



On the role of harmonious and obsessive passion in work and family outcomes: A test of the quadripartite approach

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Abstract

Past research has shown that harmonious passion (HP) for work facilitates, and obsessive passion (OP) undermines, work and family outcomes. The current investigation is the first to test the quadripartite approach of passion (Schellenberg et al., *Journal of Personality* 87:163–180, 2019) with respect to work outcomes. In line with the Dualistic Model of Passion (Vallerand, 2015), the quadripartite approach posits that HP and OP lie on different continua thereby leading to the possibilities that they may have interactive effects. Two studies with large samples of workers ($n = 5463$ in Study 1; and $n = 3642$ in Study 2) were conducted to test this perspective. Results provided support for the quadripartite approach leading to a more nuanced analysis of the effects of HP and OP. More specifically, pure HP was related to lower work-family conflict (Studies 1 and 2) and counterproductive work behaviors (Study 2) than pure OP, mixed passion, and non-passion. Pure OP was also related to greater work-family conflict (Studies 1 and 2) and lower family life satisfaction (Study 2) than mixed passion and non-passion. These findings suggest that HP protects against the contributive role of OP in counterproductive work behaviors and work-family conflict, as well as against the negative effects of OP on family life satisfaction. Results are discussed in light of the passion literature and especially the quadripartite approach.

Keywords Obsessive passion · Harmonious passion · Work passion · Quadripartite approach · Work-family conflict · Family life satisfaction · Counterproductive work behaviors

“Nothing is as important as passion. No matter what you do with your life, be passionate”

(Jon Bon Jovi).

As the above quote suggests, experiencing passion for one’s work would seem to represent one surefire way to achieve positive outcomes. Indeed, numerous examples of successful

passionate individuals from John Bon Jovi himself to Bill Gates and several others highlight the fact that passion matters. However, at the same time, we know of several others such as Steve Jobs and Tiger Woods who although successful have also suffered either physically or psychologically. Indeed, research over the past 15 years has shown that one type of passion for work (harmonious) facilitates adaptive outcomes, whereas another one (obsessive) typically triggers negative outcomes (Vallerand & Houliort, 2019). However, studies in this area are limited by their failure to consider the possible combined effects of these two types of passion. In particular, despite the acknowledgement that these two forms of passion coexist within individuals (Vallerand, 2015), potentially leading harmonious passion (HP) to protect one from the detrimental influence of obsessive passion (OP) on outcomes (Li et al., 2020; Schellenberg et al., 2019), little is known about the different combinations of HP and OP and their effects on work and family outcomes. Recently, the quadripartite approach (Schellenberg et al., 2019) has been proposed as a new way of studying passion that assesses the effect of different within-person combinations of HP and

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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OP. In the present research, we relied on the quadripartite approach to test the combined effect of HP and OP for the first time with respect to work and family outcomes (i.e., work-family conflict, counterproductive work behaviors, and family life satisfaction).

The dualistic model of passion

The Dualistic Model of Passion (Vallerand, 2010, 2015; Vallerand et al., 2003) posits that passion refers to a strong inclination toward a specific activity such as one's job (Vallerand, 2015; Vallerand & Houliort, 2019). Passionate workers invest a significant amount of effort and time in their work, find it integral to their identity, love it, and regard it as important (Vallerand & Houliort, 2003, 2019). According to the dualistic model of passion (Vallerand et al., 2003), two types of passion (HP and OP) for work must be distinguished. Harmoniously passionate workers willingly choose to engage in their work, whereas those with high levels of OP do the job that they love with an internal pressure (Vallerand et al., 2003). More specifically, for workers with high levels of HP, work occupies an important, but not overpowering, space in their identity. In other words, it is in harmony with other elements of one's life, allowing workers to establish adaptive boundaries between their work and other important life spheres (Vallerand & Houliort, 2019). In contrast, workers with high levels of OP experience an uncontrollable urge to engage in their work that they consider as enjoyable and important (Houliort et al., 2018). Therefore, they risk engaging in their work with a rigid persistence and experiencing conflicts with other life activities as they are not able to establish boundaries between their work and other life domains (Vallerand & Houliort, 2019).

Not surprisingly, prior studies have demonstrated that OP was positively linked to a number of work consequences such as work-family conflict (Caudroit et al., 2011; Houliort et al., 2018) and incivility instigations (Birkeland & Nerstad, 2016), and associated with lower levels of work performance (Kong & Ho, 2018) and satisfaction (Busby et al., 2019). Conversely, HP has long been recognized as a predictor of a wide variety of desirable outcome variables for the organization (e.g., higher levels of organizational citizenship behaviors; Ho et al., 2018) and the workers (e.g., higher job satisfaction; Houliort et al., 2018). Carbonneau et al. (2008) found, for instance, that workers presenting high levels of HP tended to demonstrate higher job satisfaction coupled with lower levels of burnout. Interestingly, HP and OP for work respectively predict positive and negative outcomes outside the work domain such as family

life, global physical and psychological health, and relationship (Vallerand, 2015; Vallerand & Houliort, 2019).

Combined effects of HP and OP

Vallerand (2015) posited that HP and OP lie on two separate continua, suggesting that some workers may experience both high OP and HP, some may experience both low OP and HP, and some may experience high levels of one passion type but low levels of the other. The combined effect of both HP and OP has been examined using a quadripartite approach (Schellenberg et al., 2019). The quadripartite approach to passion distinguishes between four combinations of HP and OP: *Pure OP* (low HP coupled with high OP), *pure HP* (high HP coupled with low OP), *mixed passion* (both high HP and OP), and *non-passion* (both low HP and OP). By differentiating between these four prototypical subtypes, activity outcomes can be compared between each one. This leads to some novel and interesting questions about passion for work that cannot be addressed by testing the effects of HP and OP individually. For example, is it better for people to have passion for their work that is purely obsessive (i.e., pure OP), or to not be passionate at all (i.e., non-passion)? Are workers protected against the negative effects of having high OP if they also have high levels of HP (i.e., mixed passion) rather than low levels of HP (i.e., pure OP)? Is it always best to have high levels of HP coupled with low levels of OP (i.e., pure HP), or are there times or contexts in which it is more adaptive to have both high OP and HP (i.e., mixed passion)? The quadripartite approach to passion allows questions such as these to be addressed and can help us understand more about how both OP and HP combine in the prediction of outcomes in the workplace.

Initial research has adopted the quadripartite approach to passion in non-work domains. In a series of four studies with a variety of participants, including undergraduates and video gamers, Schellenberg et al. (2019) found distinct effects of passion subtypes on consequences. Specifically, they found that pure HP was most often positively related to physical and psychological well-being in comparison to the other passion subtypes, whereas pure OP was linked to the lowest levels of well-being. The quadripartite approach has since been used to examine relationships between passion subtypes and consequences in other samples including students (Schellenberg et al., 2021a), athletes (Schellenberg et al., 2021b), and marijuana users (Dolan et al., 2021). Research has yet to consider how HP and OP toward work combine in the prediction of workers' outcomes.

The present research

The current investigation sought to test the quadripartite approach of passion by assessing the combined effects of HP and OP toward work on positive and negative work outcomes in two studies. In Study 1, we examined the relationships between work passion and work-family conflict with a large number of workers. In Study 2, we examined whether the results of Study 1 could not only be replicated with work-family conflict but also if they could be extended with additional outcomes (counterproductive work behaviors and family life satisfaction). These outcomes were selected because they represent key work and life outcomes for workers (Vallerand & Houliort, 2019), have been found to significantly predict work performance (e.g., Wayne et al., 2017), and, in the case of counterproductive work behaviors, may cost billions of dollars to organizations in stolen property and lost productivity (Mount et al., 2006).

Study 1

Based on previous research on the quadripartite approach (Dolan et al., 2021; Schellenberg et al., 2019, 2021a), we tested six hypotheses related to differences between each prototypical passion subtype (i.e., pure OP and HP, non-passion, and mixed passion) as pertains to work-family conflict. The first three hypotheses predict that pure HP will be related to lower levels of work-family conflict than pure OP (Hypothesis 1), mixed passion (Hypothesis 2), and non-passion (Hypothesis 3). The fourth hypothesis predicts that mixed passion will be related to lower levels of work-family conflict than pure OP. The fifth hypothesis predicts that non-passion will be related to either more (Hypothesis 5a) or less (Hypothesis 5b) work-family conflict than pure OP. Finally, the sixth hypothesis also presents competing hypotheses and predicts that non-passion will be related to either more (Hypothesis 6a) or less (Hypothesis 6b) work-family conflict than mixed passion. These competing hypotheses were proposed due to limited empirical evidence that could support a directional prediction (Schellenberg et al., 2019).

Method

Participants and procedures Data were collected from 5463 workers (2376 men and 3087 women) from various French organizations who were approached using social networks. Before completing the questionnaire (five minutes), participants were communicated information about the objectives of the research, were informed that participation was voluntary and confidential, and were ensured that they would

be able to freely withdraw from the study at any time. No incentive was offered to take part in the study. These actions resulted in a heterogeneous convenience sample of workers. All participants who agreed to participate completed an online questionnaire. A total of 1406 participants worked in the public sector (25.7%), whereas 4057 worked in the private sector (74.3%). The mean sample age was 38.54 years ($SD = 12.44$), average organizational tenure was 10.33 years ($SD = 10.12$), and average tenure in the current position was 6.72 years ($SD = 7.50$). In terms of education, 3.6% of the participants had no diploma, 23.2% had a vocational training diploma, 27.3% had a high school diploma, and 45.9% had a university diploma. Finally, most participants worked full-time (81.9%) and held a permanent position (84.2%).

Measures All measures in the questionnaire, which were either originally developed in French, or were previously validated in French, were administered in French. Validity and reliability of the French version of these measures are similar to those of the original version and have been supported in prior studies (Huyghebaert et al., 2018; Marsh et al., 2013).

Work passion The Passion Scale (Marsh et al., 2013; Vallerand et al., 2003; originally developed in French) was used to assess work passion: HP (three items; $\alpha = 0.80$; e.g., “Work is in harmony with the other activities in my life”) and OP (three items; $\alpha = 0.70$; e.g., “I have almost an obsessive feeling for work”). Prior studies have demonstrated the reliability and validity of this tool with over 20 studies confirming the bi-factorial structure, and other research supporting the invariance across gender, activities, and language (Marsh et al., 2013). The short version of the Passion Scale (Lafrenière et al., 2009; Philippe et al., 2017) was used in this study to ensure that the questionnaire would be as short as possible. This version of the scale contains three items per subscale. Prior studies have demonstrated the reliability and validity of the short-version of the Passion Scale (e.g., Lafrenière et al., 2009; Philippe et al., 2017). Items were scored on a seven-point scale (1-strongly disagree to 7-strongly agree).

Work-family conflict Work-family conflict was assessed with three items ($\alpha = 0.87$; e.g., “My work schedule makes it difficult for me to fulfill my family obligations”; Demerouti et al., 2004; French version by Huyghebaert et al., 2018). Items were scored on a seven-point scale (1-strongly disagree to 7-strongly agree).

Analyses

As in the research conducted by Schellenberg et al. (2019), we used Mplus 8.4's (Muthén & Muthén, 2019) robust

maximum likelihood (MLR) estimator for all analyses. First, we estimated a confirmatory factor analytic (CFA) model encompassing all multi-item constructs considered in the present study. In this model, all multi-item constructs were defined as latent factors from their a priori indicators and allowed to correlate with one another. No cross-loading or correlated uniqueness was included into this model. To verify the adequacy of our CFA solution, we relied on goodness-of-fit indices, where values > 0.90 and 0.95 on the Tucker-Lewis index (TLI) and the comparative fit index (CFI), and values lower than 0.08 and 0.06 on the root mean square error of approximation (RMSEA) were respectively taken to reflect acceptable and excellent levels of fit (Marsh et al., 2005). Next, using a latent moderated structural equation model approach (LMS), we regressed work-family conflict on HP and OP (both mean-centered) and their interaction effect. Low ($-1 SD$) and high ($+1 SD$) levels of each passion dimension were used to compute and plot predicted values for each passion subtype. Differences between each passion subtype were tested by interpreting simple slopes and by computing Cohen's d values for each subtype comparison (Schellenberg et al., 2019).

Results

The goodness of fit of the CFA ($\chi^2 = 741.455$, $df = 18$; $CFI = 0.95$; $TLI = 0.90$; $RMSEA = 0.09$) solution was satisfactory, supporting its ability to provide an accurate representation of the data. Parameter estimates from the CFA solution are reported in Table 1. These results revealed well-defined, reliable, and related but well-differentiated constructs. Results from the LMS regression model are displayed in Table 2. A significant $HP \times OP$ interaction effect was observed, $b = -0.199$, $SE = 0.028$, $p < 0.001$, $95\% CI [-0.174, -0.065]$. Simple slopes and subtype comparisons are displayed in Table 3, and predicted values are displayed in Fig. 1. Results supported Hypotheses 1–3 by revealing that pure HP was related to lower work-family conflict than pure OP (Hypothesis 1), mixed passion (Hypothesis 2) and non-passion (Hypothesis 3). Hypothesis 4 and 5b were supported by revealing that pure OP was related to greater work-family conflict than mixed passion (Hypothesis 4) and non-passion (Hypothesis 5b). Finally, Hypothesis 6b was supported by showing that non-passion was related to less work-family conflict than mixed passion.

Brief discussion

Findings from Study 1 provided support for Hypotheses 1 to 4 as well as Hypotheses 5b and 6b. Specifically, in line with past research relying on the dualistic model of passion as applied to the work domain (Vallerand & Houliort, 2019;

Table 1 Standardized Factor Loadings (λ) and Uniquenesses (δ) for Study 1

Items	HP λ	OP λ	WFC λ	δ
HP				
Item 1	.849			.279
Item 2	.791			.375
Item 3	.314			.902
ω	.711			
OP				
Item 1		.659		.566
Item 2		.316		.900
Item 3		.741		.450
ω		.606		
Work-family conflict				
Item 1			.860	.261
Item 2			.779	.393
Item 3			.894	.201
ω			.883	

Note. λ : Factor loading; δ : Item uniqueness; ω : Omega coefficient of model-based composite reliability; HP: Harmonious passion; OP: Obsessive passion; and WFC: Work-family conflict

Vallerand et al., 2003), pure HP was related to lower levels of work-family conflict than pure OP, mixed passion, and non-passion, thus providing support to Hypotheses 1 to 3. Moreover, both high HP and OP (mixed passion) was related to lower levels of work-family conflict than high OP and low HP (pure OP), confirming the protective effects of HP against the negative effects of OP (Hypothesis 4). Finally, the combination of both low OP and HP (non-passion) was related to lower levels of work-family conflict than pure OP (Hypothesis 5b) and mixed passion (Hypothesis 6b), suggesting that being non-passionate may protect one against negative outcomes outside of work such as work-family conflict.

Study 2

In Study 2, our aim was to replicate the findings of Study 1 with work-family conflict and examine whether these findings could be extended with counterproductive work behaviors and family life satisfaction. As in Study 1, we formulated a set of six hypotheses in line with prior studies (Schellenberg et al., 2019). In each of the six following hypotheses, we considered adaptive outcomes among workers to be represented by high levels of family life satisfaction, and low levels of counterproductive work behaviors and work-family conflict. First, pure HP will be linked to more adaptive outcomes than pure OP (Hypothesis 1), mixed passion (Hypothesis 2), and non-passion (Hypothesis

Table 2 Predictive Results from Studies 1 and 2

Outcome Variable		HP	OP	HP×OP	R ²
Study 1					
Work-Family Conflict	<i>b</i>	-0.343**	1.058**	-0.119**	.591**
	<i>SE</i>	0.039	0.051	0.028	
	95% CI	[-0.420, -0.265]	[0.959, 1.157]	[-0.174, -0.065]	
Study 2					
Work-Family Conflict	<i>b</i>	-0.553**	1.143**	-0.221**	.647**
	<i>SE</i>	0.057	0.071	0.044	
	95% CI	[-0.664, -0.442]	[1.003, 1.283]	[-0.307, -0.135]	
Counterproductive Work Behaviors	<i>b</i>	-0.118**	0.088**	0.070*	.029**
	<i>SE</i>	0.026	0.029	0.035	
	95% CI	[-0.169, -0.068]	[0.031, 0.144]	[0.001, 0.139]	
Family Life Satisfaction	<i>b</i>	0.205**	-0.117**	0.064*	.066**
	<i>SE</i>	0.019	0.022	0.025	
	95% CI	[0.166, 0.245]	[-0.161, -0.073]	[0.014, 0.114]	

Note. * $p \leq .05$; ** $p \leq .01$; unstandardized estimates are reported; HP=Harmonious passion; and OP=Obsessive passion

3). Then, mixed passion will be related to more adaptive outcomes than pure OP (Hypothesis 4), whereas non-passion will be related to either less (Hypothesis 5a) or more (Hypothesis 5b) adaptive outcomes than pure OP. Finally, non-passion will be related to either less (Hypothesis 6a) or more (Hypothesis 6b) adaptive outcomes than mixed passion.

Method

Participants and procedures We relied on the same data collection procedures than in Study 1. A total of 3642 workers (1561 men and 2081 women) employed in different French organizations took part in the study. Among them, 926 participants worked in the public sector (25.4%), whereas 2716 worked in the private sector (74.6%). The mean sample age was 38.34 years ($SD = 12.46$), average organizational tenure was 10.26 years ($SD = 10.13$), and average tenure in the current position was 6.79 years ($SD = 7.59$). In terms of education, 3.7% of the participants had no diploma, 21.6% had a vocational training diploma, 28.6% had a high school diploma, and 46.2% had a university diploma. Finally, most participants worked full-time (81.4%) and held a permanent position (84.3%).

Measures As in Study 1, all measures in the questionnaire, which were either originally developed in French or were previously validated in French, were administrated in French. Validity and reliability of the French version of these measures are similar to those of the original version and have been supported in prior studies (Fouquereau et al., 2019; Gillet et al., 2021; Huyghebaert et al., 2018; Marsh et al., 2013).

Work passion Both HP ($\alpha = 0.81$) and OP ($\alpha = 0.71$) were assessed with the same questionnaires as in Study 1.

Work-family conflict Work-family conflict ($\alpha = 0.87$) was assessed with the same questionnaire as in Study 1.

Counterproductive work behaviors Five items focusing on negative social interactions at work ($\alpha = 0.69$; e.g., “Insulted someone about their job performance”; Spector et al., 2010; French version by Fouquereau et al., 2019) were used to measure counterproductive work behaviors. Items were scored on a five-point scale (1-never to 5-every day).

Family life satisfaction One item (i.e., “Are you satisfied with your family life?”; Shimazu et al., 2015; French version by Gillet et al., 2021) was used to measure family life satisfaction on a four-point scale (1-dissatisfied to 4-satisfied).

Analyses

As in Study 1, the data were analyzed in two steps. First, a CFA was conducted in which items representing HP, OP, work-family conflict, and counterproductive work behaviors were allowed to predict latent factors that represented each construct. Family life satisfaction (a single-item observed variable) was also included in the CFA and allowed to covary with all other latent factors. Family life satisfaction was standardized for all analyses. Following the initial CFA, we used the LMS approach to conduct a multivariate regression in which all outcome variables were simultaneously regressed on HP and OP (both mean-centered) and their interaction effect. Passion subtypes were computed and compared using the same methods as described in Study 1.

Table 3 Association Between Passion Subtypes and Outcome Variables

Outcome Variable	<i>d</i>	Description	<i>B</i>	<i>SE</i>	95% CI
Study 1					
Work-family conflict					
H1: PHP v. POP	-2.801**	—	—	—	—
H2: MP v. PHP	1.878**	OP at High HP	0.939**	0.047	[0.847, 1.031]
H3: PHP v. NP	-0.447**	HP at Low OP	-0.224**	0.028	[-0.279, -0.168]
H4: MP v. POP	-0.923**	HP at High OP	-0.462**	0.062	[-0.583, -0.340]
H5: POP v. NP	2.354**	OP at Low HP	1.177**	0.067	[1.046, 1.308]
H6: MP v. NP	1.431**	—	—	—	—
Study 2					
Work-family conflict					
H1: PHP v. POP	-3.391**	—	—	—	—
H2: MP v. PHP	1.844**	OP at High HP	0.922**	0.063	[0.798, 1.046]
H3: PHP v. NP	-0.663**	HP at Low OP	-0.332**	0.032	[-0.395, -0.268]
H4: MP v. POP	-1.548**	HP at High OP	-0.774**	0.096	[-0.962, -0.585]
H5: POP v. NP	2.728**	OP at Low HP	1.364**	0.100	[1.167, 1.561]
H6: MP v. NP	1.181**	—	—	—	—
Counterproductive work behaviors					
H1: PHP v. POP	-0.413**	—	—	—	—
H2: MP v. PHP	0.316**	OP at High HP	0.158**	0.042	[0.076, 0.240]
H3: PHP v. NP	-0.377**	HP at Low OP	-0.189**	0.038	[-0.264, -0.113]
H4: MP v. POP	-0.097	HP at High OP	-0.048	0.048	[-0.143, 0.046]
H5: POP v. NP	0.035	OP at Low HP	0.018	0.049	[-0.078, 0.114]
H6: MP v. NP	-0.061	—	—	—	—
Family life satisfaction					
H1: PHP v. POP	0.644**	—	—	—	—
H2: MP v. PHP	-0.106	OP at High HP	-0.053	0.029	[-0.109, 0.003]
H3: PHP v. NP	0.283**	HP at Low OP	0.141**	0.029	[0.085, 0.198]
H4: MP v. POP	0.538**	HP at High OP	0.269**	0.036	[0.199, 0.339]
H5: POP v. NP	-0.361**	OP at Low HP	-0.181**	0.039	[-0.256, -0.105]
H6: MP v. NP	0.177**	—	—	—	—

Note. * $p \leq .05$; ** $p \leq .01$; H1-H6 corresponds to hypotheses 1 to 6; unstandardized beta coefficients are reported; PHP = Pure harmonious passion; POP = Pure obsessive passion; MP = Mixed passion; NP = Non-passion; HP = Harmonious passion; and OP = Obsessive passion

Results

As in Study 1, the goodness of fit of the CFA ($\chi^2 = 958.74$, $df = 80$; CFI = 0.93; TLI = 0.91; RMSEA = 0.06) solution was satisfactory, supporting its ability to provide an accurate representation of the data. Parameter estimates from the CFA solution are reported in Table 4. These results revealed well-defined, reliable, and related but well-differentiated constructs. Results from the LMS regression model are displayed in Table 2. Simple slopes and subtype comparisons are displayed in Table 3. Work-family conflict was predicted by a significant HP \times OP interaction effect, $b = -0.221$, $SE = 0.044$, $p < 0.001$, 95% CI [-0.307, -0.135]. As in Study 1, support was found for Hypotheses 1–4, 5b, and 6b. Subtype plots are displayed in Fig. 2.

Counterproductive work behaviors were predicted by a significant HP \times OP interaction effect, $b = 0.070$, $SE = 0.035$, $p = 0.047$, 95% CI [0.001, 0.139]. Results supported Hypotheses 1–3 by showing that pure HP was related to lower counterproductive work behaviors than pure OP (Hypothesis 1), mixed passion (Hypothesis 2), and non-passion (Hypothesis 3). No support was found for the remaining hypotheses, as associations with counterproductive work behaviors did not differ between mixed passion, pure OP, and non-passion. Subtype plots are displayed in Fig. 3.

Family life satisfaction was predicted by a significant HP \times OP interaction effect, $b = 0.064$, $SE = 0.025$, $p = 0.012$, 95% CI [0.014, 0.114]. Results supported Hypothesis 1 by revealing that pure HP was related to greater family life satisfaction than pure OP. Pure HP

Fig. 1 Study 1: Associations between harmonious passion, obsessive passion, and work-family conflict. *Note.* High and low values of harmonious and obsessive passion are plotted at one standard deviation above and below the mean; work-family conflict was standardized and passion scores were mean centered; PHP = Pure harmonious passion; POP = Pure obsessive passion; MP = Mixed passion; and NP = Non-passion

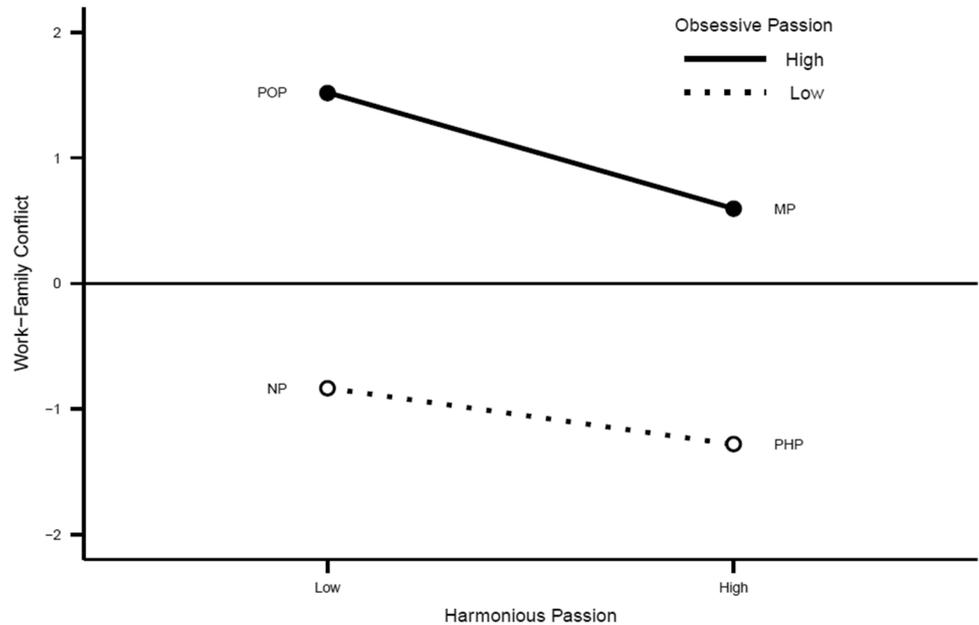


Table 4 Standardized Factor Loadings (λ) and Uniquenesses (δ) for Study 2

Items	HP λ	OP λ	WFC λ	CWB λ	δ
HP					
Item 1	.782				.389
Item 2	.895				.198
Item 3	.649				.579
ω	.823				
OP					
Item 1		.663			.560
Item 2		.427			.817
Item 3		.749			.438
ω		.651			
Work-family conflict					
Item 1			.814		.338
Item 2			.816		.334
Item 3			.857		.265
ω			.868		
Counterproductive work behaviors					
Item 1				.550	.697
Item 2				.576	.668
Item 3				.539	.709
Item 4				.629	.604
Item 5				.631	.601
ω				.723	

Note. λ : Factor loading; δ : Item uniqueness; ω : Omega coefficient of model-based composite reliability; HP: Harmonious passion; OP: Obsessive passion; WFC: Work-family conflict; and CWB: Counterproductive work behaviors

did not differ from mixed passion, which did not support Hypothesis 2, and was associated with greater family life satisfaction than non-passion, which supported Hypothesis 3. Pure OP was related to lower family life satisfaction than mixed passion (supporting Hypothesis 4) and non-passion (supporting Hypothesis 5b). Finally, mixed passion was related to higher family life satisfaction than non-passion (supporting Hypothesis 6a). Subtype plots are displayed in Fig. 4.

Brief discussion

As in Study 1, and consistent with the extant literature on the dualistic model of passion (Vallerand, 2015, 2020; Vallerand & Houliort, 2019; Vallerand et al., 2003), pure HP was related to less work-family conflict and counterproductive work behaviors, and greater family life satisfaction than pure OP, mixed passion (except for family life satisfaction), and non-passion, thus providing support to Hypotheses 1 to 3. In contrast, pure OP was associated with lower levels of family life satisfaction and higher levels of work-family conflict than mixed passion (Hypothesis 4) and non-passion (Hypothesis 5b). However, it is noteworthy that the effects of pure OP, non-passion, and mixed passion differ as a function of the outcomes considered. More precisely, counterproductive work behaviors did not differ between mixed passion, pure OP, and non-passion. In addition, the combination of both low HP and OP (non-passion) was related to lower work-family conflict (Hypothesis 6b) and family life satisfaction (Hypothesis 6a) than both high HP and OP (mixed passion).

Fig. 2 Study 2: Associations between harmonious passion, obsessive passion, and work-family conflict. *Note.* High and low values of harmonious and obsessive passion are plotted at one standard deviation above and below the mean; work-family conflict was standardized and passion scores were mean centered; PHP = Pure harmonious passion; POP = Pure obsessive passion; MP = Mixed passion; and NP = Non-passion

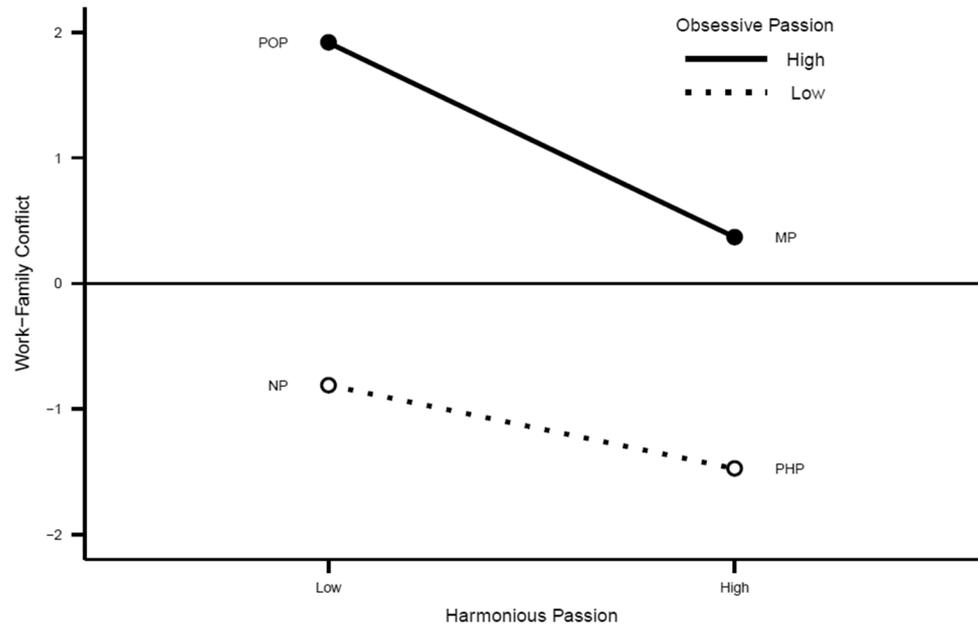
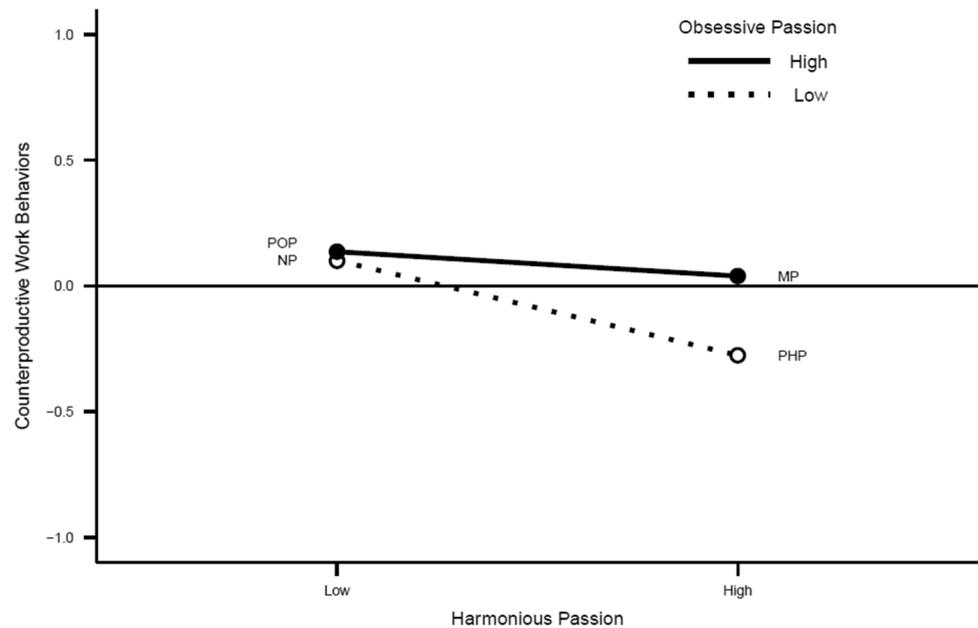


Fig. 3 Study 2: Associations between harmonious passion, obsessive passion, and counterproductive work behaviors. *Note.* High and low values of harmonious and obsessive passion are plotted at one standard deviation above and below the mean; counterproductive work behaviors were standardized and passion scores were mean centered; PHP = Pure harmonious passion; POP = Pure obsessive passion; MP = Mixed passion; and NP = Non-passion



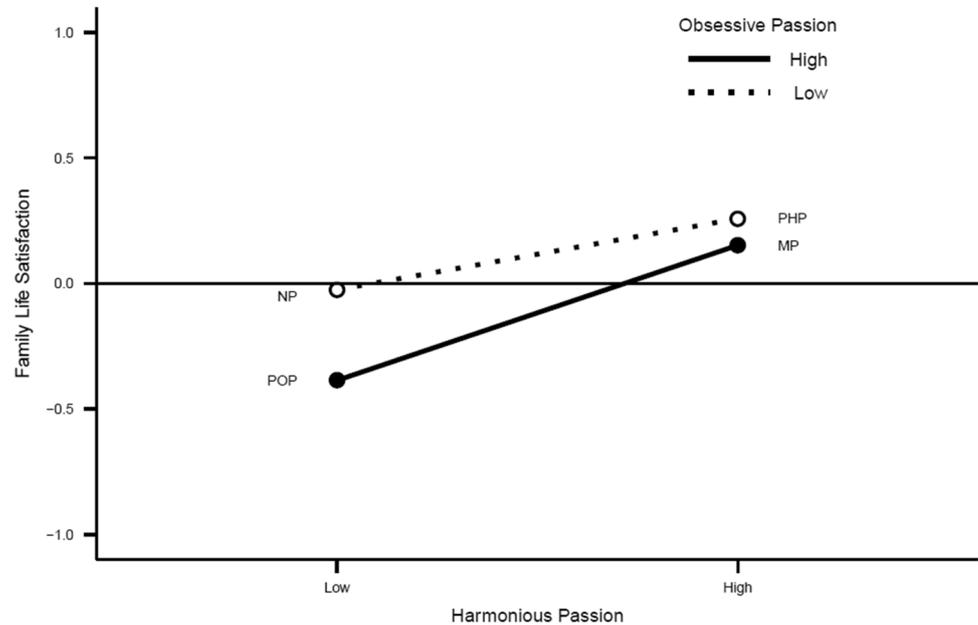
General Discussion

Prior studies have demonstrated the importance of distinguishing HP and OP (Vallerand, 2015; Vallerand et al., 2003) with positive (HP) or negative (OP) effects on various work consequences (Vallerand & Houliort, 2019). However, although prior studies suggested that HP and OP may interact in predicting outcomes (Li et al., 2020; Schellenberg et al., 2019), few investigations have examined the interactive effects of HP and OP for work. By

relying on a multidimensional conceptualization of work passion, encompassing HP and OP, we extended past research studying the unique effects of these two types of passion toward work (see Vallerand & Houliort, 2019, for a review). More specifically, by adopting the quadripartite approach, we extended the passion literature by showing that different within-person combinations of HP and OP are associated with different work- and family-related outcomes.

The two current studies were the first to test the quadripartite approach of HP and OP (Schellenberg et al., 2019,

Fig. 4 Study 2: Associations between harmonious passion, obsessive passion, and family life satisfaction. *Note.* High and low values of harmonious and obsessive passion are plotted at one standard deviation above and below the mean; family life satisfaction was standardized and passion scores were mean centered; PHP = Pure harmonious passion; POP = Pure obsessive passion; MP = Mixed passion; and NP = Non-passion



2021a) with respect to work outcomes: Work-family conflict (Studies 1 and 2), counterproductive work behaviors, and family life satisfaction (Study 2). Overall, pure HP was associated with the lowest levels of counterproductive work behaviors and work-family conflict, and the highest levels of family life satisfaction. Conversely, pure OP was related to the highest levels of work-family conflict and counterproductive work behaviors, and the lowest levels of family life satisfaction. Furthermore, in line with the quadripartite approach (Schellenberg et al., 2019, 2021a), we found that both high HP and OP (mixed passion) were related to greater work-family conflict than both low HP and OP (non-passion) in both studies. In Study 2, both high HP and OP (mixed passion) were also related to higher levels of family life satisfaction than non-passion. In contrast, mixed passion and non-passion were related to similar levels of counterproductive work behaviors. These results lend support to prior research showing the importance of distinguishing HP and OP (Vallerand, 2015), and the assertion that people can display different (but also matching) levels of HP and OP (Schellenberg et al., 2019, 2021a). The present findings also lead to some important implications.

Our results highlight that passion for work matters in terms of how workers experience conflict between their professional and family life, engage in counterproductive work behaviors, and feel that their family life is satisfying. More specifically, the present findings demonstrate the positive effects of HP for work on workers' positive behaviors at work as well as family life satisfaction and work-family conflict. Indeed, pure HP was associated with lower levels of counterproductive work behaviors and work-family conflict, and greater levels of family life satisfaction. Conversely,

pure OP was related to lower family life satisfaction, and higher counterproductive work behaviors and work-family conflict. These findings confirm that HP toward work facilitates adaptive work and family outcomes, whereas OP triggers negative outcomes in both areas (Vallerand, 2015; Vallerand & Houliort, 2019).

It is noteworthy that, to the best of our knowledge, this is the first research showing that workers' passion toward work is significantly related to their counterproductive work behaviors. However, Birkeland and Nerstad (2016) have shown that OP for work relates positively to incivility instigations (e.g., paying little attention to another person's intentions or showed little interest in their opinion, ignoring or excluding another person from professional camaraderie). Indeed, highly obsessive passionate workers might be seen as more competitive and aggressive (Carbonneau et al., 2008) as they need to prove themselves. For instance, if their status is challenged, they might respond with incivility (e.g., condescending or disrespectful behaviors) to regain confidence. This reasoning is supported by studies outside the work domain that have shown OP to be related to aggressive behaviors (Donahue et al., 2009), to poor quality interpersonal relationships (Philippe et al., 2010), and to hubristic pride (Bureau et al., 2013).

To the best of our knowledge, the present research is the first to examine the quadripartite approach with respect to work attitudes and behaviors. The present findings revealed that OP is associated with negative consequences for workers (lower levels of family life satisfaction and higher levels of work-family conflict) among those characterized by low levels of HP (pure OP). In contrast, workers characterized by mixed passion are most likely to experience the many

benefits associated with HP without suffering from the detrimental outcomes linked to OP. This can be explained by the fact that HP is associated with more frequent experiences of positive emotions (Vallerand, 2015; Vallerand & Houliort, 2019), which may increase workers' well-being and attenuate the undesirable effects of negative emotions, thus leading to a more adaptive functioning. Recent studies have also demonstrated that HP protects individuals against the detrimental effects of OP (Schellenberg et al., 2019). Though the current findings provide support for this claim by suggesting that HP can protect workers against some of the detrimental effects of OP, they reveal that this influence is limited to work-family conflict and family life satisfaction. Indeed, the present findings also show that HP eliminates the effects of OP on counterproductive work behaviors only when OP is low (pure HP), so that no advantages are associated with both high HP and OP (mixed passion) relative to high OP and low HP (pure OP) and to both low OP and HP (non-passion).

Interestingly, Schellenberg et al. (2019) have also shown that mixed passion was related to higher levels of self-rated health and psychological well-being, and lower levels of burnout than low passion. Indeed, workers with pure HP enjoy all the positive effects of HP without suffering from the detrimental influence of OP (Schellenberg et al., 2019). Though OP is generally linked to detrimental consequences (Curran et al., 2015), Amiot et al. (2006) have found that OP is associated with higher psychological adjustment in highly competitive environments. Lafrenière et al. (2012) have also shown that OP is positively related to life satisfaction following success. These findings suggest that the influence of high levels of both HP and OP (mixed passion) on counterproductive work behaviors may vary as a function of the characteristics of the work environment. It would be interesting for future studies to test this hypothesis.

Furthermore, it is noteworthy that non-passion was related to higher levels of family satisfaction and lower levels of work-family conflict than pure OP, supporting the detrimental effects of high levels of OP (Vallerand, 2015; Vallerand & Houliort, 2019). However, non-passion was also related to lower levels of family life satisfaction and work-family conflict than mixed passion, suggesting that the effects of non-passion might depend on the outcome under study (Vallerand & Houliort, 2019). On the one hand, mixed passion may be related to greater family life satisfaction in comparison to non-passion as workers characterized by mixed passion have both high levels of HP, which is related to higher well-being (Vallerand, 2015), and high levels of OP, which may be associated with adaptive outcomes in specific situations (Lafrenière et al., 2012). On the other hand, the detrimental outcomes associated with high OP may be more salient for the workers characterized by mixed passion, leading them to experience greater work-family conflict

than others without any passion (Schellenberg et al., 2019). Additional studies are thus needed to examine the interactive effects between HP and OP on other positive (e.g., organizational commitment, organizational citizenship behaviors) and detrimental (e.g., ill-being, turnover) outcomes.

More generally, these findings and those from past research (Schellenberg et al., 2019) clearly support the importance of considering the interactions between HP and OP, as suggested by Curran et al. (2015), to better explain the effects of these two forms of passion toward work. The quadripartite approach allows researchers to use variable-centered analyses (e.g., LMS, multiple regression) to predict scores on outcome variables for prototypical passion subtypes with high/low levels of HP/OP. It should be noted that the predicted values associated with each passion subtype are calculated using techniques that are sample-specific (i.e., sample standard deviations), and that the quadripartite approach is not intended to determine the proportion of respondents who identify with each subtype. However, other approaches adopting person-centered analyses can complement findings from the quadripartite approach by identifying and comparing groups of participants with differing levels of HP and OP that emerge within specific samples (e.g., Li et al., 2020). We feel that both variable- and person-centered approaches have much to offer in furthering our understanding of the interplay between HP and OP in the workplace.

Limitations and future research directions

When considering our results, some limitations have to be acknowledged. First, the fact that this study relied solely on self-report measures increases the risk of social desirability and self-report biases. Although past research has shown that the Passion Scale is free from social desirability concerns (Vallerand, 2015), it would be important for future studies to include objective and external sources such as informant-report (e.g., colleagues) measures of outcome assessment. Second, we used a single-item measure to assess family life satisfaction. Yet, it is well known that such measures tend to be less reliable than multi-item measures, and not as good at providing a complete content coverage of the construct under study. It would be interesting for future research to replicate our results using more robust measures. Third, participants were not given any specific instructions as to what to think when reading the word "family" (e.g., my partner, my partner and my children, my extended family) and completing the scales assessing work-family conflict and professional life satisfaction. In addition, we have no information regarding participants' marital/familial status (e.g., single, married, in a relationship, number of children). Future studies should specify how family is conceptualized and rely on data collected among samples of participants who lived

with a spouse or partner to clearly define the interpretation and application of the results obtained. Fourth, the present research only looked at a limited number of outcomes. Thus, future research would do well to include additional measures to assess other work and personal outcomes (Vallerand & Houliort, 2019). Finally, both studies used a correlational design. It is then impossible to determine the direction of causality. Additional longitudinal studies are necessary to help determine the directionality of the relationships between work passion and consequences.

Practical implications

The results specific to counterproductive work behaviors raise a red flag against the implementation of interventions assuming that the influence of OP could be buffered by the development of HP. They rather suggest that interventions would maximally benefit from increasing HP as a high-involvement replacement strategy for OP, perhaps by seeking work environments in which workers can benefit from autonomy-supportive behaviors (Vallerand, 2015). Indeed, as demonstrated in numerous studies (Schellenberg et al., 2019; Vallerand, 2015; Vallerand & Houliort, 2019), the two current studies suggest that HP is an adaptive type of passion that has the highest benefits for workers' personal and professional life. To facilitate the development of a harmonious passion for work among their employees, organizations and managers may also use and promote workers' signature strengths, increase workers' emotional intelligence, and facilitate a flexible and mindful investment in one's professional life, enabling workers to participate and get involved in other activities (see Vallerand & Houliort, 2019, for a review).

In sum, in addition to the main effects of HP and OP, the present research underscores the fact that it is important to consider the interactive effects of the two types of passion on work and family outcomes. More specifically, the quadripartite approach (Schellenberg et al., 2019) suggests that each worker may be characterized by four passion subtypes: Pure OP, pure HP, mixed passion, and non-passion. This quadripartite approach yields unique insights into the role of passion at work and points toward new and exciting research possibilities.

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1964 and its later amendments.

Declarations

Conflict of interest We declare that we have no conflict of interest.

Informed Consent Informed consent was obtained from all participants for being included in the study.

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