



## Pursuing, developing, and letting go of a passionate activity when facing adversity during a pandemic: Associations with well-being and ill-being<sup>☆</sup>

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### ABSTRACT

This research explored the role of passion when facing the COVID-19 pandemic. In three studies, we investigated the role of engaging in a pre-existing passionate activity (Studies 1 and 2), developing a new passionate activity (Studies 2 and 3), and letting go of an unavailable passionate activity (Study 3) during the pandemic. Emotions experienced when engaging in the passionate activity were examined as mediators in the relationships between the passionate engagement and psychological health. Results showed that harmonious passions (HPs) for pre-existing (Studies 1 to 3) and new activities (Studies 2 and 3) were positively related to well-being via positive emotions. HPs for pre-existing (Study 1) and new activities (Studies 2 and 3) were also negatively related to ill-being through their negative relationships with negative emotions and the positive link between a HP for a new activity and disengagement from an unavailable passionate activity (Study 3). Conversely, obsessive passions (OPs) for pre-existing (Study 1) and new activities (Study 2) were positively related to well-being, but also to negative emotions and ill-being (Studies 1 to 3). In sum, when facing a major negative event, HPs for pre-existing and new activities were positively related to more positive psychological outcomes than OPs.

As the novel coronavirus (COVID-19) was spreading rapidly across the globe in 2020, many local authorities imposed strict restrictions on citizens to slow the viral spread (Perre, 2021). Throughout these difficult times, people tried to face adversity as best as they could. Some people coped by immersing themselves in an activity they already loved (e.g., playing guitar), others developed a new favorite activity (e.g., discovering the joy of gardening), and some had to let go of their preferred activities because they were no longer practicable (e.g., travelling). Thus, what were the effects of engaging in a pre-existing beloved activity (one that people had before the pandemic) or to develop a love for a new activity? Moreover, what happened when people could no longer engage in their favorite activity due to COVID-19-related restrictions? Finally, how did passion for these activities, and the emotions experienced when engaging in them, help people face the situation or,

conversely, impair their functioning? Using the Dualistic Model of Passion (Vallerand, 2015), we address these issues in three studies.

### 1. Passionate activities as a way to face a major stressful situation

The Dualistic Model of Passion (DMP; Vallerand, 2015; Vallerand et al., 2003) defines a passion as a strong proclivity toward a self-defining activity that one loves, values, finds meaningful, and in which one devotes a significant amount of time and energy. According to the DMP, there are two types of passion: harmonious and obsessive. A harmonious passion (HP) refers to a non-defensive engagement in an activity that one loves while maintaining a balance between this activity and the other spheres of one's life (Vallerand, 2015). With HP, people

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engage freely in their passionate activity and can temporarily disengage from it if needed (Chichekian & Vallerand, 2022; Vallerand, 2015). In contrast, an obsessive passion (OP) is defined as an uncontrollable urge to partake in the beloved activity. There is a difficulty to disengage from the passionate activity illustrated by a rigid persistence in it that can lead to conflicts with other spheres of one's life (Chichekian & Vallerand, 2022; Vallerand, 2015). With OP, self-esteem is contingent on the performance in the activity (Mageau, Carpentier, & Vallerand, 2011). Importantly, both HP and OP for an activity coexist within an individual to a certain degree (Vallerand, 2015). People tend to engage in an activity predominately in a harmonious or obsessive fashion, but can temporarily display a more harmonious or obsessive passion. Given that one can experience a HP and an OP toward the same activity, both types of passion are expected to be moderately correlated, thus allowing them to be included in the same model. Longitudinal and cross-sectional studies have shown that HP is positively related to positive emotions and negatively related or unrelated to negative emotions (e.g., Carbonneau, Vallerand, & Massicotte, 2010; Philippe, Vallerand, Houliort, Lavigne, & Donahue, 2010; Vallerand et al., 2006, Study 2), while the opposite patterns are observed with OP. Research has also shown that HP is associated with adaptive outcomes such as subjective happiness (Yukhymenko-Lescroart & Sharma, 2019), meaning in life (Zhang, Shi, Liu, & Miao, 2014), and satisfaction with life (Stenseng & Phelps, 2013), whereas OP is related to more maladaptive outcomes such as depression (Houliort, Philippe, Vallerand, & Ménard, 2013) and anxiety (Verner-Filion et al., 2014).

Importantly, some studies have looked at the role of passion when facing negative life events (e.g., COVID-19 pandemic, Moreno-Jiménez et al., 2021; breast cancer, Burke, Sabiston, & Vallerand, 2012; stress in one's studies; Vallerand, Paquette, & Richard, 2022). The study of Moreno-Jiménez et al. (2021), conducted with 172 healthcare professionals during the COVID-19 pandemic, showed that a HP for work had a protective effect against secondary traumatic stress development and facilitated posttraumatic growth. However, it did not examine the role of OP. Another study conducted among breast cancer survivors (Burke et al., 2012) indicated that HP for an activity facilitated positive psychological outcomes such as higher positive affect and lower cancer worry, while OP for an activity had mixed effects. OP was associated with higher negative affect and cancer worry, yet it also facilitated posttraumatic growth. Finally, another research (Vallerand et al., 2022) conducted with students facing a stressful situation related to their passion for academia showed that HP led to adaptive psychological and cardiovascular responses, whereas these responses were less adaptive with OP. In light of these findings, the present research aimed to better identify the role of the two types of passion when facing a major life stressor such as the COVID-19 pandemic.

## 2. The mediating role of emotions in psychological health

One mechanism through which passion could help individuals face major negative events is through enhancing positive emotions and reducing negative emotions. Indeed, research has shown that experiencing positive emotions in the face of adversity is one key process helping individuals overcome negative events (e.g., Cohn, Fredrickson, Brown, Mikels, & Conway, 2009; Fredrickson, Tugade, Waugh, & Larkin, 2003). According to the Broaden-and-Build Theory of positive emotions (Fredrickson, 2013), positive emotions momentarily *broaden* individuals' scope of awareness which helps them have access to a wider array of thoughts, actions, and perceptions (Fredrickson & Branigan, 2005; Johnson, Waugh, & Fredrickson, 2010). Through this broadened awareness, positive emotions act as a catalyst for *building* enduring personal resources that people can rely on later when facing adversity (e.g., Fredrickson et al., 2003; Fredrickson & Joiner, 2002). As such, positive emotions facilitate psychological health in the face of stressful events as shown by positive associations with indicators of the two forms of well-being (Ryan & Deci, 2001), eudaimonic (i.e., meaning in life and

self-realization; e.g., King, Hicks, Krull, & Del Gaiso, 2006), and hedonistic (i.e., sensorial pleasure, enjoyment, and life satisfaction; e.g., Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008), as well as negative associations with ill-being (i.e., psychological maladjustment; Tan, Sheffield, Khoo, Byrne, & Pachana, 2018) whose common manifestations are depressive and anxious symptoms (Avey, Wernsing, & Mhatre, 2011; Li, Jiang, & Ren, 2017).

Conversely, research has shown that negative emotions narrow one's thought-action tendencies (Fredrickson, 2013). They can have adverse psychological effects (e.g., depressive symptoms; Fredrickson et al., 2003), but positive emotions can undo some of this strain as shown by less depressive symptoms and negative emotions following a stressful event (Fredrickson, 2013; Fredrickson et al., 2003).

## 3. Unavailable passionate activities and disengagement

During the COVID-19 pandemic, some people were no longer able to engage with their passionate activities as a consequence of lockdowns and restrictions. For example, those passionate about travelling, socializing in restaurants, or going to the gym could no longer practice these activities. There is increasing evidence from the goal adjustment literature that continued effort and psychological commitment are not adaptive if a goal becomes too costly, unrealistic or unattainable (Barlow, Wrosch, & McGrath, 2019). Indeed, research suggests that individuals experience increased psychological distress, biological dysregulation, and physical health problems when they try to pursue a goal that is no longer feasible (Miller & Wrosch, 2007; Wrosch, Scheier, & Miller, 2013). In such circumstances, individuals benefit from relinquishing behavioral effort and breaking up the psychological commitment toward the goal — what is referred to as *disengagement* (Wrosch, Scheier, Miller, Schulz, & Carver, 2003). Successful disengagement frees up motivational resources to engage with other more fruitful pursuits and helps individuals stave off symptoms of depression that are associated with frustrated goal pursuit (Wrosch et al., 2013). While goals and activities are not synonymous, the goal adjustment literature sheds light on the potential benefit of relinquishing behavioral effort and psychological commitment toward activities that are unfeasible in the context of the pandemic. While circumstances often prohibited individuals from investing behavioral effort in certain activities (e.g., there were no opportunities for travel), people may have remained psychologically committed to these activities, ruminating about them, and experiencing frustration as a result. Thus, in the context of the pandemic, we hypothesized that when individuals were confronted with restrictions that impacted their pre-existing passionate activities (e.g., travelling, going to the gym), it was adaptive for them to disengage both behaviorally and psychologically from these activities.

## 4. The present research

In the present research, three objectives were examined across three studies. The first objective was to examine the effects of (a) pursuing a passionate activity people had before the pandemic (referred to as a pre-existing passionate activity), (b) developing a new passionate activity, and (c) letting go of an unavailable passionate activity on psychological health during the pandemic. The second goal of this research was to examine the mediating role of emotions in the relationship between passion and psychological health. To do so, we integrated the DMP (Vallerand, 2015) and the Broaden-and-Build Theory (Fredrickson, 2013) where passion is associated with emotions that, in turn, are related to well-being and ill-being in the face of a major negative event. The model was tested in three studies. Finally, the third objective was to investigate the mediating role of disengagement from an unavailable passionate activity in the relationship between passion and psychological health (Study 3). Past studies suggest that HP, but not OP, should be positively related to disengagement from an unavailable passionate activity (Chichekian & Vallerand, 2022). In turn, disengagement should

be negatively related to ill-being (Wrosch et al., 2013).

In Study 1, we assessed individuals' psychological health when they maintained their engagement in a pre-existing passionate activity during the first wave of the COVID-19 pandemic in the United States (Ritchie et al., 2020). In Studies 2 and 3, we looked at the psychological health of individuals who developed a passion for a new activity during the third wave of the COVID-19 pandemic, and continued to engage in a pre-existing passionate activity (Study 2) or had to temporarily let go of an unavailable pre-existing passionate activity due to restrictions (Study 3).

In line with the DMP (Vallerand, 2015) and the Broaden-and-Build Theory (Fredrickson, 2013), we hypothesized that, when facing the COVID-19 pandemic, a HP for a pursued pre-existing activity (Study 1) and a HP for new activity (Studies 2 and 3) should be positively related to positive emotions and negatively related to negative emotions. Conversely, an OP for a pre-existing activity (Study 1) and an OP for a new activity (Studies 2 and 3) should be strongly related to negative emotions and unrelated to positive emotions. In turn, positive emotions should be positively related to well-being and negatively related to ill-being, while opposite patterns should be observed with negative emotions. Furthermore, in Study 3, given that HP is associated with a more flexible regulatory style (Vallerand, 2015), we hypothesized that a HP for a new activity should be positively associated with disengagement from an unavailable pre-existing passionate activity, while an OP for a new activity should be unrelated to disengagement. In turn, disengagement from an unavailable passionate activity should be negatively associated with ill-being.

5. Study 1

The aim of Study 1 was to investigate to what extent pursuing a pre-existing passionate activity during the pandemic's first wave helped people face this major stressful event. In line with aforementioned theories, we hypothesized that, controlling for the pandemic's impact on participants, a HP for a pursued pre-existing activity should be positively related to well-being through its positive relationship with positive emotions, and negatively related to ill-being through its negative link with negative emotions. On the other hand, an OP for a pursued pre-existing activity should be positively related to ill-being through its positive link with negative emotions. It should also be unrelated to positive emotions and well-being.

Table 1  
Types of passionate activities and the percentage of participants engaging in each activity.

Activity categories	Examples of activity	Percentage of participants who engaged in activity (%)				
		Study 1	Study 2		Study 3	
		Pre-existing activity	Pre-existing activity	New activity	Unavailable activity	New activity
Sports/physical activity	Running, swimming, biking, hiking, exercising, basketball, football	27.78	31.15	16.70	31.19	22.37
Active leisure	Baking, cooking, gardening, fishing, travelling, eating out, going to museums	9.44	15.80	21.44	25.08	20.00
Active arts	Painting, drawing, creating/playing music, photography, sewing	16.11	7.90	26.86	2.03	29.15
Interpersonal relationships	Playing game with relatives and animals	10.56	6.77	4.06	26.44	3.39
Reading	Reading a novel, a comic book	10.00	7.22	7.45	1.36	7.80
Playing video games/online activities	Playing video games, online gaming, building websites	10.00	10.16	7.67	2.71	11.86
Passive leisure	Listening music, watching a movie/series/TV	8.33	5.87	3.16	1.69	1.02
Work/education	Learning new things, part-time work	6.11	8.13	2.93	5.08	2.03
Other	Relaxing, health related activities	1.67	7.00	9.70	4.41	2.37

Note. Study 1 N = 187, Study 2 N = 411, Study 3 N = 288.

5.1. Method

5.1.1. Participants and procedures

Participants were 187 Americans (67.38 % men, M age = 36.90 years, SD age = 11.21 years) recruited via MTurk in April 2020 during the first wave of COVID-19. Of these participants, 93.58 % lived in a zone of confinement or were highly recommended to stay at home, and 32.62 % knew someone (or even themselves) who had contracted the COVID-19 virus. They were passionate about activities in various domains (e.g., reading, playing video games, drawing, hiking, cycling; see Table 1). They engaged in their passionate activity during the pandemic on average 10.25 h/week (SD = 12.06 h). In all three studies, participants provided informed consent and completed the online questionnaire in exchange for an appropriate monetary compensation (US\$1.50; Chandler & Shapiro, 2016).

5.1.2. Measures

5.1.2.1. Demographic and COVID-19 pandemic related questions. Participants answered questions about their age, gender, and the measures put in place in their city to control the COVID-19 spreading. Furthermore, to control for the impact of the pandemic on participants, we asked them "Do you personally know anyone who currently has the coronavirus?" and they were presented with many options ("Yes, myself; I have not been diagnosed but I have symptoms; A member of my family; A close friend; Someone I know; Someone else; No, I do not know anyone"). Each option selected was added to create the COVID-19 pandemic's impact score.

5.1.2.2. Passion for an activity. In line with the definition of passion, participants identified one activity that they love, find important, and to which they invest a lot of time and energy. They were also asked questions about their involvement in this activity since the coronavirus outbreak and to complete the Passion Scale (Vallerand et al., 2003). This scale consists of three subscales assessing HP (6-item subscale; e.g., "My activity is in harmony with the other activities in my life";  $\alpha = 0.84$ ), OP (6-item subscale; e.g., "I have almost an obsessive feeling for my activity";  $\alpha = 0.91$ ) and the passion criteria (5-item subscale; e.g., "My activity is important for me";  $\alpha = 0.79$ ). Items are rated on a 7-point scale ranging from 1 = do not agree at all to 7 = very strongly agree. Participants with a mean score of four or above on the passion criteria subscale (measuring the love and importance of the activity, the time spent doing the activity, and if the activity is considered as a passion and as a part of oneself) are deemed to be passionate (Vallerand, 2015). In Study 1, 93.05 % of participants were considered as passionate. The Passion Scale

shows high levels of validity and reliability, and is largely invariant for gender, language, and type of activities (Marsh et al., 2013; Vallerand & Rahimi, 2022).

**5.1.2.3. Positive and negative affect.** Participants' emotions were evaluated using 10 items from the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988). Five items assessed positive emotions ("I feel enthusiastic/interested/determined/alert/active";  $\alpha = 0.70$ ) and five items measured negative emotions ("I feel upset/afraid/hostile/irritable/nervous";  $\alpha = 0.81$ ). Participants were asked to indicate "how they feel when they are involved in their favorite activity" (1 = *very slightly or not at all* to 5 = *extremely*).

**5.1.2.4. Well-being.** Three items from the Meaning in Life Questionnaire (e.g., "I understand my life's meaning"; Steger, Frazier, Oishi, & Kaler, 2006) assessed eudaimonic well-being and three slightly modified items from the Subjective Happiness Scale (e.g., "I consider myself as a very happy person"; Lyubomirsky & Lepper, 1999) measured hedonistic well-being. These items were combined to create a mean score of general well-being ( $\alpha = 0.93$ ). Participants indicated how much they agreed or disagreed with each item since the coronavirus outbreak (1 = *do not agree at all* to 7 = *very strongly agree*).

**5.1.2.5. Ill-being.** Depressive and anxious symptoms being two common manifestations of ill-being, the state anxiety subscale of the State-Trait Anxiety Inventory short-form (6-item subscale, e.g., "I am tense"; Marteau & Bekker, 1992; Spielberger, 1983) and six items from the depression scale of the Depression Anxiety Stress Scales (e.g., "I felt downhearted and blue"; Lovibond & Lovibond, 1995) were combined to create a mean score of ill-being ( $\alpha = 0.90$ ). Participants indicated how much they agreed or disagreed with each item since the coronavirus outbreak (1 = *do not agree at all* to 7 = *very strongly agree*).

## 5.2. Results and discussion

### 5.2.1. Main analyses

Descriptive statistics and correlations between all variables are displayed in Table 2. All variables of Studies 1 to 3 were normally distributed ( $|\text{skewness}| < 3.0$ ;  $|\text{kurtosis}| < 7.0$ ; Curran, West, & Finch, 1996; Kline, 2011), thus the path analyses of all three studies were conducted using *Mplus* software version 8.6 (Muthén & Muthén, 1998-2017) with the Maximum Likelihood (ML) estimator. The paths of the model were drawn according to the hypotheses presented above. Covariances among the exogenous variables (HP, OP, and pandemic's impact score) and among the error terms of the endogenous variables (positive and negative emotions, well-being and ill-being) were estimated. The same covariances were also estimated in Studies 2 and 3. As mentioned above, the pandemic's impact score was added to the model to control for the effects of the pandemic on participants (e.g., to have caught COVID-19).

Results uncovered that the hypothesized model did not have an acceptable fit to the data,  $\chi^2 = 14.02$ ,  $df = 6$ ,  $p = .029$ ; RMSEA = 0.09 [0.03, 0.14],  $p = .137$ ; CFI = 0.98; TLI = 0.94; SRMR = 0.08. Following visual inspection and theoretical rationale (Vallerand, 2015), we added a path between OP for a pre-existing activity and well-being. This modified model had a good fit to the data (Kline, 2016),  $\chi^2 = 1.85$ ,  $df = 5$ ,  $p = .870$ ; RMSEA = 0.00 [0.00, 0.05],  $p = .946$ ; CFI = 1.00; TLI = 1.00; SRMR = 0.02.<sup>1</sup> The standardized solutions are presented in Fig. 1. Results showed that a HP for a pursued pre-existing activity was positively related to positive emotions,  $\beta = 0.35$ ,  $p < .001$ , and negatively

<sup>1</sup> The models of all three studies were also tested with eudaimonic well-being, hedonistic well-being, depressive and anxious symptoms separately and yielded highly similar results.

related to negative emotions,  $\beta = -0.11$ ,  $p = .023$ . Conversely, an OP for a pursued pre-existing activity was positively associated with negative emotions,  $\beta = 0.65$ ,  $p < .001$ . In turn, positive emotions were positively related to well-being,  $\beta = 0.16$ ,  $p = .016$ , and negative emotions were positively related to ill-being,  $\beta = 0.44$ ,  $p < .001$ . Moreover, a HP for a pursued pre-existing activity was positively and negatively, respectively, related to well-being,  $\beta = 0.37$ ,  $p < .001$ , and ill-being,  $\beta = -0.23$ ,  $p < .001$ . An OP for a pursued pre-existing activity was also directly and positively related to both well-being,  $\beta = 0.23$ ,  $p < .001$ , and ill-being,  $\beta = 0.23$ ,  $p = .007$ . The pandemic's impact score was only positively associated with negative emotions,  $\beta = 0.21$ ,  $p < .001$ , and ill-being,  $\beta = 0.12$ ,  $p < .001$ . Indirect effects, calculated using bootstrapping (10,000 samples), were all significant and in the expected directions (see Table 3). Thus, emotions mediated the relationships between passion and psychological outcomes.

In sum, the present findings support the DMP (Vallerand, 2015) and the Broaden-and-Build Theory (Fredrickson, 2013) by showing the differential role of HP, OP, and emotions in psychological health. More precisely, a HP for a pursued pre-existing activity was positively related to well-being through higher positive emotions, and was also negatively related to ill-being through lower negative emotions. Conversely, an OP for a pursued pre-existing activity was positively related to well-being (contrary to our hypothesis), but also to ill-being through higher negative emotions.

## 6. Study 2

The results of Study 1 uncovered the effects of pursuing a passionate activity and emotions on psychological health during the COVID-19 pandemic. Study 2 aimed to replicate and to build upon these findings by examining the role of developing a passion for a new activity in psychological health during the pandemic, beyond the effects of one's passion for a pre-existing passionate activity. Schellenberg and Bailis (2015) have shown that having a passion for two activities may have additive effects on well-being. Thus, we sought to uncover if pursuing a pre-existing passionate activity and developing a new one had independent effects on well-being and ill-being. Controlling for a pre-existing passionate activity and the pandemic's impact, we hypothesized that a HP for a new activity should be positively related to well-being via its positive link with positive emotions. It should also be negatively related to ill-being via its negative association with negative emotions and its positive link positive emotions. Conversely, OP for a new activity should be positively associated with ill-being via its positive link with negative emotions. Based on the results of Study 1, we also hypothesized that an OP for a new activity should be positively and directly related to well-being.

### 6.1. Method

#### 6.1.1. Participants and procedures

Participants were 411 Americans (57.42 % men,  $M$  age = 35.28 years,  $SD$  age = 11.10 years) recruited via MTurk in December 2020 during the pandemic's third wave. Participants were passionate about activities in various domains prior to the onset of the pandemic (see Table 1). On average, they had been engaged in this pre-existing passionate activity for 11.81 years ( $SD = 11.32$  years). Yet, they also developed a new passionate activity during the lockdown (e.g., baking, gardening, jogging; see Table 1). Participants kept pursuing their pre-existing passionate activity during the pandemic for an average of 11.60 h per week ( $SD = 12.87$  h), while engaging in average 7.95 h per week ( $SD = 7.94$  h) in their new passionate activity.

#### 6.1.2. Measures

Participants answered the same demographic questions as in Study 1 and a question about the pandemic's impact (see below). They completed the Passion Scale (HP for a new activity  $\alpha = 0.87$ , HP for a

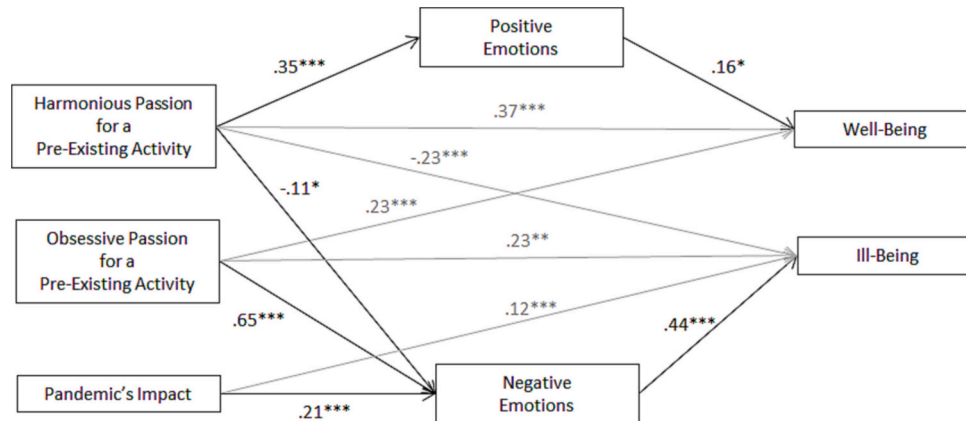


**Table 2**  
Descriptive statistics and correlations for study variables (Study 1).

Variable	M (SD)	1	2	3	4	5	6
1. HP for a pre-existing activity	5.08 (0.86)	–					
2. OP for a pre-existing activity	2.80 (1.03)	.28***	–				
3. Positive emotions	3.67 (0.63)	.35***	.05	–			
4. Negative emotions	2.15 (0.79)	.11	.69***	–.18*	–		
5. Subjective well-being	4.47 (1.21)	.49***	.34***	.31***	.19*	–	
6. Subjective ill-being	4.70 (1.20)	–.10	.52***	–.17*	.62***	–.27***	–
7. Pandemic's impact	5.22 (1.03)	.16*	.35***	.04	.42***	.20**	.33***

Note. N = 187. HP = harmonious passion; OP = obsessive passion.

\* p < .05.  
\*\* p < .01.  
\*\*\* p < .001.



**Fig. 1.** Results of the path analysis of Study 1.

Note. N = 187. Standardized path coefficients are presented. For clarity concerns, covariances are not shown between the variables.

\*p < .05. \*\*p < .01. \*\*\*p < .001.

**Table 3**  
Bootstrap estimates of the indirect effects and their associated bias-corrected 95 % confidence intervals (Study 1).

Predictor	Mediator	Outcome	β	95 % CI	p-Values
HP for a pre-existing activity	Positive emotions	Well-being	0.05	[0.01, 0.11]	p = .027
OP for a pre-existing activity	Negative emotions	Ill-being	0.28	[0.19, 0.40]	p < .001
HP for a pre-existing activity	Negative emotions	Ill-being	–0.05	[–0.09, –0.01]	p = .027

Note. HP = harmonious passion, OP = obsessive passion.

pre-existing activity  $\alpha = 0.86$ ; OP for a new activity  $\alpha = 0.92$ ; OP for a pre-existing activity  $\alpha = 0.91$ , the PANAS short-form (positive emotions  $\alpha = 0.89$ ; negative emotions  $\alpha = 0.97$ ), and scales measuring well-being and ill-being (see below). Based on the passion criteria (see Study 1), 82.17 % of participants were considered as passionate for their new activity and 88.04 % were deemed passionate for their pre-existing activity.

**6.1.2.1. COVID-19 pandemic related questions.** A COVID-19 pandemic's impact score was created using one item "How heavily affected by COVID-19 coronavirus is the state in which you live?" (1 = not at all affected to 7 = severely affected).

**6.1.2.2. Well-being.** All five items from the Meaning in Life

Questionnaire (Steger et al., 2006, see Study 1) assessed eudaimonic well-being and five items from the Satisfaction with Life Scale (e.g., "I am satisfied with my life"; Diener, Emmons, Larsen, & Griffin, 1985) measured hedonistic well-being. These items were combined to create a mean score of general well-being ( $\alpha = 0.92$ ). Participants indicated how much they agreed or disagreed with each item since the coronavirus outbreak (1 = strongly disagree to 7 = strongly agree).

**6.1.2.3. Ill-being.** The items from the Centre for Epidemiologic Studies Depression Scale Revised (CESD-R 10; Eaton, Muntaner, Smith, Tien, & Ybarra, 2004) and the Generalized Anxiety Disorder scale (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006) were combined to create a mean score of ill-being ( $\alpha = 0.94$ ). The CESD-R includes 10 items, e.g., "I could not get going" (1 = rarely or none of the time, <1 day to 4 = most or all the time, 5–7 days). The GAD-7 is a 7-item scale where participants indicate to what extent they were bothered by, e.g., "feeling nervous, anxious or on edge" over the last 2 weeks (1 = not at all to 4 = nearly every day).

**6.2. Results and discussion**

**6.2.1. Main analyses**

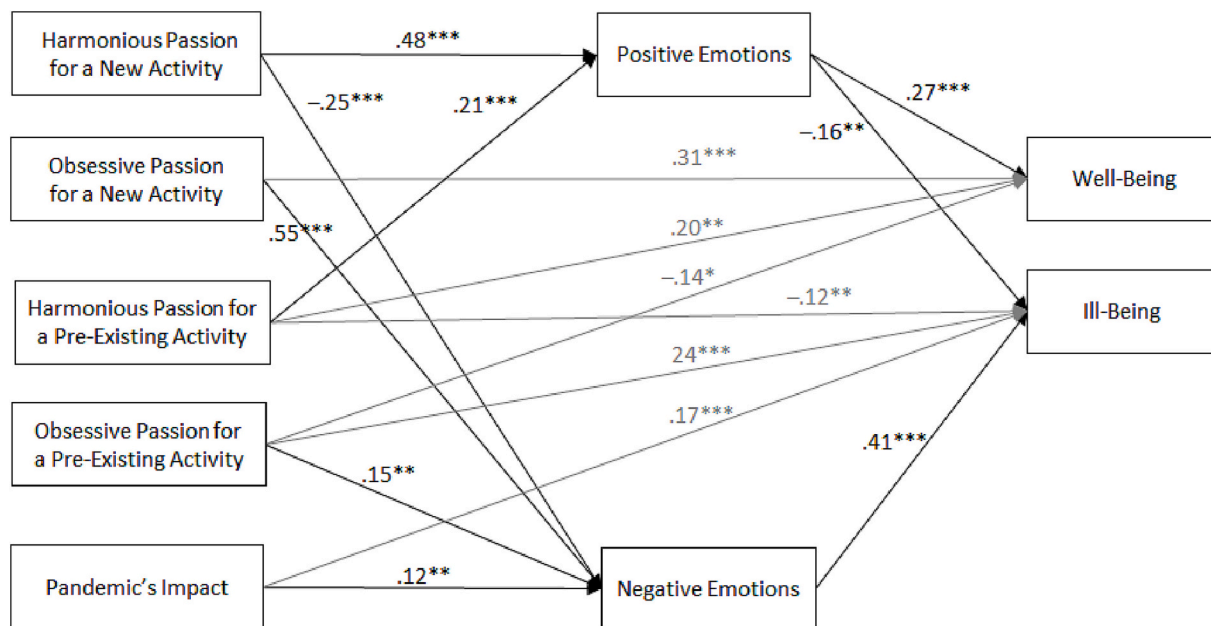
Descriptive statistics and bivariate correlations between all variables are presented in Table 4. The path analysis model was drawn according to the hypotheses presented above. The standardized model is shown in Fig. 2 and had an excellent fit to the data,  $\chi^2 = 15.11$ ,  $df = 10$ ,  $p = .128$ ; RMSEA = 0.04 [0.00, 0.07],  $p = .725$ ; CFI = 0.99; TLI = 0.98; SRMR = 0.02. Results revealed that a HP for a new activity and a HP for a pursued pre-existing activity were both positively related to positive emotions,  $\beta = 0.48$ ,  $p < .001$  and  $\beta = 0.21$ ,  $p < .001$ , respectively. A HP for a new

**Table 4**  
Descriptive statistics and correlations for study variables (Study 2).

Variable	M (SD)	1	2	3	4	5	6	7	8
1. HP for a new activity	5.11 (1.12)	–							
2. OP for a new activity	3.37 (1.70)	.37***	–						
3. HP for a pre-existing activity	5.21 (1.11)	.57***	.19***	–					
4. OP for a pre-existing activity	3.61 (1.70)	.19***	.73***	.32***	–				
5. Positive emotions	3.64 (0.79)	.60***	.27***	.48***	.17**	–			
6. Negative emotions	1.67 (0.97)	–.01	.58***	–.01	.53***	–.01	–		
7. Subjective well-being	4.77 (1.29)	.38***	.33***	.34***	.20***	.42***	.16**	–	
8. Subjective ill-being	11.55 (7.56)	–.12*	.35***	–.09	.42***	–.16**	.55***	–.29***	–
9. Pandemic's impact	5.32 (1.25)	.10*	.09	.17**	.15**	.08	.17**	–.00	.27***

Note. N = 411. HP = harmonious passion; OP = obsessive passion.

\* p < .05.  
\*\* p < .01.  
\*\*\* p < .001.



**Fig. 2.** Results of the path analysis of Study 2.

Note. N = 411. Standardized path coefficients are presented. For clarity concerns, covariances are not shown between the variables.  
\*p < .05. \*\*p < .01. \*\*\*p < .001.

activity was also negatively related to negative emotions,  $\beta = -0.25, p < .001$ . Conversely, an OP for a new activity and an OP for a pursued pre-existing activity were positively related to negative emotions,  $\beta = 0.55, p < .001$  and  $\beta = 0.15, p = .001$ , respectively. In turn, positive emotions were positively related to well-being,  $\beta = 0.27, p < .001$ , and negatively related to ill-being,  $\beta = -0.16, p = .001$ . Conversely, negative emotions were positively associated with ill-being,  $\beta = 0.41, p < .001$ . Furthermore, an OP for a new activity was positively and directly associated with well-being,  $\beta = 0.31, p < .001$ . In addition, a HP and an OP for a pursued pre-existing activity were directly related to well-being,  $\beta = 0.20, p = .001$  and  $\beta = -0.14, p = .027$ , respectively, and ill-being,  $\beta = -0.12, p = .008$  and  $\beta = 0.24, p < .001$ , respectively. The pandemic's impact score was only positively associated with negative emotions,  $\beta = 0.12, p = .001$ , and ill-being,  $\beta = 0.17, p < .001$ . Indirect effects were all significant and in the expected directions (see Table 5), showing that emotions mediated the relationships between passion and psychological outcomes.

Overall, Study 2 replicated and expanded the results of Study 1. Indeed, this study added to previous findings by suggesting that, controlling for a passion for a pre-existing activity and the pandemic's impact, a HP for a new activity was positively related to well-being through higher positive emotions, and negatively related to ill-being

**Table 5**

Bootstrap estimates of the indirect effects and their associated bias-corrected 95 % confidence intervals (Study 2).

Predictor	Mediator	Outcome	$\beta$	95 % CI	p-Values
HP for a new activity	Positive emotions	Well-being	0.13	[0.07, 0.20]	p < .001
HP for a pre-existing activity	Positive emotions	Well-being	0.06	[0.03, 0.10]	p = .002
HP for a new activity	Positive emotions	Ill-being	–0.08	[–0.13, –0.03]	p = .002
HP for a pre-existing activity	Positive emotions	Ill-being	–0.03	[–0.07, –0.01]	p = .012
OP for a new activity	Negative emotions	Ill-being	0.23	[0.17, 0.29]	p < .001
OP for a pre-existing activity	Negative emotions	Ill-being	0.06	[0.03, 0.11]	p = .004
HP for a new activity	Negative emotions	Ill-being	–0.10	[–0.14, –0.07]	p < .001

Note. HP = harmonious passion, OP = obsessive passion.

through lower negative emotions and higher positive emotions in the face of the pandemic. In contrast, an OP for a new activity was related to higher negative emotions and, thereby, to higher ill-being. However, the role of an OP for a new activity was not completely maladaptive: it was also directly and positively related to well-being. These results are in line with the DMP, which posits the more adaptive role of HP over OP. They also align with the Broaden-and-Build Theory, which presents positive emotions as vectors facilitating positive psychological outcomes. To be noted, all paths of Study 1 remained the same, with the exception of the link between OP for a pre-existing activity and well-being. This link was positive in Study 1 and negative in this study. The engagement in the pre-existing passionate activity may compete with the engagement in the new passionate activity (e.g., less energy to engage in the pre-existing activity because of the new one), hence this negative link with well-being.

## 7. Study 3

The results of Studies 1 and 2 revealed the role of passion and emotions in psychological health when people pursued a pre-existing passionate activity (Studies 1 and 2) and developed a new passionate activity during the pandemic (Study 2). However, what happened to individuals who could no longer pursue their passionate activity due to COVID-19's restrictions? Were they suffering psychologically? Study 3 aimed to answer this question by examining individuals who developed a new passionate activity during the pandemic, but who also had to let go of an unavailable pre-existing passionate activity. Controlling for an unavailable passionate activity and the pandemic's impact, we hypothesized that a HP for a new activity should be positively related to well-being via its positive link with positive emotions. It should also be negatively related to ill-being via its negative link with negative emotions and its positive association with positive emotions. Conversely, we hypothesized that an OP for a new activity should be positively related to negative emotions which, in turn, should be positively associated with ill-being. Moreover, based on the results of Studies 1 and 2, an OP for a new activity should be positively and directly related to well-being. Regarding disengagement, we hypothesized that a HP for a new activity should also provide people with the possibility to psychologically disengage from the unavailable passionate activity. In other words, if people developed a HP for a new activity such as walking in nature, it might then be easier to disengage from their previous passion for travel. Because OP is generally less adaptive than HP, we expected that OP for a new activity should be unrelated to disengagement from an unavailable activity. Finally, in line with the goal-disengagement literature (Wrosch et al., 2013, 2003), we hypothesized that disengaging from the unavailable passionate activity should be associated with lower ill-being.

### 7.1. Method

#### 7.1.1. Participants and procedure

Participants were 288 Americans (55.21 % men,  $M$  age = 34.09 years,  $SD$  age = 11.76 years) recruited via MTurk in December 2020 during the pandemic's third wave. They reported on a pre-existing passionate activity that they had let go of during the pandemic (e.g., travelling, going to restaurants and bars, playing team sport). Prior to abandoning the activity, they had been engaged in it for an average of 12.35 years ( $SD$  = 11.12 years). Participants also reported developing a passion for a new activity during the pandemic that they engaged in on average 8.72 h per week ( $SD$  = 7.48 h).

#### 7.1.2. Measures

Participants answered the same demographic and pandemic-related questions as in Study 2. They also completed the Passion Scale (HP for a new activity  $\alpha$  = 0.86; HP for an unavailable activity  $\alpha$  = 0.88; OP for a new activity  $\alpha$  = 0.90; OP for an unavailable activity  $\alpha$  = 0.88), the PANAS (positive emotions  $\alpha$  = 0.88; negative emotions  $\alpha$  = 0.94), and

the same scales used in Study 2 to measure well-being ( $\alpha$  = 0.92) and ill-being ( $\alpha$  = 0.92). In this study, 79.66 % of participants were deemed passionate for their new activity and 87.80 % were still passionate for the unavailable activity. Participants also completed the following disengagement scale.

**7.1.2.1. Disengagement.** Disengagement was assessed with a modified version of the Goal Adjustment Capacity Scale (Wrosch et al., 2003). This scale consists of four items measuring one's tendency to disengage from unattainable goals. The scale was modified to measure how people disengage from a specific activity (e.g., "It's easy for me to reduce my effort towards this activity";  $\alpha$  = 0.82).

## 7.2. Results and discussion

### 7.2.1. Main analyses

Descriptive statistics and bivariate correlations between all variables are displayed in Table 6. A path analysis was conducted and paths were drawn according to the hypotheses presented above. This model had an excellent fit to the data,  $\chi^2 = 41.40$ ,  $df = 23$ ,  $p = .011$ ; RMSEA = 0.05 [0.03, 0.08],  $p = .402$ ; CFI = 0.97; TLI = 0.94; SRMR = 0.05. The standardized model is shown in Fig. 3. A HP for a new activity was positively related to positive emotions,  $\beta = 0.59$ ,  $p < .001$ , and to disengagement from the unavailable passionate activity,  $\beta = 0.22$ ,  $p < .001$ . A HP for a new activity was also negatively related to negative emotions,  $\beta = -0.25$ ,  $p < .001$ . Furthermore, a HP for an unavailable passionate activity was positively associated with positive emotions,  $\beta = 0.12$ ,  $p = .010$ , and negatively related to disengagement,  $\beta = -0.36$ ,  $p < .001$ . Conversely, an OP for a new activity was positively related to negative emotions,  $\beta = 0.55$ ,  $p < .001$ . An OP for an unavailable activity was negatively associated with disengagement,  $\beta = -0.20$ ,  $p < .001$ , positively and directly related to ill-being,  $\beta = 0.14$ ,  $p = .004$ , and unrelated to well-being,  $\beta = 0.02$ ,  $p = .755$ . In turn, positive emotions were positively related to well-being,  $\beta = 0.38$ ,  $p < .001$ , and negatively related to ill-being,  $\beta = -0.19$ ,  $p = .001$ . Moreover, negative emotions were positively associated with ill-being,  $\beta = 0.31$ ,  $p < .001$ . Finally, disengagement from an unavailable passionate activity was only negatively related to ill-being,  $\beta = -0.16$ ,  $p < .001$ . None of the bias-corrected 95 % bootstrapped confidence intervals of the indirect effects passed through zero and these effects were in the expected directions (see Table 7). Thus, emotions mediated the relationships between passion and psychological outcomes.

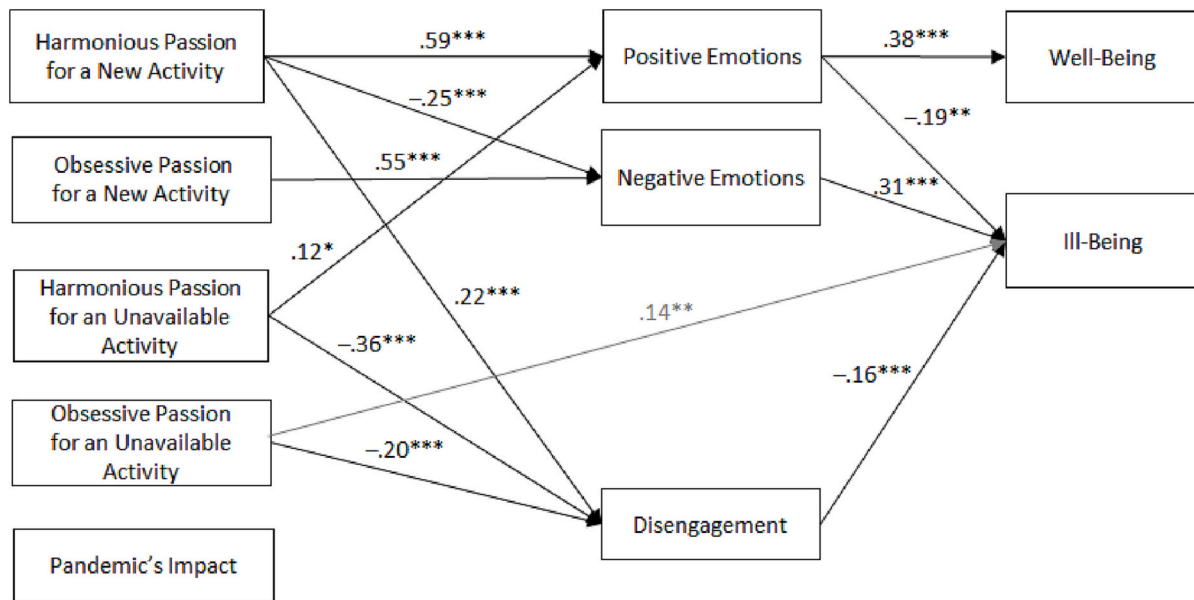
Overall, Study 3 replicated findings from Studies 1 and 2, but also extended the scope of these studies by highlighting the role of disengagement from an unavailable passionate activity in psychological health during the pandemic. As expected, a HP for a new activity was positively related to well-being via its positive link with positive emotions. It was also negatively related to ill-being through its positive links with positive emotions and disengagement, and its negative link with negative emotions. Conversely, an OP for a new activity was positively related to ill-being via higher negative emotions. Contrary to findings from Studies 1 and 2, none of the OPs (for a new or unavailable activity) were associated with well-being, showing the less adaptive role of OP, as posited by the DMP (Vallerand, 2015). Expanding on the results from the first two studies, Study 3 showed the positive role of a HP for a new activity in disengagement from an unavailable passionate activity which was negatively related to ill-being. This is in accordance with previous research on the adaptive role of disengagement (Wrosch et al., 2003). In sum, a HP, but not an OP, for a new activity provided psychological benefits to participants who had to let go of an unavailable passionate activity. Future research is needed to validate the modified version of the Goal Adjustment Scale, which was used here for the first time with unavailable activities rather than unattainable goals.

**Table 6**  
Descriptive statistics and correlations for study variables (Study 3).

Variable	M (SD)	1	2	3	4	5	6	7	8	9
1. HP for a new activity	5.04 (1.08)	–								
2. OP for a new activity	2.86 (1.48)	.27***	–							
3. HP for an unavailable activity	5.27 (1.23)	.26***	–.13*	–						
4. OP for an unavailable activity	3.23 (1.58)	.09	.52***	.17**	–					
5. Positive emotions	3.61 (0.78)	.62***	.25***	.28***	.10	–				
6. Negative emotions	1.37 (0.64)	–.10	.48***	–.13*	.33***	–.10	–			
7. Disengagement	3.75 (1.50)	.11	.08	–.34***	–.24***	.02	.05	–		
8. Subjective well-being	4.25 (1.39)	.35***	.15*	.18**	.04	.38***	.01	.07	–	
9. Subjective ill-being	12.38 (7.93)	–.21***	.09	–.06	.26***	–.21***	.34***	–.22***	–.56***	–
10. Pandemic's impact	5.37 (1.20)	.08	–.03	.18**	.04	.01	–.01	–.10	–.06	.12*

Note. N = 289. HP = harmonious passion; OP = obsessive passion.

\* p < .05.  
\*\* p < .01.  
\*\*\* p < .001.



**Fig. 3.** Results of the path analysis of Study 3.  
Note. N = 289. Standardized path coefficients are presented. For clarity concerns, covariances are not shown between the variables.  
\*p < .05. \*\*p < .01. \*\*\*p < .001.

**8. General discussion**

The aim of the present research was to study how individuals make use of a passionate activity when facing a major stressor, namely the COVID-19 pandemic. There were three objectives to this research. First, we examined the effects on well-being and ill-being of engaging in pre-existing and new passionate activities, and of letting go of an unavailable passionate activity during the pandemic. Second, we investigated the mediating roles of emotions between passion and psychological health. Third, we ascertained the role of disengagement in the association between passion and psychological health. These objectives were pursued in three studies. Study 1 was conducted with individuals pursuing a pre-existing passionate activity. Studies 2 and 3 were undertaken with individuals who developed a passion for a new activity during the pandemic, but also kept pursuing a pre-existing passionate activity (Study 2) or had to temporarily let go of an unavailable passionate activity (Study 3). Overall, the results generally supported the stated hypotheses. HPs for a pre-existing activity (Study 1) and for a new activity (Studies 2 and 3) were positively related to well-being through HPs' positive association with positive emotions (Studies 1 to 3). Furthermore, HPs for a pre-existing activity and a new activity were negatively related to ill-being through three processes, namely their negative links

with negative emotions (Studies 1 to 3), and their positive links with both positive emotions (Studies 2 and 3) and disengagement from an unavailable passionate activity (Study 3). Conversely, OPs for a pre-existing activity (Study 1) and for a new activity (Studies 2 and 3) were positively related to both benefits (well-being in Studies 1 and 2) and drawbacks (negative emotions and ill-being in all studies). Furthermore, HP and OP for unavailable passionate activities were negatively related to disengagement. During the pandemic, people were forced to behaviorally let go of unavailable activities. However, their passion for these activities may still be present, rendering it hard to psychologically disengage.

In sum, these results speak to the generally more adaptive role of HP when facing a stressful life event such as a pandemic. This is consistent with previous research showing that HP predicts positive adaptation in the face of a major life stressor (e.g., Moreno-Jiménez et al., 2021). Even in the major negative context of the pandemic (McGinty, Presskreischer, Han, & Barry, 2020), individuals with a predominant HP experienced less depression and anxiety. These three studies have important implications. Specifically, this is the first series of studies to examine the combined effects of engaging in multiple passionate activities and letting go of unavailable ones on psychological health when facing adversity. As such, these studies pave the way for more research on the effects



**Table 7**

Bootstrap estimates of the indirect effects and their associated bias-corrected 95 % confidence intervals (Study 3).

Predictor	Mediator	Outcome	$\beta$	95 % CI	<i>p</i> -Values
HP for a new activity	Positive emotions	Well-being	0.22	[0.14, 0.30]	$p < .001$
HP for an unavailable activity	Positive emotions	Well-being	0.05	[0.01, 0.09]	$p = .022$
HP for a new activity	Positive emotions	Ill-being	-0.11	[-0.18, -0.04]	$p = .002$
HP for an unavailable activity	Positive emotions	Ill-being	-0.02	[-0.05, -0.01]	$p = .058$
OP for a new activity	Negative emotions	Ill-being	0.17	[0.11, 0.24]	$p < .001$
HP for a new activity	Negative emotions	Ill-being	-0.08	[-0.12, -0.05]	$p < .001$
HP for a new activity	Disengagement	Ill-being	-0.04	[-0.07, -0.01]	$p = .009$
HP for an unavailable activity	Disengagement	Ill-being	0.06	[0.03, 0.10]	$p = .002$
OP for an unavailable activity	Disengagement	Ill-being	0.03	[0.01, 0.06]	$p = .011$

Note. HP = harmonious passion, OP = obsessive passion.

of multiple passions (Schellenberg & Bailis, 2015, 2021) and the role of passion in adversity. They also identified the mechanisms at the heart of these effects. The patterns of results we found during the pandemic may pertain to other major stressful situations (e.g., sickness, bereavement). In sum, the present research provides novel contributions to the literature.

### 8.1. On passion as a determinant of psychological health during the pandemic

A first implication of this research is to show that engaging in passionate activities or disengaging from unavailable ones during stressful times, such as the COVID-19 pandemic, can foster psychological health. However, these effects are more adaptive with a harmonious engagement in the passionate activity than with an obsessive one. In line with the DMP and previous research (Curran, Hill, Appleton, Vallerand, & Standage, 2015; Vallerand, 2015), the quality of engagement in the passionate activity matters with respect to adaptive outcomes. As such, in all three studies, HPs for pre-existing and new passionate activities were positively related to well-being and negatively related to ill-being, whereas OPs for pre-existing and new passionate activities had mixed effects. OPs in Studies 1 and 2 were directly and positively associated with well-being. However, in all three studies, OPs were also positively related to ill-being. While the effects of OP were not all bad, consistent associations with markers of poor adaptation were noted across all three studies. Perhaps the positive effects of OP in Studies 1 and 2 can be attributed to the fact that being passionately engaged, even in an obsessive fashion, was perceived as helpful during the difficult times of lockdowns and restrictions. However, the obsessive engagement in these activities also came at a significant cost, as noted by the associations between OP and markers of ill-being. The role of OP in psychological health in the face of a stressful event should be further investigated in future studies.

### 8.2. On the role of emotions in psychological health

A second implication of the present research is that emotions play a key role in explaining the association between passion and psychological health during stressful times. More precisely, HPs were positively related to positive emotions and negatively related to negative

emotions, while OPs were positively related to negative emotions. In turn, positive emotions were positively related to well-being (Studies 1 to 3) and negatively related to ill-being (Studies 2 and 3), while negative emotions were positively associated with ill-being (Studies 1 to 3). These results are in accordance with the DMP and previous research showing that HP is associated with a more positive affective tone, while OP is related to a more negative affective tone (e.g., Philippe et al., 2010). These findings also support the Broaden-and-Build Theory (Fredrickson, 2013) stating that positive emotions positively relate to positive psychological outcomes and negatively to negative ones, while negative emotions are associated with ill-being and prevent people from bouncing back from stressful situations (Fredrickson et al., 2003). These results add to Fredrickson's findings by showing the role of passion as one of the determinants of these emotions.

### 8.3. On the adaptive role of psychologically disengaging from an unavailable passionate activity

A third implication pertains to the adaptive role of disengaging from an unavailable passionate activity. Consistent with findings from the disengagement literature (Wrosch et al., 2013, 2003), we observed that disengaging from an unavailable passionate activity was negatively associated with symptoms of depression and anxiety, similar to how disengaging from unattainable goals is negatively associated with depression symptoms. Thus, psychological disengagement had positive effects on psychological health.

The results of Study 3 showed that only a HP for a new activity was positively related to disengagement for an unavailable passionate activity. In other words, engaging in a new passionate activity in a harmonious way helped individuals break up psychological commitment and behavioral effort toward passionate activities that were no longer feasible in the context of the pandemic. These results are in line with the DMP and previous findings showing the more adaptive role of HP compare to OP (Vallerand, 2015). To the authors' knowledge, this is the first study to document a link between the quality of passion (harmonious vs. obsessive) and Goal Adjustment Theory adapted to the commitment to an activity. Making parallels between the disengagement from an unavailable activity and from an unattainable goal, this finding may have important implications for Goal Adjustment Theory (Wrosch et al., 2003). These results highlight the role of HP as a possible pathway through which disengagement from unattainable pursuits might be facilitated. However, due to the cross-sectional nature of our data, we cannot speak to the causality of this association. More research is needed on the role of HP in the disengagement process.

### 8.4. Limitations and future directions

This research presents some limitations. First, all three studies used a correlational design which prevents the inference of causality between the variables and the examination of the mediational effect. Future research on the role of passion when facing adversity should use an experimental design where HP and OP are experimentally induced toward a passionate activity (see Vallerand, 2015). Secondly, although the present research examined how the individuals faced the situation by looking at both positive and negative outcomes, the set of variables was limited and only self-report measures were used. Future research should integrate objective measures and observe more possible mediators (e.g., challenge and threat appraisals, see Vallerand et al., 2022) as well as multiple outcomes both within the sphere of the passionate activity (e.g., performance) and in other areas of one's life (e.g., interpersonal relationships). Thirdly, because all three studies were conducted during the pandemic, it was impossible to have access to participants' baseline states and to confirm that they experienced the pandemic adversely. However, a study comparing the mental health of Americans before and during the pandemic shows 9.7 % of increases in mental health complaints between 2018 and 2020 (McGinty et al., 2020). These statistics

indicate that the COVID-19 pandemic was associated with distress and may be considered by many as a major negative event disturbing people's lives.

In conclusion, the present research showed that passion may play an important role in how people face a major stressful event such as the COVID-19 pandemic. Indeed, pursuing engagement in a pre-existing passionate activity, developing a passion for a new activity, and letting go of an unavailable passionate activity during the pandemic appear to go a long way in helping people adapt to this adverse situation. However, such effects were more adaptive when fueled by a HP than an OP. Future research on these issues seems highly promising.

### CRedit authorship contribution statement

**Virginie Paquette:** Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Writing – original draft, Writing – review & editing. **Anne C. Holding:** Conceptualization, Data curation, Formal analysis, Methodology, Project administration, Writing – original draft, Writing – review & editing. **Catherine Cimon-Paquet:** Conceptualization, Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **Alexandra Giroux:** Conceptualization, Methodology, Writing – original draft, Writing – review & editing. **Vincent Gosselin Boucher:** Conceptualization, Methodology, Writing – review & editing. **Robert J. Vallerand:** Conceptualization, Methodology, Resources, Supervision, Writing – review & editing, Funding acquisition.

### Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Robert J. Vallerand reports financial support was provided by Social Sciences and Humanities Research Council, the Fonds de Recherche du Québec - Société et Culture, and Canada Research Chairs program.

### Data availability

Data will be made available on request.

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