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ORIGINAL PAPER

The moderating effect of passion on the relation between activity engagement and positive affect

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Abstract The present diary study investigates the moderating effect of passion on the relation between activity engagement and daily positive affect. In line with past research (Vallerand et al. 2003, *Journal of Personality and Social Psychology, 85*, 756) it is suggested that people with an obsessive passion have more difficulties putting their passion aside to invest themselves in other activities, to a point where they fail to experience positive affect during these activities. A sample of 154 college students reported their daily activity engagement and positive affect over a 2-week period. HLM analyses show that the more people have an obsessive passion the more they experience accentuated decreases in positive affect during days when they do not engage in their passion compared to days when they do. In contrast, harmonious passion predicts daily positive affect on days when people engage in their activity. These results are discussed in light of previous research on passion and positive affect.

Keywords Harmonious and obsessive passion · Positive affect · Activity engagement

Introduction

Many researchers have emphasized the importance of positive affect (Watson and Tellegen 1985) both as a source of psychological benefits (e.g., Fredrickson 2001) and as a principal component of subjective well-being (e.g., Diener 1994). While numerous dispositional and situational determinants of positive affect have been identified, interactionist researchers (e.g., David et al. 1997; Diener et al. 1984; Feist et al. 1995) have emphasized the dynamic interplay of both types of influence on positive affect. In line with this interactionist view of positive affect, the purpose of the present research was to examine how people's type of passion (i.e., harmonious vs. obsessive; Vallerand et al. 2003) moderates the impact of activity engagement and non-engagement on daily positive affect.

Vallerand and his collegues (2003) propose a new conceptualization of passion, where passion is defined as a strong inclination toward an activity that one finds important, likes (and even loves), and to which one devotes time and energy. This definition is in line with past research that shows that activity valuation (e.g., Deci et al. 1994), time and energy expenditure (Emmons 1999), and liking for the task (Csikszentmihalyi et al. 1993) are all associated with engagement in activities. Vallerand and his colleagues further propose that activities are passionate when they constitute central features of people's identity (Schlenker 1985) such that people with a passion for dancing or for painting, for example, do not merely dance or paint. They are "dancers" or "artists".

Guided by philosophers' writings (e.g., Descartes 1649; Lagache 1936; Spinoza 1953), Vallerand and his colleagues (2003) propose a dualistic approach to passion. Two types of passion are put forward, an obsessive and a harmonious passion, which reflect the more passive and active forms of passion found in philosophers' work (see Rony 1990). Vallerand and his colleagues (2003) hypothesize that the two types of passion result from the way the activity is internalized in a person's identity. In line with

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Self-Determination Theory (Deci and Ryan 2000), it is proposed that activities can be internalized in either a controlled or an autonomous way. A controlled internalization refers to an activity that is internalized as tied to various contingencies, such as the person's perception of competence, desire for excitement, or sense of acceptance. This type of internalization is hypothesized to result in a more obsessive and passive form of passion, where activity engagement feels mandatory and even compulsory. Obsessive passion is thus characterized by an internal pressure that pushes the person to engage in the activity. The individual feels compelled to do his or her activity because doing so may quench an uncontrollable thirst for the activity or satisfy various internal demands such as the maintenance of one's value or sense of self-worth. As such, the activity tends to be overly valued, to be favored above all other aspects of the person's life, and to take disproportionate space in the person's identity (Vallerand et al. 2003).

An activity may also be internalized within a context of choice and exploration, referred to as an autonomous form of internalization. This form of internalization is hypothesized to result in a more active and harmonious type of passion, which is characterized by a sense of deep interest, but also of volition. Harmonious passion refers to a motivational force that leads people to choose to engage in the activity and to personally endorse the importance of their activity engagement. The activity is valued, but not overly so, which allows people to engage in other life projects. Although the activity occupies a significant space in the person's identity, it is not overpowering, such that activity engagement remains under the person's willful control and is in harmony with other aspects of the person's life (Vallerand et al. 2003).

Past research on passion supported the conceptualization of the two types of passion. Using the Passion Scale, a bidimensional measure of the two types of passion, Vallerand and his colleagues (2003) showed that the more people report high levels of passion, either obsessive or harmonious, the more they spend time on their activity, the more they value it, and the more they perceive it as a passion. Furthermore, obsessive passion has been shown to be more invasive in people's life than harmonious passion. For example, people with a more obsessive passion perceive their activity as occupying a greater part of their identity (Vallerand et al. 2003, Study 1) and experience more conflicts with other life domains (Séguin-Lévesque et al. 2003; Vallerand et al. 2003, Study 1). When asked to evaluate the relative importance of the passionate activity and other life domains (e.g., family, friends, or work), people with a more obsessive passion are more inclined to value their activity above all other domains (Ratelle et al. 2007).

Passion, activity engagement, and positive affect

Obsessive and harmonious passions are also experienced differently in terms of people's affect and cognition. Vallerand and his colleagues (2003, Study 1) showed that during activity engagement, only harmonious passion is positively related to positive affect and flow experiences (Csikszentmihalyi 1975, 1982) and negatively associated with shame. Furthermore, only harmonious passion is related to higher levels of positive affect following activity engagement when positive affect is measured retrospectively (Vallerand et al. 2003, Study 1), immediately after activity engagement (Rousseau and Vallerand 2007, Study 3), or when using a longitudinal design (Rousseau and Vallerand 2007, Study 2; Vallerand et al. 2003, Study 2). No research has yet investigated whether the affective benefits associated with harmonious passion last throughout the day when people engage in their passionate activity. If harmonious passion significantly contributes to well-being, engaging in one's activity out of harmonious passion should be an effective way to influence one's daily affective experiences. The first goal of the present research was thus to test this hypothesis.

In past research on activity engagement, positive affect has been chosen as the measure of choice for investigating people's affective experiences because compared to affective traits and more specific emotions (e.g., joy or guilt), affect is moderately long-lasting and occupies the background of consciousness (Oatley and Jenkins 1996; Rosenberg 1998). As such, positive affect is expected to influence people's threshold for experiencing more specific positive emotions by creating temporary, albeit important, deviations in these thresholds (Rosenberg 1998). In research on passion, positive affect has been defined as a state of high energy and pleasurable engagement (Watson and Tellegen 1985). In the present study, positive affect was measured using two dimensions, pleasantness and engagement (or high arousal; Watson and Tellegen 1985; Watson et al. 1988). Using a diary design, we sought to determine whether harmonious passion would predict people's positive affect as measured at the end of each day (see Sheldon et al. 1996 for a similar procedure). It was hypothesized that over a 2-week period, the more people have a harmonious, but not an obsessive, passion the more they should experience positive affect on days when they engage in their passionate activity. This hypothesis is in line with several studies that found a positive relation between activity engagement and daily positive affect (e.g., Clark and Watson 1988; Gauvin et al. 2000; Omodei and Wearing 1990).

Passion, activity non-engagement, and positive affect

Research on passion also shows that the negative consequences of obsessive passion are most obvious when people cannot engage in their passionate activity. When prevented from engaging in one's passionate activity, people with a more obsessive passion are more distracted when they engage in other activities (Vallerand et al. 2003, Study 1). Results from another study also show that obsessive passion predicts ruminative thoughts and feelings of psychological dependence when people are prevented from engaging in their activity (Ratelle et al. 2004). However, no research has examined the affective consequences of not engaging in one's passionate activity on a day-to-day basis.

The second purpose of the present study was to investigate the impact of passion on the way people react to engagement and non-engagement in their passionate activity on a daily basis. As research on passion suggests, people with a more obsessive passion might not invest and immerse themselves in other areas of their lives because they tend to over-value (Ratelle et al. 2007), rigidly persist in (Ratelle et al. 2004; Rip et al. 2006; Vallerand et al. 2003), and over-identify with their passionate activity (Vallerand et al. 2003, Study 1). In line with Csikszentmihalyi's (1975, 1982) theory of flow, this lack of investment in other activities should result in lower levels of positive affect when people do not engage in their passionate activity. Flow, which is defined as the complete absorption of oneself in an activity, has been repeatedly related to positive affect (e.g., Csikszentmihalyi 1982; Mundell 2000), and seems to constitute one of the processes through which activity engagement influences people's positive affect. To the extent that people with a more obsessive passion fail to invest in other areas of their lives, they should derive less positive affect from these activities compared to people with a more harmonious passion. Accordingly, we hypothesized that the more people experience an obsessive passion the more they should react strongly to being away from their passionate activity. Specifically, it was expected that although activity engagement would generally be associated with higher levels of positive affect at a within-person level (Beck and Page 1988; Harlow and Cantor 1996; Rejeski et al. 1995; Watson 1988), obsessive passion would moderate this relation at the between-person level. People with a more obsessive passion were thus expected to experience a greater decrease in positive affect on days when they do not engage in their passionate activity compared to days when they do. Harmonious passion was not expected to moderate the relation between activity engagement and positive affect.

Passion and activity engagement

The third and final goal of the present research was to investigate how the two types of passion relate to activity engagement. Past research (Mageau et al. 2007; Vallerand et al. 2003, Study 1) shows that harmonious and obsessive passion are similarly related to retrospective measures of activity engagement. However, other studies show that differences in activity engagement emerge when the circumstances surrounding activity engagement make it ill advised or counterproductive to pursue the activity. It was found that the more people report an obsessive passion, the more likely they are to do their activity under hazardous conditions (Vallerand et al. 2003, Study 3), to engage in their activity when injured (Rip et al. 2006), and to engage in heavier and compulsory gambling (Ratelle et al. 2004; Vallerand et al. 2003, Study 4). Obsessive passion thus seems to foster a more rigid and systematic form of activity engagement than harmonious passion.

Although these differences were not apparent when a retrospective measure of activity engagement was used, they might come to light when activity engagement is examined on a day-to-day basis. Over a 2-week period, several daily constraints and obligations may arise and prevent activity engagement. It was hypothesized that the more people report an obsessive passion, the more they should ignore the circumstances surrounding their activity engagement and engage in their activity systematically, and thus more often over a 2-week period. In contrast, harmonious passion should not predict engagement frequency over a 2-week period because this type of passion is related to a more flexible and less systematic form of activity engagement. Yet, because harmonious passion is related to retrospective measures of time spent on the activity (Mageau et al. 2007; Vallerand et al. 2003, Study 1), it should still predict high (but not necessarily systematic) activity engagement over a 2-week period. It is possible that compared to obsessive passion, harmonious passion leads to a different pattern of activity engagement where high levels of activity engagement are reflected more in terms of engagement length and less in terms of engagement frequency. To investigate possible differences in activity engagement patterns, both the frequency and length of activity engagement were measured.

In sum, the present research had three objectives. Using a 2-week diary design, we first examined if engaging in one's activity out of a harmonious passion could influence one's daily positive affect. We also investigated the consequences of not engaging in one's passionate activity. Specifically, we aimed at showing that the more people have an obsessive, but not a harmonious, passion the more they should have difficulties putting their passion aside to invest themselves in other activities to a point where they

fail to experience positive affect from engagement in other activities. Finally, we investigated the relation between the two types of passion and daily activity engagement in terms of participation length and frequency.

Method

Participants and procedure

The sample consisted of 154 students from various colleges in Montreal. A total of 560 students were contacted in their classroom and asked to participate in a 2-week diary study. Each student received a questionnaire booklet along with a pre-stamped return envelope. Of these 560 students, 154 decided to participate and returned their questionnaire, for a participation rate of 27.5%[1]. The final sample consisted of 112 women and 28 men with a mean age of 18.8 years. When asked to describe their favorite activity, participants mentioned a total of 98 activities (e.g., arts, sports, or cultural interests), which were similar to those reported by Vallerand and his colleagues (2003, Study 1).

Measures

On Day 1, participants completed measures of passion, situational affect, and demographic variables. On Day 2, and consecutively for the following 12 days, they described their activity engagement and reported their situational positive affect. On average, participants completed their daily questionnaire on 10.5 days out of 13 days.

The Passion Scale (Vallerand et al. 2003)

The Passion Scale assesses harmonious and obsessive passion as proposed by Vallerand and his colleagues (2003). Participants are asked to think about the activity that is most dear to their heart and to complete the Passion Scale according to this activity using a 7-point Likert-type response scale ranging from "Do not agree at all" (1) to "Strongly agree" (7). A sample item for harmonious passion is "For me it is a passion that I can still manage to control", and a sample item for obsessive passion is "I have a tough time controlling my need to do this activity". The Passion Scale has been shown to be structurally sound, theoretically valid, and highly reliable (Vallerand et al. 2003). In the present study, an abridged version was used where each type of passion was measured with 5 items. These items were shown to have the highest inter-item correlations in a previous sample (Ratelle et al. 2007). Both passion subscales showed satisfactory reliability as indicated by Cronbach's alphas of .77 and .87 for harmonious and obsessive passion, respectively.

Positive affect

A 5-item version of the positive dimension of the Positive and Negative Affect Schedule (PANAS; Watson et al. 1988) was used to measure participants' level of positive affect at the end of each day. Watson and his colleagues (1988) define positive affect as the extent to which a person feels enthusiastic and active. Participants were instructed to indicate the extent to which they experienced each emotion at the present moment (i.e., enthusiastic, interested, determined, alert, and active) using a 5-point Likert-type response scale ranging from (1) "Very slightly or not at all" to (5) "Extremely". These five items were chosen because they were shown to be both reliable and valid in a previous study (Rousseau and Vallerand 2007). In the present study, the positive affect subscale showed satisfactory reliability over the 2-week period with Cronbach's alphas ranging from .82 to .86.

Activity engagement

Each evening (except for Day 1) participants reported whether or not they had engaged in their passionate activity during the day. If participants did engage in their passionate activity, they were asked to indicate how much time they had devoted to it.

Hierarchical linear modeling analyses

The present study involved a hierarchically structured data set, where repeated daily measures (level 1) were nested under participants' dispositional measures (level 2). Hierarchical linear modeling (HLM) analyses with the restricted maximum likelihood method of estimation were used because these analyses examine variables from different levels of generality simultaneously and independently. In HLM analyses, between-person variability of means is calculated at the intercepts (β_{0j}) of the HLM equation, where level-1 predictors equal 0. How level-1 predictors are set up therefore determines the meaning of participants' means. When level-1 predictors are centered, the intercepts (β_{0j}) represent participants'

[1] This rate should be interpreted as a participation rate and not as a response rate because students who received a questionnaire had not previously agreed to participate. Students were met in classrooms during a 5-min period where the first author described the study and distributed questionnaire booklets to all potential participants.

means on the dependent variable *at mean level of the level-1 predictors*. When level-1 predictors are dichotomous, the intercepts (β_{0j}) represent participants' means on the dependent variable *for the category coded as 0*. The same principle holds for level-2 predictors when interpreting the grand mean of participants' means. In the present study, the level-1 predictor was dichotomous and level-2 predictors were centered on the sample mean. Missing values of level-2 variables ($n = 1$) were replaced by sample means to satisfy HLM software's (version 5.04) requirements.

Results

Preliminary analyses

Descriptive statistics of the situational variables were obtained by aggregating the daily data. Over the 2-week span, participants engaged in their passionate activity on between 0 and 12 days, with an average of 4.8 days. On each occasion, participants engaged in their activity for an average of 2 h and 46 min per day. Means, standard deviations, and reliability coefficients are presented in Table 1. Correlations and HLM analyses showed that potential confounding variables such as age, gender, whether it was a weekend day or not, daily missing data, and activity type[2] did not influence the present findings. These variables were thus not included in the main analyses.

Passion, activity engagement, and positive affect

Using hierarchical linear modeling, the relations among the two types of passion, activity engagement, and positive affect were examined with the following equation:

$$\begin{aligned} \textit{Level}\,1: \quad & \text{Positive Affect}_{ij} = \beta_{0j} + \beta_{1j} \\ & (\text{Activity Engagement}) + r_{ij} \\ \textit{Level}\,2: \quad & \beta_{0j} = \gamma_{00} + \gamma_{01}(\text{Harmonius Passion}) \\ & \quad + \gamma_{02}(\text{Obsessive passion}) + u_{0j} \\ & \beta_{1j} = \gamma_{10} + \gamma_{11}(\text{Harmonius Passion}) \\ & \quad + \gamma_{12}(\text{Obsessive passion}) + u_{1j} \end{aligned} \tag{1}$$

Specifically, this equation allowed us to examine (1) if activity engagement predicted daily positive affect, (2) if harmonious passion predicted mean levels of positive affect on days when participants engaged in their activity, and (3) whether obsessive passion moderated the relation between activity engagement and positive affect. Results from this equation are presented in Table 2. Within-person effects are described first followed by the effects of the two types of passion on the variability of means and slopes.

To investigate the relation between activity engagement and positive affect at the within-person level, activity engagement was dummy coded such that days when participants engaged in their activity were coded as "0" and days when they did not were indicated by "1"[3]. Results showed that whether or not people engaged in their passionate activity during the day predicted daily positive affect ($\gamma_{10} = -.42$, $p < .001$)[4]. In general, one could expect an increase of .42 on the 5-point Likert-type response scale of positive affect on days when people engaged in their activity compared to days when they did not. Activity engagement accounted for 13.7% of the within-person variability of positive affect[5].

Predictions of the variability of means (β_{0j}) and slopes (β_{1j}) from level-2 variables are presented in turn. In the present equation, people's means represented positive affect across days when participants *engaged in their activity* (when activity engagement is coded as "0"). The two types of passion were entered as predictors of means and slopes. Results from the prediction of means (β_{0j}) showed that harmonious passion predicted positive affect when people engaged in their passionate activity. Specifically, the more people reported having a harmonious passion, the more they experienced positive affect on days when they had engaged in their activity ($\gamma_{01} = .14$, $p < .05$). In line with previous findings, obsessive passion

Table 1 Descriptive statistics and reliability coefficients

Variable	Mean	*SD*	Cronbach's alpha
Level 1: Daily measures			
Daily positive affect	2.89	0.68	0.84
Time spent each day one engaged in the activity (min)	165.71	117.67	–
Level 2: Day-1 measures			
Harmonious passion	5.62	0.96	0.77
Obsessive passion	4.13	1.32	0.87

[2] Activity type was coded according to six dichotomous criteria. Each activity was classified as whether or not it gave participants a particular opportunity to (1) experience competence, (2) engage in physical activity, (3) engage in an activity with other people, (4) express their creativity in a piece or project, (5) be active instead of passive, and (6) be in contact with a form of artistic expression.

[3] Activity engagement was coded as such in order for participants' means to represent positive affect on days when people engaged in their passionate activity.

[4] When the dependent variable is continuous results from HLM analyses are interpreted as non-standardized betas.

[5] Percentage of variance accounted for by a predictor is calculated by comparing unexplained variability before and after adding the predictor to the equation.

Table 2 Results from Eq. 1: Predicting positive affect from activity engagement (level-1) and harmonious and obsessive passion (level-2)

Fixed effect	Coefficient	*t*-ratio	df	*p* value
Means as outcomes, β_{0j}				
Intercept (γ_{00})	3.12	51.60	150	.001
Harmonious passion (γ_{01})	0.14	2.12	150	.05
Obsessive passion (γ_{02})	0.02	0.51	150	.61
Slopes as outcomes, β_{1j}*(Activity engagement)*				
Intercept (γ_{10})	–0.42	–8.13	150	.001
Harmonious Passion (γ_{11})	0.05	0.81	150	.42
Obsessive Passion (γ_{12})	–0.08	–2.00	150	.05

was not related to positive affect when people engaged in their passionate activity (γ_{02} = .02, p = .61). The two types of passion accounted for 2.4% of the between-person variability of means.

Results from the prediction of slopes involving activity engagement (β_{1j}) showed that only obsessive passion (γ_{12} = –.08, $p < .05$) moderated the relation between activity engagement and positive affect. The more people reported having an obsessive passion toward their activity, the greater the relation between activity engagement and daily positive affect. With each increase of 1 point above the mean on obsessive passion, one would expect an *increase* of .08 in the *negative* relation between activity engagement and positive affect compared to the original grand slope (γ_{10} = –.42). The moderating role of obsessive passion on the relation between activity engagement and positive affect is illustrated in Fig. 1. Obsessively passionate people experienced lower levels of positive affect when they did not engage in their activity compared to days when they did, and this difference was more pronounced for them than for harmoniously passionate people. Importantly, Fig. 1 also illustrates that people with a more obsessive passion did not experience a corresponding *increase* in positive affect when they engaged in their activity as did people with a more harmonious passion. On the contrary, people with a more obsessive passion generally experienced lower levels of positive affect than people with a more harmonious passion. The two types of passion accounted for 2.9% of the variability of slopes between activity engagement and positive affect.

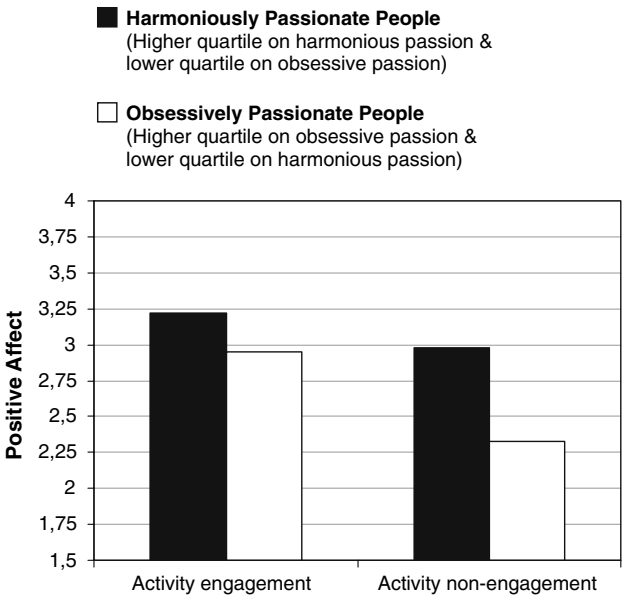

Fig. 1 The moderating effect of obsessive passion on the relation between activity engagement and positive affect

$$\begin{aligned} &\textit{Level}\,1: \quad \text{Prob}\,(\text{Activity Engagement}_{ij} = 1|\text{B}) = \text{P} \\ &\qquad\qquad \text{Log}[\text{P}/(1-\text{P})] = \beta_{0j} \\ &\textit{Level}\,2: \quad \beta_{0j} = \gamma_{00} + \gamma_{01}(\text{Harmonius Passion}) \\ &\qquad\qquad + \gamma_{02}(\text{Obsessive passion}) + u_{0j} \end{aligned} \tag{2}$$

The dependent variable being a binary outcome, a Bernoulli model was tested using Unit-specific logit links (Raudenbush and Bryk 2002). Results showed that, on average, the probability that participants engaged in their activity on a given day was 45% (γ_{00} = .20)[6]. Results also showed that the more participants reported having an obsessive passion, the more likely they were to engage in their passionate activity (γ_{02} = –.24, $p < .01$). With an increase of 1 point above the mean on obsessive passion, the probability that participants engaged in their activity on a given day would be 51% instead of 45%. Harmonious passion was not related to engagement frequency (γ_{01} = .11, p = .33). The two types of passion accounted for 5.9% of the between-person variability.

A second equation was tested to investigate the influence of passion on the amount of time people spent on their favorite activity once they decided to engage in it. Data obtained on days when people did not engage in their favorite activity were coded as missing and not as "0", such that results remained independent from engagement frequency. The equation was:

Passion and activity engagement

The following HLM equation was tested to examine the influence of passion on activity engagement (activity engagement was dummy coded as previously described):

[6] With Bernoulli models, gamma coefficients (e.g., γ_{00}) are predicted log-odds that can be converted to a predicted probability with the following formula: $\varphi = 1/1 + e^{-\eta}$, where φ represents the predicted probability and η the predicted log-odd.

$$\begin{aligned} \textit{Level}\,1: &\quad \text{Time Spent on Activity}_{ij} = \beta_{0j} + r_{ij} \\ \textit{Level}\,2: &\quad \beta_{0j} = \gamma_{00} + \gamma_{01}(\text{Harmonius Passion}) \\ &\quad + \gamma_{02}(\text{Obsessive passion}) + u_{0j} \end{aligned} \tag{3}$$

Results from this equation showed that only harmonious passion was related to time spent on the activity. The more people had a harmonious passion, the more time they spent on their favorite activity once they decided to engage in it (γ_{01} = 27.48, $p < .01$). One could expect an increase of 27.48 min in time spent on the activity with each increase of 1 point above the mean on harmonious passion. The two types of passion accounted for 3% of the between-person variability.

Taken together, these results suggest that harmonious and obsessive passion may lead to different patterns of activity engagement. People with a more obsessive passion tend to engage in their activity more often over a 2-week period, but not necessarily for longer periods of time. In contrast, people with a more harmonious passion do not seem to engage in their activity more or less often over a 2-week period. However, when they do engage in their activity they tend to do so for longer periods of time.

Discussion

Using a diary design, we (1) investigated the relation between harmonious passion and positive affect, (2) examined how passion influences the way people react to being away from their passionate activity, and (3) explored the relations between the two types of passion and daily activity engagement. Overall, the present research extends available evidence on the different consequences of the two types of passion.

Passion, activity engagement, and positive affect

Results first show that the more people have a harmonious passion, the more they experience high levels of positive affect on days when they engage in their passionate activity. Although this finding is correlational in nature and no direction of causality can be established, it suggests the possibility that engaging in one's passionate activity out of harmonious passion may have a moderately long lasting effect on positive affect, and contribute to one's daily positive affective experiences. A positive association between harmonious passion and positive affect following activity engagement has been previously observed using cross-sectional (Vallerand et al. 2003, Study 1) and longitudinal (Vallerand et al. 2003, Study 2; Rousseau and Vallerand 2007) designs with students (Vallerand et al. 2003, Study 1), athletes (Vallerand et al. 2003, Study 2), and elderly samples (Rousseau and Vallerand 2007). The present research extends these findings in showing a positive relation between harmonious passion and positive affect when positive affect is measured at the end of the day using a 2-week diary design. Also in line with previous results, no relation was found between obsessive passion and positive affect.

Passion, activity non-engagement, and positive affect

Results also show that people with different types of passion react differently to being away from their activity in terms of their positive affect. In line with previous research (e.g., Beck and Page 1988; Harlow and Cantor 1996; Rejeski et al. 1995; Watson 1988), we found a positive relation between engaging in one's passionate activity and daily positive affect. However, obsessive, and not harmonious, passion moderates this relation. Specifically, the more people have an obsessive passion, the more they experience an accentuated decrease in positive affect on days when they do not engage in their passionate activity compared to days when they do. The present findings thus extend available evidence on the different consequences of the two types of passion when people do not engage in their passionate activity.

The negative repercussion of obsessive passion in other activities may be especially important considering that, in the present study, people generally engaged in their activity on about 5 out of 13 days. Although this proportion increases according to people's level of obsessive passion, people with a more obsessive passion nevertheless experienced many days during which they felt little positive affect. Future research is needed to investigate the psychological processes responsible for the fact that people with an obsessive passion seem to have difficulty experiencing positive affect during other activities. In line with past research, we would argue that people with a more obsessive passion may be so invested in their activity that they tend to neglect other life domains (Séguin-Lévesque et al. 2003) and ruminate about their passionate activity when they are doing other things (Ratelle et al. 2004). This lack of investment in turn might limit the level of positive affect that they can derive from other activities. This hypothesis is consistent with Csikszentmihalyi's (1975, 1982) theory of flow, which proposes that in order to experience flow one needs to concentrate on and immerse oneself in an activity. In light of the positive relation between positive affect and flow (Csikszentmihalyi 1982; Mundell 2000), we argue that similar attentional processes may be at play in the experience of positive affect. Future research is needed to investigate the role of attentional

processes such as ruminative thoughts and flow in the relations between passion, activity engagement, and positive affect.

Passion and activity engagement

The present research reveals interesting differences in activity engagement patterns of people with different types of passion. Over a 2-week period, the more people experience an obsessive passion, the more frequently they engage in their activity. Yet, people with higher levels of obsessive passion do not necessarily engage in their activity for longer periods of time. In contrast, the more people experience a harmonious passion the longer they engage in their activity once they decide to engage in it. People with a more harmonious passion do not however engage in their activity more often. Past research shows that while both types of passion are related to retrospective measures of activity engagement (Mageau et al. 2007; Vallerand et al. 2003, Study 1) the quality of activity engagement associated with each type of passion differs (Vallerand et al. 2003). People with a more harmonious passion are more flexible in their activity engagement and they consider the circumstances surrounding their activity engagement to a greater extent. It is likely that over a 2-week period, situational factors such as time constraints, or school and family obligations may prevent people with a harmonious passion from partaking in their passion more often or in a more systematic way, whereas people with an obsessive passion might engage in their activity rigidly, regardless of situational factors or external demands. Furthermore, it is possible that people with a harmonious passion, being more volitional toward their activity engagement, tend to choose to engage in their activity only when they know they can devote enough time to it, whereas people with an obsessive passion might engage in their activity regardless of how much time they have. Future research is needed to replicate these findings and to investigate how people with different types of passion deal with activity engagement obstacles.

Theoretical contribution to the literature on positive affect

In addition to its contribution to the passion literature, the present research is also theoretically important for research on positive affect. First, the present research provides support for bottom-up models of positive affect, where it is proposed that activity engagement has a positive influence on people's affective experiences (e.g., Beck and Page 1988; Harlow and Cantor 1996; Rejeski et al. 1995; Watson 1988). It also supports interactionist models of positive affect (e.g., David et al. 1997; Diener et al. 1984; Feist et al. 1995), which suggest that not all types of activity engagement result in equally high levels of positive affect. For example, research shows that engaging in an activity for intrinsic reasons generates higher levels of positive affect than engaging in an activity for extrinsic purposes (Sheldon et al. 1996). Similarly, Brunstein (1993) showed that the influence of goal achievement on subjective well-being depends on the degree of commitment to those goals. The present research identifies obsessive passion as an additional moderator of the relation between activity engagement and positive affect.

Limitations and directions for further research

Despite the theoretical contributions of the present research, positive affect as measured with the PANAS (Watson et al. 1988) is but one of a variety of ways to investigate people's affective experiences (Rosenberg 1998). Future research is needed to replicate the present findings with other indicators of affective states. For example, the relation between harmonious passion and specific emotions such as pride or joy remains to be established. Nevertheless, the present results suggest that by influencing positive affect harmonious passion may heighten people's threshold for experiencing specific positive emotions.

Furthermore, it should be noted that activity engagement was not manipulated. People decided when and if they engaged in their passionate activity, such that passion influenced these decisions. It is not clear whether people with a more obsessive passion did not engage in their activity out of choice or out of obligation. Yet, it may be argued that if people with a more obsessive passion were explicitly told not to engage in their activity within an experimental design they might be more affected by their non-engagement than if they had personally chosen not to engage in their activity. Studies on the consequences of being prevented from engaging in one's passion suggest that this might be the case (Ratelle et al. 2004; Vallerand et al. 2003, Study 1). Experimental studies are needed to test this hypothesis.

Finally, three methodological limitations should be underscored. First, because this study was correlational in nature, nothing can be said about the direction or the causality of the observed relations. Second, although our sample ($N = 154$) was larger than those typically used in similar diary studies (e.g., David et al. 1997; Emmons 1991; Sheldon et al. 1996), the participation rate was somewhat lower than we would have hoped for. Unfortunately, because participation rate is rarely reported in

published studies, it is difficult to critically evaluate its magnitude. Nonetheless, one should keep in mind that people who participate in empirical studies may differ from people who do not, which limits the generalizability of the findings. Similarly, our sample was mostly composed of women. Although gender did not seem to be a confounding variable in the present study or in past research on passion (Vallerand et al. 2003), efforts should be made to ensure that the present findings hold with a more gender-balanced sample.

Keeping in mind these limitations, the present results together with previous findings (e.g., Vallerand et al. 2003) suggest the potential negative repercussions of obsessive passion on people's affective experiences in other life areas. The more people experience an obsessive, but not a harmonious, passion the less likely they are to experience positive affect when they do not engage in their passionate activity. It is hoped that future research on passion will shed light on the psychological processes underlying these effects as well as further our understanding of the distinctions and similarities between the two types of passion.

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