

## On feeling good at work: the role of regulatory mode and passion in psychological adjustment

Jocelyn J. Bélanger<sup>1</sup>, Antonio Pierro<sup>2</sup>, Arie W. Kruglanski<sup>3</sup>, Robert J. Vallerand<sup>1,4</sup>, Nicola De Carlo<sup>5</sup>, Alessandra Falco<sup>5</sup>

<sup>1</sup>Université du Québec à Montréal

<sup>2</sup>University of Rome “La Sapienza”

<sup>3</sup>University of Maryland

<sup>4</sup>Australian Catholic University

<sup>5</sup>University of Padua

Correspondence concerning this article should be addressed to Jocelyn J. Bélanger, Department of Psychology, Université du Québec à Montréal, P.O. Box 8888 Downtown, Montreal, Quebec H3C 3P8, Canada. E-mail: [jocelyn.belanger@gmail.com](mailto:jocelyn.belanger@gmail.com)

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### Abstract

The major postulate of this work is that regulatory modes influence the type of passion people experience with regard to an activity, which in turn influences their psychological adjustment. Integrating regulatory mode theory and the dualistic model of passion, we hypothesized that locomotion—associated with intrinsic and autonomous motivations—would positively predict harmonious passion, which in turn would enhance workers’ psychological adjustment. In contrast, we hypothesized that assessment—associated with extrinsic and non-autonomous motivations—would positively predict obsessive passion, which in turn would reduce workers’ psychological adjustment. Two field studies supported these hypotheses with psychological adjustment measures of stress (Study 1) and burnout (Study 2) in different work contexts.

Susan and Claire work for the same financial department of a hardware supply company. At work, they assist their managers in making strategic decisions and ensure that the company’s operations run smoothly. Susan is a “doer,” she bustles about all day and works relentlessly to get the job done, whereas Claire is more detail-oriented and always ensure she is doing “the right thing.” Despite, having similar responsibilities and being equally committed to their work, Susan and Claire’s work experience is much different. Susan is constantly full of energy and copes very well with stress. After a day’s work, she can easily let go of her responsibilities and enjoy other activities in her life. Claire, on the other hand, feels emotionally drained and constantly preoccupied with her work, even outside working hours. How can this be?

In the last decades, much research has focused on worker’s psychological adjustment: a billion dollar problem draining organizational profit by increasing turnover rates (Gupta & Beehr, 1979), absenteeism (Karasek, 1979), and reducing overall performance (Motowidlo, Packard, & Manning, 1986). Beyond work-related factors such as job demands (Karasek, 1979), job insecurity (Fein, 1976), and employees’ financial situation (Aldag, Barr, & Brief, 1981), much research has emphasized the role of social factors in deter-

mining workers’ experience of stress and burnout (e.g., Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Salanova, 2007). For instance, extensive work has been conducted on topics such as supervisor–subordinate relationships (Landeweerd & Boumans, 1994; Tepper, 2000) and social support at work (for a review, see Viswesvaran, Sanchez, & Fisher, 1999). However, as the preceding example illustrates, one important question that remains is how can people experience diametrically opposed psychological adjustment despite working in similar environment? The present research addresses this theoretical question by investigating the interface between regulatory mode theory (Kruglanski et al., 2000) and the dualistic model of passion (Vallerand et al., 2003). In the present article, we propose that one pivotal factor for psychological adjustment can be found in workers’ attitude toward their work. Specifically, we suggest that basic self-regulatory processes such as locomotion (i.e., being a “doer”) and assessment (i.e., “doing the right thing”) can impact individuals’ psychological adjustment by influencing the type of passion individuals entertain for an important activity (e.g., work). In turn, the type of passion (harmonious vs. obsessive) one develops for an activity can either facilitate or prevent the occurrence of stress and burnout at work.

In the pages to follow, we first briefly review regulatory mode theory and the dualistic model of passion. Drawing on these notions, we then formulate our specific hypotheses and describe how we empirically scrutinized them.

## Regulatory mode theory

According to regulatory mode theory (Higgins, Kruglanski, & Pierro, 2003b; Kruglanski et al., 2000), human behavior is guided by two major self-regulatory components, locomotion and assessment. Locomotion is an orientation geared toward movement, such as moving away from a current state to another. It is best described by the precept “just do it,” which dictates “committing the psychological resources that will initiate and maintain goal-directed progress in a straightforward manner, without undue distractions or delays” (Kruglanski et al., 2000, p. 794). In contrast, assessment is an orientation encapsulated in the motto “doing the right thing” and consists of comparing and evaluating different entities (e.g., goals and means) to establish which one is most worthy of pursuing. Together, locomotion and assessment enable goal pursuit, by allowing individuals to select appropriate means (assessment) and engage in them (locomotion) to attain their goal.

Mounting evidence supports the foregoing conceptualization of locomotion and assessment (Avnet & Higgins, 2006; Benjamin & Flynn, 2006; Cesario, Grant, & Higgins, 2004; Pierro, Pica, Mauro, Higgins, & Kruglanski, 2012). For instance, research has evinced that assessment positively correlates with fear of invalidity, discomfort with ambiguity, neuroticism, and low self-esteem (Kruglanski et al., 2000), whereas it has been shown to negatively correlate with counterfactual thinking and regret (Pierro et al., 2008). On the other hand, research has demonstrated that locomotion positively correlates with psychological vitality, self-esteem, optimism, and negatively correlates with social anxiety and depression (Kruglanski et al., 2000). Notably, scholars have theorized and empirically found support for the notion that locomotion and assessment are orthogonal dimensions (Kruglanski et al., 2000). Furthermore, there is precedent in the literature that an individuals’ orientation toward each mode can vary as a function of situational features (e.g., Avnet & Higgins, 2006; Orehek, Mauro, Kruglanski, & van der Bles, 2012) and can also represent relatively stable individual differences because of both temperament and socialization factors (Higgins, Idson, Freitas, Spiegel, & Molden, 2003a; Higgins et al., 2003b).

Of relevance to the present work is the relationship between regulatory modes and the experience of autonomous (e.g., intrinsic) and non-autonomous (extrinsic) motivation. Intrinsic motivation is commonly defined as engaging an activity for its inherent pleasure (Deci & Ryan, 1991),

whereas extrinsic motivation is typically described as engaging in an activity to achieve specific end-states (Ryan, 1995). In keeping with the idea that sustained activity involvement and “flow” is a key ingredient for intrinsic motivation (e.g., Csikszentmihalyi, 1975), it has been hypothesized that locomotion (the propensity to remain in motion) would be positively associated with the experience of intrinsic motivation. In contrast, because evaluating the consequences of one’s actions against external criteria (e.g., how others fair in comparison) suggests that one is carrying out an activity for reasons other than for its own sake and pleasure, assessment has been hypothesized to be associated with extrinsic motivation. Pierro and colleagues (Pierro, Kruglanski, & Higgins, 2006) have adduced experimental and longitudinal evidence corroborating these hypotheses (see also Kruglanski et al., 2000; Pierro, Presaghi, Higgins, & Kruglanski, 2009). For instance, in one of their studies (Study 2), subjects that received rewards (vs. no reward) for the completion of a series of cognitive tasks expressed more interest for these activities depending on their standing on locomotion or assessment. Specifically, locomotors displayed high levels of task involvement irrespective of the presence or absence of rewards, whereas assessors reported being more involved in the reward (vs. no reward) condition. These results suggest that assessors are responsive to external rewards, whereas locomotors are relatively insensitive to them. In addition to highlighting how regulatory modes influence the experience of intrinsic and extrinsic motivation, these results also hint to the possibility that if these dynamics are experienced repeatedly they may, over time, influence how a given activity is perceived and integrated into people’s identity. Specifically, locomotion and assessment could influence the type of passion people develop for an activity (e.g., work) for which people invest a significant amount of time and energy. We now turn to this construct.

## The dualistic model of passion

In the last decade, a theoretical framework of passion investigating the motivational processes underlying heavy and sustained activity involvement has been proposed (Vallerand, 2008; Vallerand et al., 2003). Passion is defined as a strong inclination toward a self-defining activity that one likes, finds important, and in which one invests a significant amount of time and energy. Through trial and error, a limited number of activities will be perceived as particularly enjoyable, important, and resonate with how people see themselves. Over time, an activity becomes a passion if it represents a central feature of one’s identity.

Two types of passion are proposed by Vallerand et al. (2003) model: harmonious and obsessive passion. Harmonious passion results essentially from an autonomous internalization of the activity in identity (Ryan & Deci,

2000).<sup>1</sup> Internalization is considered autonomous when people accept freely and without contingencies to adopt the activity as an integral part of themselves (Mageau et al., 2009; Vallerand, 2008). Individuals maintaining a harmonious passion invest themselves in their activity out of choice and pleasure and not because of constraints and pressures. In other words, with harmonious passion, the person fully partakes in the passionate activity with openness and mindfulness (Brown & Ryan, 2003) that lead one to directly face positive and negative information without reacting defensively (Bélanger, Lafrenière, Vallerand, & Kruglanski, 2013a; Hodgins, Yacko, & Gottlieb, 2006). Because the passionate activity typically generates fun and enjoyment, such an open and flexible state of mind is generally conducive to positive experiences (Hodgins & Knee, 2002). Consequently, the activity takes an important, but not overwhelming, place in one's identity. This flexibility is also a major factor preventing individuals' passionate activities from conflicting with other life activities (Bélanger, Lafrenière, Vallerand, & Kruglanski, 2013b; Séguin-Lévesque et al., 2003). The person may then better concentrate on the task and experience positive affect, task satisfaction, and flow (i.e., the feeling that one is immersed in the activity; see Csikszentmihalyi, 1978) while engaging in the activity. Furthermore, because harmonious passion facilitates control of the activity, it contributes to the experience of positive affect, task satisfaction, and minimizes the experience of negative affect after task engagement.

Research has provided support for the present position as people with a predominant harmonious passion toward a given activity have been shown to experience greater general positive emotions (Vallerand et al., 2003) subjective well-being (Philippe, Vallerand, & Lavigne, 2009; Rousseau & Vallerand, 2008), less conflict with other activities (Séguin-Lévesque et al., 2003; Vallerand et al., 2003), a flexible task engagement leading to a mastery orientation (Vallerand et al., 2007), better concentration, absorption, positive situational emotions, self-esteem, and flow during activity engagement (Lafrenière, Bélanger, Sedikides, & Vallerand, 2011; Mageau, Vallerand, Rousseau, Ratelle, & Provencher, 2005; Vallerand et al., 2003). At work, harmonious passion has been shown to be negatively associated with

burnout, but positively associated with work satisfaction (Vallerand, Paquet, Philippe, & Charest, 2010).

In contrast, obsessive passion results from a controlled internalization of the activity in identity (see Ryan & Deci, 2000; Sheldon, 2002; Vallerand & Ratelle, 2002). In other words, rather than investing themselves freely in their activity for reasons of choice and pleasure, individuals with a predominant inclination toward obsessive passion tend to succumb to irrepressible internal urges to engage in the activity (Vallerand, 2010). This type of engagement not only leads to a rigid participation in the activity, but also to ruminative thoughts when prevented from engaging it (Vallerand et al., 2003). Because the activity is attached to contingencies of self-worth (i.e., self-esteem, social acceptance), the activity often conflicts with other life domains (Séguin-Lévesque et al., 2003). Consequently, obsessive passion promotes defensive reactions to self-relevant negative information (Bélanger et al., 2013a; Hodgins & Knee, 2002). Moreover, engaging the activity under pressure may interfere with the experience of positive affect and even facilitate negative affect during task engagement (Vallerand et al., 2010).

Consistent with this analysis, obsessive passion has been found to be positively correlated with general negative emotions (Mageau et al., 2005; Vallerand et al., 2003), poor on-task concentration (Vallerand et al., 2003), increased rumination (Ratelle, Vallerand, Mageau, Rousseau, & Provencher, 2004; Vallerand et al., 2003), conflict with other life activities (Bélanger et al., 2013b), dyadic adjustment problems (Séguin-Lévesque et al., 2003), low implicit self-esteem (Lafrenière et al., 2011), and rigid task engagement (Rip, Fortin, & Vallerand, 2006; Vallerand et al., 2003), which fosters negative situational emotions (Vallerand et al., 2003). Research by Vallerand et al. (2007) has also demonstrated that obsessive passion is associated different types of achievement goals such as mastery, performance approach (doing better than others), and performance avoidance (avoiding being worse than others). At work, obsessive passion has been shown to be positively associated with burnout and the experience of conflict (Vallerand et al., 2010).

## Overview of studies

The goal of the present research was to examine the influence of regulatory modes on psychological adjustment at work. We hypothesized that being basic self-regulatory processes, regulatory modes would be associated with the type of passion people develop for work, which in turn would be associated with workers' psychological adjustment. We predicted that regulatory modes would be associated with workers' type of passion because regulatory modes are fundamental regulatory processes that operate before the development of a passion, which occurs later in life (see Mageau et al., 2009). Because locomotion promotes intrinsic motivation

<sup>1</sup>The concept of passion is related to intrinsic and extrinsic motivation. Yet, these constructs are distinct (e.g., Vallerand et al., 2003, Study 2) and can even predict different outcomes (Bélanger et al., 2013b, Study 4). Intrinsic motivation resembles passion as both involve interest and liking toward the activity. However, research has shown that passion involves the internalization of the activity into one's identity, whereas intrinsically motivated activities are generally conceived of as emerging from momentary person-task interaction (Koestner & Losier, 2002). Another distinction is that extrinsic motivation does not necessarily entail performing the activity out of enjoyment (e.g., Ryan & Connell, 1989), whereas it does for passionate activities (e.g., Vallerand et al., 2003).

(Kruglanski et al., 2000; Pierro et al., 2006, 2009) and that harmonious passion is derived from an autonomous internalization of the activity (Vallerand et al., 2003), we hypothesized that locomotion should be positively correlated with harmonious passion, which in turn would be positively associated with workers' psychological adjustment (Vallerand et al., 2003, 2010). In contrast, because assessment promotes extrinsic motivation (Kruglanski et al., 2000; Pierro et al., 2006) and obsessive passion is derived from a control internalization of the activity (Vallerand et al., 2003), we predicted that assessment would be positively correlated with obsessive passion, which in turn should be negatively associated with workers' psychological adjustment (Vallerand et al., 2010). The following hypotheses were tested on workers' stress (Study 1) and burnout (Study 2) in different organizational settings (i.e., car dealership, hardware supply company, hospital). Both studies relied on convenience samples for which all measures, conditions, and data exclusions are reported.

## Study 1

The aim of Study 1 was to test the proposed mediation model on workers' stress. To this end, Study 1 took place in two organizations: a car dealership and a hardware supply company. Two indirect effects were hypothesized: (1) locomotion would be negatively associated with workers' stress through its positive association with harmonious passion; and (2) assessment would be positively associated with workers' experience of stress through its positive association with obsessive passion.

## Participants and procedure

One hundred nineteen employees (69 women,  $M_{age} = 35.76$ ,  $SD_{age} = 8.92$ ) from two Italian organizations (79 from a car dealership and 40 from a hardware supply company) participated in this research on a voluntary basis. Employees had been employed for an average of 8.76 years ( $SD_{years} = 6.89$ ). All participants filled out the Regulatory Mode Scale (RMS, Kruglanski et al., 2000), the passion scale (Vallerand et al., 2003), and a measure of stress at work (Cohen, Kamarck, & Mermelstein, 1983).

## Materials

### Regulatory mode orientations

The Italian version of the locomotion and assessment scales (Kruglanski et al., 2000) are two separate 12-item self-report measures designed to tap individual differences in regulatory mode tendencies. Specifically, respondents rate the extent to which they agree with self-descriptive statements reflecting locomotion (e.g., "By the time I accomplish a task, I already

have the next one in mind") or assessment (e.g., "I spend a great deal of time taking inventory of my positive and negative characteristics"). Ratings are made on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). We computed two composite scores, one for locomotion ( $\alpha = .82$ ) and one for assessment ( $\alpha = .70$ ), by averaging across responses.

### Passion for work

Passion for work was assessed with the Italian (back-translated) version of the Passion Scale developed by Vallerand et al. (2003). The Passion Scale is composed of two subscales of six items each, assessing harmonious (HP) and obsessive (OP) passion. Ratings are made on a 7-point Likert scale with responses ranging from 1 (*do not agree at all*) to 7 (*completely agree*). A sample item for OP is "I have difficulties controlling my urge to do my work," and a sample item for HP is "My work is in harmony with other activities in my life."

We computed two composite scores (one for HP and one for OP) by averaging across responses. Results from exploratory and confirmatory factor analyses have provided strong support for the bi-factorial structure of the scale in a number of life contexts, including work (Carbonneau, Vallerand, Fernet, & Guay, 2008; Vallerand & Houliort, 2003). Furthermore, internal consistency analyses supported the reliability of the HP ( $\alpha = .83$ ) and OP ( $\alpha = .82$ ) scales.

### Stress

Stress was measured with six items derived from the Perceived Stress Scale (Cohen et al., 1983). Sample items: "In the last month, I often felt nervous and stressed at work" and "In the last month, I often felt unable to control important things at work." Participants responded on a 6-point Likert scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). A score of perceived stress was computed by averaging across responses. Reliability of the Perceived Stress Measure was satisfactory ( $[\alpha] = .88$ ).

## Results

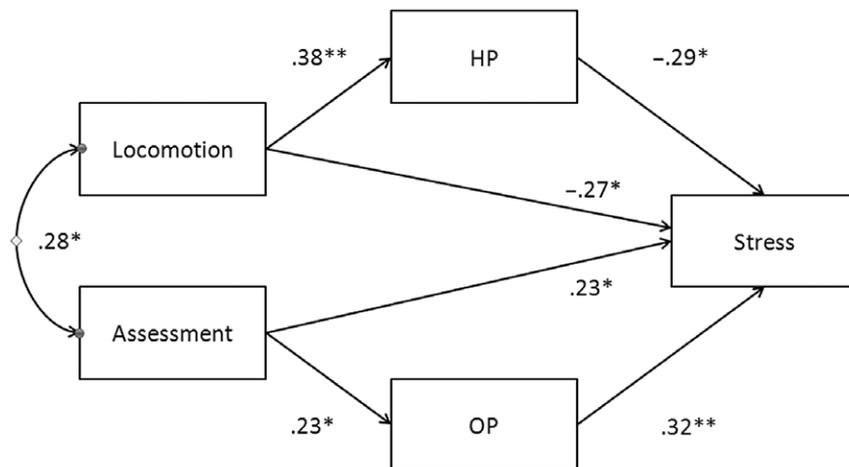
Path analyses<sup>2</sup> were conducted to examine the mediating role of passion in the relationship between regulatory modes and stress. The model was tested using Amos (Arbuckle, 2007) and maximum likelihood estimation procedures. Six paths were specified: two paths from locomotion to harmonious passion and stress, two paths from assessment to obsessive passion and stress, and two paths linking each type of passion to stress. A covariance was added between the error of harmonious and obsessive passion because they were correlated. Gender, age, type of organization, and job tenure add no

<sup>2</sup>In Studies 1 and 2, path analysis was chosen over structural equation modeling because of sample size.

**Table 1** Descriptive and Correlations between Variables (Study 1)

	<i>M</i>	<i>SD</i>	1	2	3	4	5
(1) Locomotion	4.80	.68	(.82)	—	—	—	—
(2) Assessment	3.16	.71	.28**	(.70)	—	—	—
(3) Harmonious passion	4.54	1.12	.41***	.05	(.83)	—	—
(4) Obsessive passion	2.90	1.08	.10	.21*	.41***	(.82)	—
(5) Stress	3.06	1.29	-.29**	.21*	-.26**	.22**	(.88)

Note. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . In bracket (Cronbach'alpha).  $n = 119$ .



**Figure 1** Results from the path analysis (Study 1). Standardized betas are reported. The correlation between HP and OP was .42,  $p < .001$ . \* $p < .01$ ; \*\* $p < .001$ .

bearing (all  $ps > .1$ ) on any of the variables, they were thus excluded from the model. We display means, standard deviations, and correlations for all measures in Table 1. Results revealed that the hypothesized model fit the data well  $\chi^2$  ( $df = 2$ ,  $n = 119$ ) = 0.71,  $p = .71$ , comparative fit index (CFI) = 1.00, goodness of fit (GFI) = .99, root mean square error of approximation (RMSEA) = .00.

As shown in Figure 1, all estimated paths were significant. Standardized betas are reported. Results indicated that locomotion was positively related to harmonious passion ( $\beta = .38$ ,  $p < .001$ ) and negatively related to stress ( $\beta = -.27$ ,  $p < .01$ ), whereas assessment was positively related to obsessive passion ( $\beta = .23$ ,  $p < .01$ ) and positively related to stress ( $\beta = .23$ ,  $p < .01$ ). In line with our expectations, harmonious passion was negatively associated with workers' experience of stress ( $\beta = -.29$ ,  $p < .01$ ), whereas obsessive passion was positively with stress ( $\beta = .32$ ,  $p < .001$ ).

Tests of indirect effects were conducted to examine the mediating role of passion in the relationship between regulatory modes and stress. Percentile bootstrapped confidence intervals (CIs) were measured in order to demonstrate mediation, while minimizing the probability of type I errors (Biesanz, Falk, & Savalei, 2010; Fritz, Taylor, & MacKinnon,

2012). In the present study, 95% CI were obtained with 5,000 bootstrap resamples (Preacher & Hayes, 2008).

First, we tested for the indirect effect of locomotion on stress through its effect on harmonious passion, while controlling for all other variables in the model. Results indicated that this indirect effect was statistically significant ( $\beta = -.11$ , CI  $-.22$  to  $-.03$ ,  $p = .008$ ). Similar analyses were conducted to test the indirect effect of assessment on stress through its effect on obsessive passion, controlling for all other variables in the model. Results supported our predictions and indicated a significant indirect effect ( $\beta = .07$ , CI  $.01$  to  $.15$ ,  $p = .02$ ).

## Discussion

Results from Study 1 provide evidence for the hypothesized model including regulatory modes, passion, and stress. In line with our theoretical framework, results supported the notion that locomotion, which facilitates action, was positively associated with workers' harmonious passion, which in turn was associated with better psychological adjustment at work (i.e., less stress). On the other hand, assessment, which facilitates comparative evaluations, was associated with obsessive passion, which in turn was negatively associated

with psychological adjustment. These results are consistent with prior research on two different levels: (1) Kruglanski et al.'s (2000) findings that locomotion and assessment are correlated with autonomous and non-autonomous motivations, respectively; and (2) Vallerand et al.'s (2010) findings that harmonious and obsessive passion are important predictors of psychological adjustment at work. However, Study 1 extends previous research by connecting these two separate, and heretofore, unrelated approaches under a single paradigm, thus evincing how regulatory modes are associated with people's passion for work (i.e., harmonious and obsessive) and how the latter construct is related to workers' psychological adjustment. Note, however, that compared with Hong, Tan, and Chang (2004) that only found a positive correlation between assessment and stress among undergraduates students, we also found a negative association between locomotion and stress. One possible explanation for this finding is that in the work context being proactive is a good strategy to meeting one's job responsibilities and avoid stressful situations (e.g., missing deadlines, not performing well). This might not have been captured by Hong et al.'s (2004) research conducted in a non-organizational context with a global measure of stress.

## Study 2

Study 2 aimed to conceptually replicate Study 1 using a different measure of psychological adjustment (i.e., burnout) and extend the generalizability of our findings to workers in a different organizational setting (i.e., hospital). In keeping with Study 1's hypotheses, we predicted that locomotion would be positively associated with workers' harmonious passion, which in turn should be related to better psychological adjustment (less burnout). In contrast, assessment was expected to be positively related to obsessive passion, which in turn would be negatively associated with workers' psychological adjustment (more burnout).

## Method

### Participants and procedure

Ninety-two nurses (51 women,  $M_{\text{age}} = 40.79$ ,  $SD_{\text{age}} = 9.93$ ) from an Italian Hospital participated in this research on a vol-

untary basis. Nurses had been employed for an average of 11.88 years ( $SD_{\text{years}} = 8.98$ ). As in Study 1, participants filled out the RMS and the passion scale. Then, participated completed the Shirom-Melamed Burnout Measure (SMBM, Shirom & Melamed, 2006).

## Materials

### Regulatory mode orientations

Nurses' regulatory mode orientations was measured using the locomotion ( $\alpha = .69$ ) and assessment scales ( $\alpha = .74$ ).

### Passion for work

Nurses' passion for work was measured using the same harmonious ( $\alpha = .81$ ) and obsessive ( $\alpha = .74$ ) passion scales.

### Burnout

The SMBM (Shirom & Melamed, 2006) is a 14-item scale that measures three underlying dimensions of burnout: (1) emotional exhaustion (EE, three items; e.g., "I feel I am unable to be sensitive to the needs of coworkers and customers"); (2) physical fatigue (PF, six items; e.g., "I feel like my batteries are dead"); and (3) cognitive weariness (CW, five items; e.g., "I feel I'm not thinking clearly"). Items were scored on a 6-point Likert scale, ranging from 1 (*almost never*) to 6 (*almost always*). High scores in the EE, PF and CW scales, indicate high levels of burnout. Because the three subscales were significantly correlated each other (EE and PF,  $r = .72$ ;  $p < .001$ ; EE and CW,  $r = .80$ ;  $p < .001$ ; PF and CW,  $r = .80$ ;  $p < .001$ ), following Shirom and Melamed (2006) suggestions, we averaged the scores on these three measures to form an overall index of burnout ( $\alpha = .92$ ).

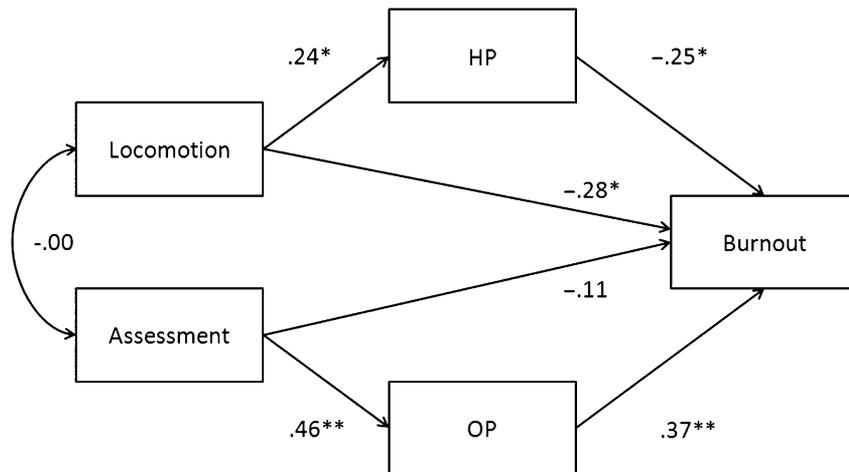
## Results

We tested the exact same hypothesized model as in Study 1 using Amos (Arbuckle, 2007) and maximum likelihood estimation procedure. Gender, age, and job tenure add no bearing (all  $ps > .1$ ) on any of the variables; they were thus excluded from the model. We display means, standard deviations, and correlations for all measures in Table 2. Results revealed that the hypothesized model fit the data well  $\chi^2 (df = 2, n = 92) = 2.08, p = .35, CFI = .99, GFI = .99, RMSEA = .02$ .

**Table 2** Descriptive and Correlations between Variables (Study 2)

	<i>M</i>	<i>SD</i>	1	2	3	4	5
(1) Locomotion	4.99	.43	(.69)	—	—	—	—
(2) Assessment	2.98	.77	-.01	(.74)	—	—	—
(3) Harmonious passion	5.21	1.04	.28**	-.03	(.81)	—	—
(4) Obsessive passion	3.33	1.14	.13	.46***	.30**	(.74)	—
(5) Burnout	2.15	.93	-.31**	.07	-.23*	.22*	(.92)

Note. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ . In bracket (Cronbach'alpha).  $n = 92$ .



**Figure 2** Results from the path analysis (Study 2). Standardized betas are reported. The correlation between HP and OP was  $.32, p < .01$ . \* $p < .01$ ; \*\* $p < .001$ .

The model is displayed in Figure 2. Standardized betas are reported. Results indicated that locomotion was positively related to harmonious passion ( $\beta = .24, p < .01$ ) and burnout ( $\beta = -.28, p < .01$ ), whereas assessment was positively related to obsessive passion ( $\beta = .46, p < .001$ ), but not related to burnout ( $\beta = -.11, p = .29$ ). Harmonious passion was negatively related to workers' experience of burnout ( $\beta = -.25, p < .05$ ), whereas obsessive passion was positively related to it ( $\beta = .37, p < .001$ ).

Similar to Study 1, indirect effects were tested using percentile bootstrapped CIs (using 5,000 bootstrap resamples).

We first tested the indirect effect of locomotion on stress through its effect on harmonious passion, while controlling for all other variables in the model. Results indicated that this indirect effect was statistically significant ( $\beta = -.06, CI -.20$  to  $-.001, p = .04$ ). Similar analyses were conducted to test the indirect effect of assessment on stress through its effect on obsessive passion, controlling for all other variables in the model. Results indicated a marginally significant indirect effect ( $\beta = .18, CI -.01$  to  $.32, p = .06$ ).

## Discussion

Study 2 provides further evidence for our model by conceptually replicating several findings of Study 1 using workers from a different organizational setting and a different measure of psychological adjustment (i.e., burnout). Study 2 thus offers additional support to our theoretical framework regarding (1) the relation between regulatory modes and passion; and (2) the positive (vs. negative) association of harmonious (vs. obsessive passion) with workers' psychological adjustment, which replicates the work of Vallerand et al. (2010). Notably, one finding that was not replicated in Study 2 is the direct effect of assessment on psychological adjustment. However,

this parameter did not statistically differ from the relationship observed in Study 1 ( $Z = 1.02, p = .30$ ). Across studies, we also note that the indirect effects linking locomotion to psychological adjustment (i.e., stress and burnout) through harmonious passion were of similar magnitude and were not statistically different ( $Z = .50, p = .61$ ). The same can be said with regard to the indirect effects linking assessment to psychological adjustment through obsessive passion ( $Z = .60, p = .54$ ).

## General discussion

In the last decades, social scientists have unraveled two independent self-regulatory orientations that are part and parcel of goal pursuit (e.g., Higgins et al., 2003b; Kruglanski et al., 2000). The first orientation is assessment and pertains to comparing and evaluating the value of one's current state to future end states. The second orientation is locomotion and pertains to initiating movement away from a current state to reach a new one. Together, these basic self-regulatory orientations influence how goals are pursued and thus, the type of passion (harmonious vs. obsessive) people experience with regards to an important activity. In turn, harmonious and obsessive passion dictates the amount of flexibility (vs. rigidity) associated with engaging the activity, and thus affects people's psychological adjustment (Vallerand et al., 2010).

The present research based on the integration of regulatory mode theory (Higgins et al., 2003a, 2003b; Kruglanski et al., 2000) and the dualistic model of passion (Vallerand et al., 2003), yielded results consistent with the foregoing perspective. Specifically, we found that each regulatory orientation was associated with workers' mental health through different psychological mechanisms. The first mechanism involves harmonious passion. Locomotion is positively related to

harmonious passion because it increases the level of experiential involvement and thus, the experience of intrinsic and autonomous motivation (Csikszentmihalyi, 1975; Kruglanski et al., 2000; Pierro et al., 2006, 2009). As a consequence, individuals tend to experience greater psychological adjustment because harmonious passion promotes flexible task engagement and overall minimizes the experience of negative affect (Vallerand et al., 2003, 2010).

The second mechanism affecting psychological adjustment involves obsessive passion. Assessment is associated with obsessive passion because it increases the likelihood of perceiving one's actions as means toward specific ends and thus, stimulates the experience of extrinsic and non-autonomous motivation (Kruglanski et al., 2000; Pierro et al., 2006, 2009). In turn, with obsessive passion, the activity becomes out of the individual's control, which produces psychological pressure to continuously pursue it. Consequently, obsessive passion facilitates the experience of negative affect (Mageau et al., 2005; Vallerand et al., 2003, 2010).

Consistent with this analysis, Study 1 demonstrated that locomotion was negatively associated with workers' stress at work through its effect on harmonious passion, whereas assessment was positively associated with workers' stress through its effect on obsessive passion. Study 2 conceptually replicated these results with another measure of psychological adjustment (i.e., burnout). Through replication with different psychometric instruments in different work settings, Studies 1 and 2 offer robust and generalizable findings. However, some limitations of this research should be also acknowledged. The reliance on correlational data prevents us from making causal inferences. Future research could address this issue using an experimental design.

At the theoretical level, the present work makes a contribution to our understanding of the antecedents of stress and burnout. Indeed, whereas prior research has focused on the social forces or job characteristics accentuating these factors (e.g., Aldag et al., 1981; Karasek, 1979; Schaufeli & Salanova, 2007), our research underscores the importance of understanding work-related attitudes for psychological adjustment. This approach allows one to take a shot at the question raised at the onset of our manuscript as to why two individuals working in the same environment can have diametrically opposed psychological experience. Furthermore, whereas prior research has documented the relationship between regulatory modes and well-being (De Carlo et al., 2014; Hong et al., 2004; Kruglanski et al., 2000), the present research sheds light on the mechanism at play in these relationships by highlighting the importance of passion for workers' psychological adjustment (Vallerand et al., 2010). In doing so, the present article connects two seemingly disparate theories affording new insights to each perspective, and thus novel predictions for organizational research. Indeed, aside from the present work, the extent to which regulatory modes influ-

ence organizational phenomena is mostly unknown at this point. However, it seems highly plausible that regulatory modes have bearing on outcomes beyond psychological adjustment such as organizational commitment, perceived justice, and leadership, to name a few. For instance, workers' with a strong assessment orientation may show an inclination toward comparing (potentially to their despair) how well they are being treated at work (e.g., promotions received) in comparison with their colleagues. As a result, these workers could perceive that their work environment is unfair in terms of distributive, procedural, and interactional justice. For these reasons, assessment could predict more negative work climate perceptions, and thus affect workers' job satisfaction (Fatt, Khin, & Heng, 2010), commitment (Bakshi, Kumar, & Rani, 2009), performance (Colquitt, Noe, & Jackson, 2002), and the practice of unethical behavior (e.g., stealing; Tripp, Bies, & Aquino, 2002). Another hypothesis could be that because locomotors are highly committed "doers," they could be naturally inclined to become transformational leaders that inspire others by their devotion. These phenomena could well be probed in further research and have far-reaching implications for our understanding of organizational dynamics.

Another interesting avenue for future research is the relationship between regulatory modes, passion, and achievement goals (Conroy, Elliot, & Hofer, 2003; Elliot, 1997). The achievement motivation literature typically distinguishes between mastery and performance goals, whereby the former involves the development of proficiency and the latter involves proving one's competence (Dweck, 1991). Interestingly, locomotion and harmonious passion have been found to positively correlate with mastery goals only, whereas obsessive passion and assessment have been correlated with both mastery and performance goals (Kruglanski et al., 2000; Vallerand et al., 2008). One question that could be investigated is whether the relationship between regulatory modes and achievement goals are mediated by passion in the same way as the model presented in this manuscript. Support for these hypotheses could potentially attest to the generalizability of the model beyond psychological adjustment at work.

A second theoretical contribution afforded by the present set of studies is a better understanding of how people develop different types of passion. Prior research on the development of passion (Mageau et al., 2009) has established that autonomy-supportive environments foster the development of harmonious passion, whereas (1) identification with the activity; (2) preference for activity specialization; and (3) parents' activity valuation, are factors that pressure one to engage in the activity that facilitate the development of obsessive passion. Whereas important insights have been gleaned from this research, it appears to have focused solely on the environmental determinants of passion while overlooking individual factors potentially at play. The present work thus innovates and contributes to this topic by demonstrating how

proximal self-regulatory processes influence distal motivational phenomena. Future research could further these issues by investigating longitudinally how locomotion and assessment affect the development of harmonious and obsessive passion with individuals that have yet to get a kick out of doing an activity (i.e., before the activity is fully part of the person's identity).

## Conclusion

Regulatory modes are particular interests or concerns that guide human behavior. On the one hand, locomotion is an orientation geared toward action, whereas assessment

fosters comparative evaluations. Consistent with prior theorizing on regulatory mode (Kruglanski et al., 2000) and the dualistic model of passion (Vallerand et al., 2003), the present research found that locomotion is related to harmonious passion, which in turn is positively associated with workers' psychological adjustment. In contrast, assessment is related to obsessive passion, which in turn is negatively associated with workers' psychological adjustment. Overall, the present research demonstrates how proximal psychological mechanisms such as basic regulatory modes can impact distal outcomes such as stress and burnout through motivational phenomena such as passion.

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