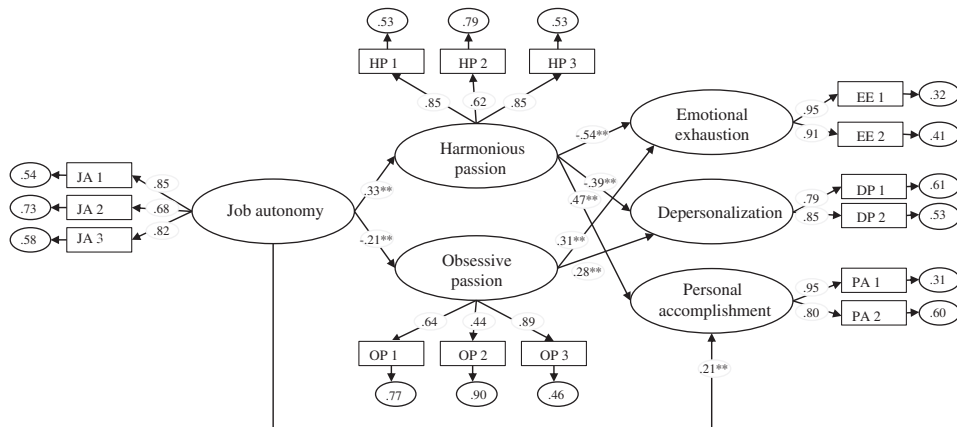


Figure 2. Final model with significant standardized path coefficients: Study 1. \*\* $p < .01$ .

### Main analyses

To test our hypotheses, we ran two contrasting models: a fully mediated model (M1) and a partially mediated model (M2). M1 included only indirect paths from job autonomy to burnout components through harmonious and obsessive passion. The preliminary analyses revealed a non-significant relationship between obsessive passion and personal accomplishment. We consequently omitted the indirect path connecting job autonomy to personal accomplishment through obsessive passion. M2 added three direct paths connecting job autonomy to burnout components. SEM analysis results indicated that M2 ( $\chi^2(76) = 109.621$ , CFI = .971, NNFI = .960, RMSEA = .052 [.028, .072]) provided a better fit to the data ( $\Delta\chi^2[3] = 8.983$ ,  $p < .05$ ) than M1 ( $\chi^2(79) = 118.604$ , CFI = .966, NNFI = .955, RMSEA = .055 [.033, .075]) and that one direct path was significant (job autonomy to personal accomplishment). The hypothesized model was consequently modified (M3) to include this direct path. Although the fit of M3 ( $\chi^2(78) = 111.886$ , CFI = .971, NNFI = .961, RMSEA = .052 [.028, .072]) did not differ significantly from that of M2, it provided a more parsimonious solution. Coefficient paths of the final model (M3) are depicted in Figure 2 (for simplicity, covariances are not shown because they closely resemble the latent correlations presented in Table 1).

The results showed that harmonious passion predicted all three burnout components (supporting H1a, H1b and H1c), whereas obsessive passion predicted only exhaustion and depersonalization (supporting H2a and H2b, but not H2c). Moreover, job autonomy positively predicted harmonious passion and negatively predicted obsessive passion (supporting H3a and H3b).

The results provide support for the full mediating role of both types of passion in the relationship between job autonomy and emotional exhaustion and depersonalization (supporting H4a, H4b, H5a and H5b). Although obsessive passion did not mediate the relationship between job autonomy and personal accomplishment (rejecting H5c), harmonious passion partially mediated this relationship (supporting H4c).

## Study 2

Study 2 used a full cross-lagged panel design over a 12-month period (October to October) to further examine the relationships among job autonomy, passion and burnout. This time frame was chosen for two reasons. First, despite the lack of consensus on the time required to detect change in burnout (Taris & Kompier, 2014), it is generally acknowledged that the burnout components manifest themselves over months, not weeks (Leiter, 1993). For teachers, a full year should provide sufficient time to examine a relatively stable burnout state, as opposed to a transitory or temporary state that might manifest itself over a shorter period (e.g. 3–6 months). Second, compared to a longer period (e.g. 18–24 months), this time length allows minimizing dropouts from the study, as most novice teachers have temporary jobs and can be hard to track down once they change schools.

Based on DMP assumptions and longitudinal burnout studies (e.g. Hakanen, Schaufeli, & Ahola, 2008), we proposed that job autonomy would have a unidirectional effect on passion (harmonious and obsessive), and that passion would have a unidirectional effect on burnout components (emotional exhaustion, cynicism and reduced professional efficacy). Although we hypothesized “normal” causal relationships, we also examined potential reversed and reciprocal cross-lagged effects. Whereas most longitudinal studies provide support for normal causal effects (e.g. job autonomy decreases burnout), few studies have systematically investigated alternative possibilities (de Lange, De Witte, & Notelaers, 2008). For instance, passionate teachers could have positively or negatively biased perceptions of job autonomy or changes in the school environment. Alternatively, job autonomy, passion and burnout could mutually reinforce each other over time.

## Method

### *Participants and procedure*

This study included two waves of data collection from French-Canadian novice teachers in the province of Quebec, Canada. Participants were recruited through Quebec’s ministry of education, leisure and sports (MELS), which sent us a random list of 3000 teachers having five years’ or less experience. Teachers were sent a letter describing the study objectives (i.e. examining the role of motivational factors in psychological health at career start) and inviting them to complete an online questionnaire. A total of 1019 teachers completed the questionnaire at Time 1 (T1; 34% response rate), and 689 of these completed the second questionnaire at Time 2 (T2; 68% retention rate). Our final sample comprised 689 teachers (592 women, 97 men). Mean age was 27.9 years ( $SD = 4.3$ ) and mean teaching experience was 3.3 years ( $SD = 1.6$ ). Participants taught at elementary school (61%), high school (35%) or in vocational/technical and adult education (4%). To rule out potential selection bias, we examined whether teachers who participated at both measurement times were equivalent to those who participated at T1 only. A MANOVA indicated that the two samples did not differ on background variables (gender, age, school level, job position, certification status and years of experience) or the study variables.

### *Measures*

*Passion for teaching.* To minimize the total number of items, the short form (Lafrenière et al., 2013) of the Passion Scale (Vallerand et al., 2003) was used in this study. Two three-item subscales assessed harmonious and obsessive passion. Each item was used as

an indicator of the latent constructs of harmonious 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). In the present study, 93% of teachers scored four or more on average on the four criterion items. As in Study 1, although additional analyses showed essentially the same results as those for the entire sample, analyses are based on the sample of passionate teachers only ( $n = 627$ ).

*Job autonomy.* Two scales were used to assess job autonomy. Decision making was measured with the three-item subscale developed by Cammann, Fichman, Jenkins, and Klesh (1979), rated from 1 (*strongly disagree*) to 4 (*strongly agree*). A sample item is, “My principal encourages people to speak up when they disagree with a decision”. Control over tasks was assessed using the control subscale of the Areas of Worklife Scale (Leiter & Maslach, 2000). A sample item is, “I have control over how I do my work”. Items were scored on a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Each variable was used as an indicator of the latent construct of job autonomy. The construct validity and internal consistency of these scales have been previously established (Cammann et al., 1979; Leiter & Maslach, 2000).

*Burnout.* The three burnout components were assessed using the Maslach Burnout Inventory–General Survey (MBI–GS; Schaufeli et al., 1996). Emotional exhaustion was assessed with five items (e.g. “I feel used up at the end of a work day”). Five items assessed cynicism (e.g. “I doubt the significance of my work”). Professional efficacy was assessed with six items (e.g. “I can effectively solve the problems that arise in my work”). All items were scored on a seven-point scale ranging from 0 (*never*) to 6 (*every day*). High scores on exhaustion and cynicism and low scores on professional efficacy indicate burnout. For each component, two manifest indicators were created by averaging items 1 and 2 and items 3, 4 and 5 in order to assess the latent construct emotional exhaustion. The construct validity of the MBI–GS (factor structure, factor invariance and reliability) has been well established (Maslach et al., 2001).

*Statistical analyses.* As in Study 1, model adequacy was assessed by SEM using EQS (Bentler, 2004). Hancock’s coefficients were also calculated to determine the reliability of the measures. Table 2 shows that coefficient  $H$  ranged from .74 to .94. To test our hypotheses, we compared four models. The normal causal model (M1 – on which our hypotheses are based – includes unidirectional paths from job autonomy to harmonious and obsessive passion. Additionally, it comprises unidirectional paths from job autonomy, harmonious passion and obsessive passion to burnout components. The stability model (M2) includes autoregressive effects only. The reversed model (M3), which also includes autoregressive effects, comprises unidirectional paths from burnout components to harmonious and obsessive passion, and from harmonious and obsessive passion to job autonomy. The reciprocal model (M4) combines M1 and M3. Autoregressive effects were included in all tested models to control for baseline levels of each latent factor. Synchronous correlations between latent factors were allowed, and error terms (uniquenesses) between corresponding indicators were included.

Table 2. Study 2: means, standard deviations and correlations between latent variables.

	Range	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12
<i>Time 1</i>															
1. Job autonomy	1–5	3.16	0.52	(.74)											
2. Harmonious passion	1–7	5.48	1.07	.37**	(.92)										
3. Obsessive passion	1–7	2.55	1.14	–.36**	–.57**	(.74)									
4. Exhaustion	0–6	2.10	1.22	–.48**	–.51**	.51**	(.91)								
5. Cynicism	0–6	1.20	0.95	–.58**	–.46**	.42**	.67**	(.83)							
6. Professional efficacy	0–6	4.69	0.81	.60**	.33**	–.25**	–.36**	–.62**	(.87)						
<i>Time 2</i>															
7. Job autonomy	1–5	3.19	0.54	.70**	.24**	–.26**	–.32**	–.41**	.36**	(.78)					
8. Harmonious passion	1–7	5.34	1.15	.32**	.66**	–.55**	–.43**	–.39**	.25**	.31**	(.94)				
9. Obsessive passion	1–7	2.59	1.16	–.32**	–.45**	.68**	.44**	.35**	–.17**	–.23**	–.59**	(.80)			
10. Exhaustion	0–6	2.23	1.26	–.32**	–.31**	.43**	.60**	.37**	–.20**	–.40**	–.54**	.57**	(.93)		
11. Cynicism	0–6	1.52	1.12	–.38**	–.32**	.37**	.42**	.61**	–.42**	–.59**	–.56**	.44**	.68**	(.84)	
12. Professional efficacy	0–6	4.65	0.86	.41**	.31**	–.26**	–.29**	–.49**	.59**	.57**	.47**	–.22**	–.45**	–.74**	(.90)

Notes: Reliabilities (coefficient *H*) are shown on the diagonal.\*\**p* < .01.

**Results: study 2**

A measurement model provided a satisfactory fit to the data ( $\chi^2(270) = 494.777$ , CFI = .984, NNFI = .977, RMSEA = .036 [CI = .031, .041]). Correlations between latent variables were in the expected direction (see Table 2). Next, we compared the four competing models to test our hypotheses. The normal causation model (M1) provided a satisfactory data fit ( $\chi^2(289) = 532.641$ , CFI = .983, NNFI = .977, RMSEA = .037 [CI = .032, .042]). This model was compared to three alternative models: stability (M2;  $\chi^2(300) = 552.697$ , CFI = .982, NNFI = .978, RMSEA = .037 [CI = .032, .041]), reversed causation (M3;  $\chi^2(289) = 535.603$ , CFI = .982, NNFI = .977, RMSEA = .037 [CI = .032, .042]) and reciprocal causation (M4;  $\chi^2(278) = 520.665$ , CFI = .982, NNFI = .976, RMSEA = .037 [CI = .032, .042]). These results indicate that M1 provided a better data fit than M2 ( $\Delta\chi^2[11] = 20.056$ ,  $p < .05$ ), whereas neither M3 ( $\Delta\chi^2[11] = 17.094$ , n.s.) nor M4 ( $\Delta\chi^2[22] = 32.032$ , n.s.) provided a better fit than M2. We therefore concluded that M1 provided the best-fit solution.

The results are summarized in Figure 3 (for simplicity, covariances are not shown). Taking into account autoregressive effects ( $\beta$ s ranging from .51 to .68), the results show that job autonomy has a cross-lagged effect on harmonious and obsessive passion ( $\beta = .12$ ;  $\beta = -.10$ , respectively), confirming H3a and H3b. Moreover, taking into account the baseline effect of job autonomy, harmonious passion had a cross-lagged effect on professional efficacy ( $\beta = .14$ ; supporting H1c but not H1a and H1b), whereas obsessive passion had a cross-lagged effect on emotional exhaustion ( $\beta = .12$ ; supporting H2a but not H2b and H3b). As none of the three baseline effects of job autonomy on burnout components were significant, these results partially support the mediating role of harmonious passion between job autonomy and professional efficacy (supporting H4c

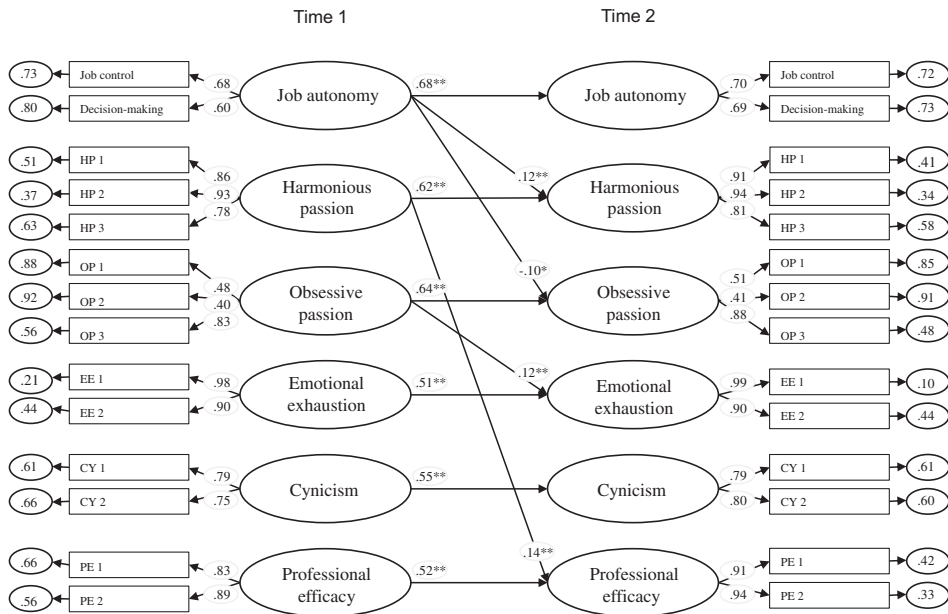


Figure 3. Final model with significant standardized path coefficients: Study 2. \* $p < .05$ ; \*\* $p < .01$ .

but not H4a or H4b) and of obsessive passion between job autonomy and emotional exhaustion (supporting H5a but not H5b or H5c).

To summarize, the longitudinal results of Study 2 support the two relationships between job autonomy and harmonious and obsessive passion as well as two of the five relationships between passion and burnout components observed cross-sectionally in Study 1.

## Discussion

A main contribution of these two studies is the suggestion that a more nuanced understanding of psychological investment in teaching is necessary in order to predict burnout in the early years of the career. Our results corroborate the motivational premise of burnout: in order to burn out, one must first be on fire, or psychologically invested in the job. Our results further advance the current state of knowledge by highlighting the need to consider the qualitative aspects of psychological investment, such as the type of passion for work. Whereas the cross-sectional results of Study 1 indicate that harmonious passion is negatively associated with all three burnout components, the longitudinal results of Study 2 suggest that it fosters professional efficacy in the early years of a career. Thus, harmonious passion produces a motivational drive to willingly and effectively invest efforts in one's work. Regarding obsessive passion, the cross-sectional results showed that such passion in novice teachers was associated with emotional exhaustion and depersonalization, and the longitudinal results suggest that it promoted their emotional exhaustion over one year in the early years of their career. Thus, it appears that obsessive passion produces a motivational drive that drains emotional energy at work. Interestingly, neither type of passion predicted changes in cynicism over time, even though they were cross-sectionally associated with this burnout component. Perhaps novice teachers are so passionate about their work that it becomes difficult to devalue it.

Beyond underscoring the relevance of examining the three burnout components separately (Schaufeli & Taris, 2005), the results emphasize the need to examine not only the quantity, but more importantly, the quality of psychological investment in one's work. From the results of our study, we conclude that passion is a motivational factor that could help explain why some teachers are at higher risk for burnout. Future research could integrate other psychological investment concepts, such as work engagement and workaholism, to gain a more comprehensive understanding of the mechanisms involved in the aetiology of burnout.

This study also sheds new light on the burnout process. Although burnout research tends to examine the contributions of individual and work factors separately (Maslach et al., 2001), our results show that these factors make a combined contribution. The cross-sectional results indicate that job autonomy acts on burnout through passion for teaching, whereas the longitudinal results suggest that job autonomy influences the type of passion over time, and that the two types of passion predict change in specific components of burnout over and above job autonomy. These results extend previous research (e.g. Carbonneau et al., 2008; Lavigne et al., 2012) by specifying the differential role of passion in connection with burnout components, and further suggest that burnout can be affected by job autonomy. By considering the person within the job context, our theoretical predictions and empirical findings deepen the understanding of how the work environment contributes to burnout. Burnout may be exacerbated not only by a lack of



job autonomy, but more importantly, because when valuable resources are lacking, employees tend to channel their energy unproductively. Our results offer a more nuanced perspective on the notion of investment in resources, as proposed in the conservation of resources theory (Hobfoll, 2002). Faced with the loss (or threatened loss) of a resource, such as a reliable level of job autonomy, employees may turn to suboptimal accommodation strategies such as obsessive investment in their work, instead of minimizing their losses by adopting defensive or self-protective strategies, such as slowing down. Employees would be motivated to use accommodation strategies because the job represents an important aspect of their identity. However, in the long run, this motivational drive saps employees' energy and contributes to exhaustion. Further research is needed to better determine other accommodation mechanisms in relation to burnout.

These two studies increase our comprehension of the nature of burnout in the first few years of a career. Previous studies have generally concentrated on relatively experienced employees, suggesting that burnout is stable over time (Schaufeli, 2003). Although our results support the temporal stability of the burnout components, even at the beginning of a career ( $r > .50$ ), they also reveal that certain variables, such as the types of passion for work, may contribute to burnout. Moreover, our findings help reconcile the inconsistent results of previous cross-sectional and longitudinal studies on burnout. However, the relatively low effect size of the lagged effects of passion on burnout components (.12 and .14) raises the question as to whether all burnout symptoms can be eliminated at the beginning of a career. Longer-term studies are needed to determine whether burnout components remain stable with time (when initially assessed at career start or during training), and whether passion predicts change in burnout over longer time frames.

Our results also underscore the relevance of the dualistic model of passion (Vallerand et al., 2003) for understanding how teachers function psychologically. Although longitudinal studies that include at least three time points are needed to more thoroughly investigate the meditational effect of passion for work, to our knowledge this is the first attempt to examine the sequence proposed in the model (i.e. that the environment plays an influential role in the deployment of passion and that passion acts on psychological health). Further studies are needed to definitively establish the causal relationships between variables and to identify other environmental factors that could foster or hinder harmonious and obsessive passion in teachers. A promising research direction would be to simultaneously examine the role of job demands (e.g. work overload, role problems) and job resources (e.g. administrative and peer support) in the development of passion, in teachers and other occupations. Another would be to investigate how job characteristics contribute to the emergence of passion for work in certain industries where passion appears less prominent (e.g. manufacturing).

### **Limitations**

Some limitations of these two studies are worth mentioning. First, although the longitudinal design of Study 2 improves on previous burnout studies and offers insight into burnout correlates in novice teachers, a full cross-lagged design provides only a glimpse of the causal relationships. However, the inadequacy of the alternative models tested in Study 2, the convergence of the results of the two studies and their coherence with DMP research (see Vallerand, 2010) provide strong preliminary support for our theoretical proposition. Second, although the studies considered a 12-month time interval,

which could be considered adequate for examining change in burnout (e.g. de Lange, Taris, Kompier, Houtman, & Bongers, 2004), a data panel based on multiple time points and a longer study period (Taris & Kompier, 2014) would be more informative on the lagged effects of job autonomy and passion on burnout components. Third, both studies used teachers' self-reports, which raises the possibility of shared method variance. We attempted to minimize this problem by (i) selecting differently formulated self-report measures; (ii) using different scale ranges; and (iii) correlating uniquenesses (Study 2) between same constructs measured at the two time points. In addition, we used different assessments of job autonomy and burnout in the two studies to strengthen our results. Nonetheless, other sources of information (e.g. principals, colleagues and mentors) should be included in future studies. Fourth, our findings provide support for the widely held belief that teachers are generally passionate about their work, as 94% (Study 1) and 93% (Study 2) of our participants reported at least a moderate level of passion. However, considering that these percentages represent only the teachers who participated in the studies, larger population studies are needed to better estimate the overall prevalence of passion in novice teachers. Fifth, only novice teachers in the province of Quebec, Canada participated. Although our studies were designed to investigate burnout in novice teachers, our results should be validated in more experienced teachers, and the study replicated in other Canadian provinces, other countries and other occupations.

### ***Practical implications***

Despite these limitations, our results have promising implications for preventing burnout in novice teachers and possibly in other occupations. For instance, school administrations could provide more support for autonomy in newly hired teachers. Our results show that opportunities to make choices, participate in decision making and have some control over how tasks are accomplished foster autonomous passion and hinder obsessive passion, and that both types of passion can help prevent burnout. Other studies have shown that the interpersonal dimensions of job autonomy, conceptualized as autonomy support (Deci & Ryan, 2000) and transformational leadership (Bono & Judge, 2003), can yield similar impacts by fostering the satisfaction of basic psychological needs. Certain organizational aspects of the workplace could be redesigned, and better supervisory support could be provided to novice teachers, especially as studies have reported an international trend towards less professional autonomy in teaching (Ballet, Kelchtermans, & Loughran, 2006). In parallel, education interventions could be developed to raise awareness of the passion of teachers for work, to strengthen harmonious passion and to mitigate obsessive passion in novice teachers. To facilitate the internalization of passion, Vallerand (2010) suggests that individuals reflect on intrinsic work values (Kasser, 2002), and are attentive to the various autonomous forces that drive them to become passionately invested in their work. Forest et al. (2012) recently found that the use of signature strengths (i.e. capacity for a particular way of behaving, thinking or feeling that is authentic and energizing to the user) facilitates harmonious passion and fosters psychological well-being at work.

### **Conclusion**

Assuming that burnout is the outcome of a process in which psychological investment is initially high (Maslach, 1982), many teachers who are passionate about their work would

appear to be destined to burn out. Two studies, one cross-sectional and the other longitudinal, were conducted to investigate the relationship between two types of passion in novice teachers – harmonious and obsessive – and burnout. These two studies probe more deeply into this state of psychological investment. It was found that the type of passion, either harmonious or obsessive, that fires up novice professionals had a differential effect on burnout. It seems that whereas obsessive passion can consume some individuals, harmonious passion allows others to keep the flame alive.

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