



The Relationship between Types of Passion, Mindfulness and Hedonic well-being for Tennis Athletes

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Abstract

Passion has recently gained considerable attention in various fields of study. Passion is defined as “a strong inclination toward an activity that people love and in which they invest time and energy”. The present study investigates the relationship between passion and hedonic well-being as well as the mediating effect of mindfulness. One hundred and one professional tennis players (19.82 years, SD =1.94) completed a scale of passion for sport, positive and negative affects, life satisfaction and mindfulness. Results indicated that harmonious and obsessive passions were associated, respectively, positively and negatively with composite hedonic well-being. Moreover, Bootstrapping results indicated that mindfulness was proved to mediate the relationship between both types of passion and indices of well-being (positive affect, negative affect, and life satisfaction). The findings inform future research to promote the mindfulness-based intervention to improve many outcomes.

Keywords: Harmonious passion, Obsessive passion, Hedonic well-being, Mindfulness

Introduction

The existing research literature on sports psychology and sports performance, passion has received a great deal of scholarly attention as an issue of major concern. A special focus has been given to its role, its origin, its effects as well as its links with certain psychological aspects. Obviously, scientific conceptualizations and theories of passion are always divergent, sometimes even contradictory.

In general, passion always evokes an impulse towards a favorite activity to which an individual would be attached in a particular way. Vallerand et al. [1] defined passion as <<a strong inclination toward an activity that people love and in which they invest time and energy>>. Passion has gained a growing interest in various areas, such as work [2,3], exercise

[4], and burnout [5]. According to the Dualist Model of Passion [6], passion encompasses two dimensions which are defined differently, leading to various emotional outcomes for engaging in the individuals chosen activity.

Harmonious and Obsessive Passion

The Dualist Model of Passion [7] describes two dimensions of passion. The autonomous and free internalization of activity leads to harmonious passion. Athletes can be deemed harmoniously passionate when they engage in an activity of their own volition [7]. Besides, harmonious passion refers to a motivational force and flexible engagement in a given activity [8]. Conversely, obsessive passion is characterized by a controlled internalization of the activity and is experienced as an invincible desire to engage in one's favorite activity [7].

An athlete would identify with obsessive passion when s/he engages in sport due to interpersonal pressures and inner contingencies [9,10]. The emotional experience specific to each type of passion is different. For example, harmonious passion is related to subjective well-being and flow during the engagement in the activity of poker. On the contrary, Obsessive passion leads to guilt [11,12] and emotional exhaustion. However, more recent studies found a positive association between harmonious passion, life satisfaction, sense of psychological growth, and mastery. In contrast, holding an obsessive passion contributes to anxiety [13]. Currently, there is a series of studies connecting behavioral outcomes and passion. Harmonious passion was found to enhance psychological well-being [14], subjective vitality [15], sexual gratification [16], subjective happiness [17], and exercise addiction [18]. By contrast, obsessive passion is related to a motivation [19], dance addiction [20], and burnout [21].

Research on well-being in sport has found that many traits and characteristics of well-being have been linked with passion. A recent study conducted by Bum (2019) has found that harmonious passion for sports increased positive emotions [22,23], whereas a high level of obsessive passion can lead to negative emotions. Similarly, Salama-Younes [15] found that obsessive passion is associated with growing life satisfaction and vitality (2018). The intrinsic motivation model is a field of research auspicious to the study of passion as a motivational impetus. Consequently, researchers have found a positive correlation between harmonious passion and intrinsic motivation [24].

Research on the passion for exercise has been relatively large. A study by Soós, Vega, Ruíz-Barquín, and Szabo indicated that obsessively passionate athletes in the individual sport are addicted to exercise compared to their counterparts in a team sport. Similarly, Bureau et al. [16] examined college students spent on exercise. They found that athletes with harmonious passion had spent more time on the activity than athletes with obsessive passion. In terms of performance; others have revealed that passionate high school basketball players (harmonious and obsessive) have a higher level of objective performance [25].

The Mediating Role of Mindfulness

Mindfulness is defined as the ability to be alert and aware of the sensory, cognitive, and emotional experiences of everyday life in the present moment without judgment [26]. Research on mindfulness has demonstrated that it has many beneficial effects on positive affect, work engagement [27], mood [28], life satisfaction [29], and psychological well-being. Mindfulness promotes prevention against negative

psychological reactions such as anxiety [30,31] and life stress [32]. A more in-depth analysis has been carried out on the relationship between the two conceptions: passion and mindfulness. Recent studies have shown that obsessive passion for video gaming is significantly and negatively related to mindfulness. Harmonious passion, on the other hand, has no relationship with video gaming [33].

Unlike traditional approaches, which suggest that negative thoughts and emotions need to be controlled, eliminated, or replaced, mindfulness and acceptance interventions aim to develop the ability to consciously pay attention to internal or external experiences of the present moment without making value judgments. For example, the MBSR approach has been deployed for specific issues such as stress, pain [34], and adjustment to illness [35]. Also, the positive effect of the intervention of mindfulness protects from eating disorder [36], emotion dysregulation, and stress.

Several previous studies have focused a great deal of attention on the importance of mindfulness in the field of sport [37]. In the pursuit of sporting success, practicing mindfulness exercises (the MAC protocol: Mindfulness-Acceptance-Commitment) was developed to reduce anxiety [38], increase anaerobic performance and deal with behavioral disorders [39,40].

To summarize, harmonious passion and obsessive passion refer respectively to two different modes of internalization. With harmonious passion, activity is valued and based on autonomous behavioral regulation and therefore takes place in identity. In contrast, with obsessive passion, the individual engages in their activity under constraints. Researchers proved that passions have an influence on well-being. More specifically, holding a harmonious passion for exercise enhances soccer players' positive emotions and reduces their negative emotions [24]. By contrast, obsessive passion is positively related to negative emotions [22]. Given that little research has examined the relationship that maintains passion with well-being for tennis players, the present research sought to investigate the role of harmonious passion and obsessive passion as a determinant of hedonic well-being in the context of this specific sport.

Passion also has important emotional consequences well documented in the existing literature. Previous studies show variability depending on the type of passion. Indeed, individuals with harmonious passion experience a greater number of positive affects, unlike obsessively passionate individuals [3,13]. The emotions stimulated by passion appeared to have an influence on other processes such as mindfulness. More specifically, contrary to obsessive passion, harmonious passion is linked positively with mindfulness,

which in turn enhances positive affect [40,41]. Despite the abundant research, that has examined the link between passion and internal responses, such as intrinsic motivation [42], only scant research has examined the interaction of the two types of passion with subjective well-being and mindfulness as a mediating variable. In order, to verify these postulates, this study looked at the role of mindfulness between passion and tennis player's well-being.

The present study

The present study aims to (1) investigate the link between passion and hedonic well-being; and (2) analyze the role of mindfulness as a mediator in the relationship between passion indicators of hedonic well-being. It was hypothesized that harmonious positively correlated to subjective well-being contrary to obsessive passion. In addition, it was expected that mindfulness would be a mediator between both two types of passion and indicators of hedonic well-being.

Methods

Participants

The sample of this study consisted of 101 professional tennis players, 52(51.5%) were males, living in France. The participants indicated that they typically practice their activity 5.53(SD = 1.66) hours per week. The mean age of participants was 19.82 years (SD =1.94). The career length in the specified sport ranged from 9 years to 20 years (M = 12, SD = 1.86). Specifically, 68.3% performed at national and international levels and the remaining 31.7% were working towards achieving such status.

Measures

The Passion Scale: The Passion Scale [6] assesses perceptions relating to the two passion types: harmonious and obsession passion. Harmonious passion was measured using a 6-item subscale. The participants were asked to rate on a 7-point Likert scale to indicate to what extent, for example, ("My activity is in harmony with the other activities in my life"). A harmonious passion score was calculated. Six items to evaluate the obsessive passion (e.g. "have difficulties controlling my urge to do my activity"). An obsessive passion score was calculated by summing the responses.

The Positive and Negative Affect Schedule: To assess positive and negative effect, *The Positive and Negative Affect Schedule* was used (Nicolais et al., 2014). This multi-dimensional inventory consists of 20 items that assess positive affect (e.g. "happy", "proud", "interested") and negative affect (e.g. "angry", "irritable"). Athletes responded

according to the degree to which each statement applied to them, using a Likert scale ranging from 1 (very slightly or not at all) to 5 (extremely). All items were averaged to calculate an overall life satisfaction score for each athlete.

The Satisfaction with life scale: *The Satisfaction with life scale* [43] was used to evaluate participants' life satisfaction. It is a short 5-item instrument (e.g. "I am satisfied with my life"). Athletes were asked to rate their level of agreement to each item. To this end, a 7-point Likert-type scale was used (1=strongly disagree to 7=strongly agree). All items were averaged to produce an overall life satisfaction score for each athlete.

Hedonic composite well-being: To assess hedonic well-being, the average scores of positive affects and life satisfaction were added together, followed by a subtraction of the scores of negative affects from the obtained sum [44,45].

Mindfulness: In order to assess mindfulness, the *Mindfulness Attention Awareness Scale* [46] was used. This scale contains 15 items that assess the dispositional mindfulness and the capacity to be conscious in the present (e.g. <<I find it difficult to stay focused on what's happening in the present>>). Participant answered on a 6-point scale ranging from <<almost never>> and <<almost always>>. Each respondent has an overall mindfulness score based on the sum of their responses.

Procedure

The researcher explained to the coach the purpose of the study in order to obtain permission to distribute the survey package to athletes. Participants completed the questionnaires independently. Once the questionnaires had been collected, the coach returned them to the primary researcher on the same day or later. Participants answered to questionnaires measuring: demographic information, harmonious passion, obsessive passion, life satisfaction, positive affect, negative affect, and mindfulness.

Data Analyses

Descriptive statistics, including the mean and standard deviation, were calculated for each variable. A simple Pearson correlation was calculated between harmonious/obsessive passion scores and composite score of well-being to determine the link between both types of passion and hedonic well-being. Second, In order to assess mediation of mindfulness, two separate models were estimated. The bootstrapping strategy with the SPSS macros by Jermann F, et al. [47] was used to analyze indirect effect of passion on well-being through mindfulness, with 10,000 samples to derive a 95% confidence interval. Indirect effects are considered significant when the 95% confidence intervals exclude zero.

Results

Preliminary Analysis

Questionnaire data was imported into SPSS 23. The preliminary data screening for missing values and outliers revealed that no missing values were found for most variables among the items [48]. Assumptions of multivariate analysis have been verified through skewness and kurtosis values. Means and standard deviations are presented in Table 1. Reliability analysis (Cronbach's α) revealed that the scales used to measure each of the variables were internally consistent (Table 1) [49, 50]. The one exception was the reduced sense of life satisfaction ($\alpha=0.53$).

		Mean	SD	α
1	Harmonious passion	20,48	9,56	0,96
2	Obsessive passion	17,82	5,17	0,90
3	Positive Affect	30,47	6,99	0,88
4	Negative Affect	21,89	6,7	0,79
5	Life satisfaction	16,49	5,47	0,53
6	Mindfulness	33,99	6,22	0,77
7	Well-being	25,08	1,48	

Table 1: Descriptive statistics ($n = 101$)

Hypothesis 1

First, a correlation matrix was generated to examine the relationships among all three constructs, which included harmonious passion, obsessive passion; as well as total scores of well-being (Table 2). Results indicated that harmonious passion was positively correlated with composite score of well-being ($r = .607$, $p < 0.01$). Whereas obsessive passion was negatively correlated with composite score of well-being ($r = -.326$, $p < 0.01$). According to the recommendations by Hayes [51], unrelated variables should not be included within the multiple regression analysis. Multiple regression

analyses were conducted and results supported the above-mentioned hypotheses that harmonious passion ($\beta = .389$, $P < 0.01$) and obsessive passion ($\beta = -.113$, $P < 0.01$) are, respectively, associated positively and negatively with composite well-being.

		Harmonious Passion	Obsessive Passion
1	Positive affect	.366**	-.205*
2	Negative affect	-.456**	.279**
3	Life satisfaction	.633**	-.288**
4	Mindfulness	.355**	-.305**
5	Well being	.607**	-.326**

** $p < .001$

* $p < .005$

Table 2: Correlation coefficients of Harmonious Passion, Obsessive Passion and Positive Affect, Negative Affect, Life Satisfaction and Mindfulness variables, ($n = 101$).

Hypothesis 2

To determine whether the mediating affects of mindfulness on athletes' well-being were statistically significant, the PROCESS macro for SPSS was used. Two models were tested to determine whether the mediating affects of mindfulness on three dimensions of well-being were statistically significant. Each model included two independent variables (harmonious and obsessive passion), a single mediator variable (Mindfulness) and 4 dependent variables (indices of well-being). All models displayed adequate fit with the data. The path coefficients are presented in Figures 1 and 2. Using a nonparametric bootstrapping method [47] with 10000 samples [51] to derive a 95% confidence interval. Indirect effects are considered significant when the 95% confidence intervals exclude zero (Table 3). Indirect effects of both type of passion on positive affect, negative affect, life satisfaction and composite well-being met this criterion.

	Indirect Effect Harmonious passion-Mindfulness-well being (95% CI)	Indirect Effect obsessive passion-Mindfulness-well being (95% CI)
Positive affect	.073**(.019 to .19)	-.143**(-.284 to -.041)
Negative affect	-.056**(-.13 to 0.06)	.120**(-.226 to -.028)
life satisfaction	.039**(.008 to 0.82)	-.109**(-.008 to .082)
well - being	.170**(.053 to 338)	-.374**(-.741 to -.111)

Table 3: Summary of bootstrap analysis showing the indirect effects of mindfulness on the well-being through passion ($n = 101$).

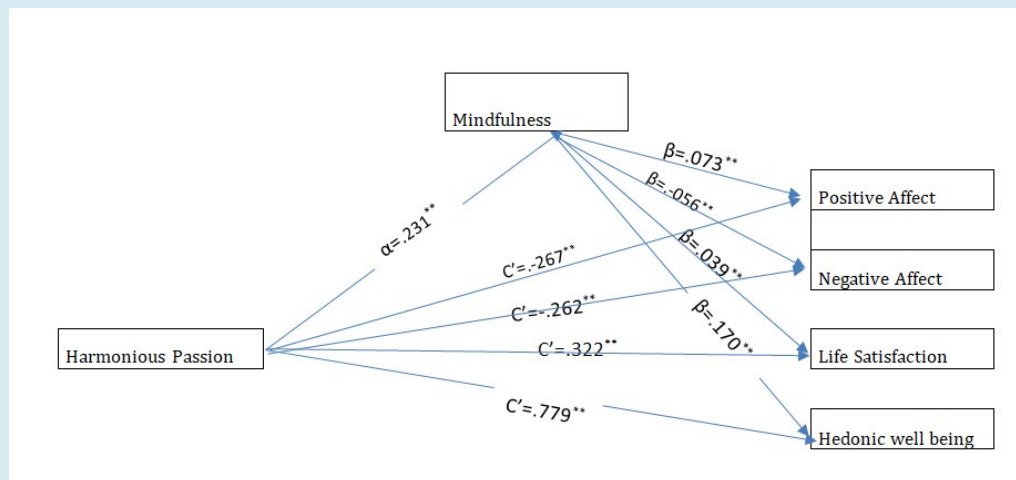


Figure 1: Meditational diagrams for models testing the mediation of Mindfulness through Harmonious Passion with Positive Affect, Negative Affect, Life Satisfaction Well-being composite. Value (standardized) above lines reflects bivariate (β) relations. All associations are significant (* $p < .05$, ** $p < .001$).

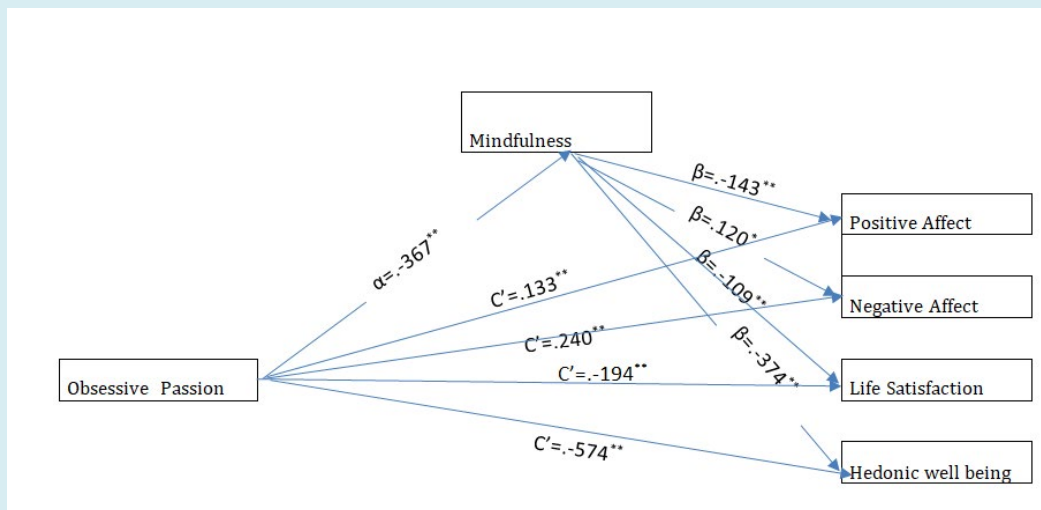


Figure 2: Meditational diagrams for models testing the mediation of Mindfulness through Obsessive Passion with Positive Affect, Negative Affect, Life Satisfaction Well-being composite. Value (standardized) above lines reflects bivariate (β) relations. All associations are significant (* $p < .05$, ** $p < .001$).

Discussion

The present research aimed to explore the link between both types of passions and tennis players' subjective well-being. Hedonic well-being has been studied according to two components: an affective component that constitutes positive and negative affects, and a cognitive component that includes life satisfaction.

Consistent with our expectations, a positive relationship was found to be shared between harmonious passion and athletes' well-being, and this relationship was reversed for obsessive passion. This is in agreement

with results reported in previous studies that found that harmonious passion was associated with emotional consequences such as increased levels of well-being. In contrast, obsessive passion was negatively correlated with well-being among a sample of 172 soccer players [24].

Research that evaluated the relationship between harmonious /obsessive passions and well-being revealed that the interactions were significant; the more important the scores for harmonious passion are, the more important scores for well-being are [5]. In addition, these findings updates previous studies devoted to the link between passion and well-being inside and outside of sport [53,54]. Similarly,

Stenseng, et al., pointed out that harmonious passion for leisure sports engenders subjective well-being [55,56], while obsessive passion was negatively associated with subjective well-being. Regarding the consequences of passion, many differences appear between the two forms. Harmonious passion has positive affective consequences, whereas with obsessive passion they turn out to be negative [55,57].

This study, therefore, adds to the literature by successfully generalizing the link between passion and well-being. Indeed, such findings are consistent with research conducted with competitive basketball players and focusing on the affective experiences such as positive, negative affect as well as vitality associated with passion. Findings from this investigation contribute a greater understanding of the processes by revealing that the more activity is lived with a harmonious passion, the more it arouses positive affective experiences within the realm of sport, whereas the obsessive passion presents the opposite profile [58].

The present study also particularly offers specific predictions about the association between both types of passion and emotion. For this purpose, the type of passion developed will have a significant impact on sports participants' emotions. For example, the passion for sport, if it is harmonious, is associated with positive emotion. On the contrary, in its obsessive mode, it is linked to increasing negative emotion [22].

In addition, although the above mentioned studies reveal that obsessive passion has a negative correlation with the psychological outcomes, it can also engender a great deal of pleasure and excitement during the practice time [59]. Also, obsessively passionate individuals have been reported to spend more time in vigorous activity than harmoniously passionate individuals [16].

Hence, our findings further corroborates the contention that mindfulness, such as passion, has the potential to be an explaining factor for well-being. Despite growing empirical evidence examining the potential benefits of mindfulness in affect and one's experience of well-being [40,60], there are few studies that have investigated the mediating role of mindfulness in well-being through passion. The present research goes further to focus on the mediating role of mindfulness in positive affect, negative affect, life satisfaction and hedonic well-being through passion. The results revealed that both types of passion (harmonious and obsessive passion) were directly and indirectly associated with well-being through mindfulness. As a result, it is evident that mindfulness was associated with profile passion. Specifically, Mills found a positive correlation between harmonious passion and mindfulness [32].

Mindfulness plays a significant role in mediating between various outcomes and passion. Likewise, the more the individual was harmoniously passionate, the more s/he allowed access to mindfulness and well-being, whereas obsessive passion limits one's mindful capacity and positive emotion [61].

Concerning obsessive passion, the results of the current study revealed a negative relationship with well-being. However, follow-up bootstrap-based data revealed both directly and indirectly established relationship between obsessive passion and well-being through mindfulness. This is in agreement with previous research demonstrating the association between obsessive passion and positive and negative affects through mindfulness [61].

Research suggests that Athletes' mindfulness capability could be associated with a wide range of outcomes. Consequently, several studies have evaluated the efficacy of the intervention of mindfulness to boost the sense of well-being [62]. In congruence with our expectations, the present results suggest the competence-promoting processes in mindfulness-based intervention, to the extent that it can foster well-being. For example, a 2018 study by Shortway, et al. used a sample of 108 student athletes who received an instructional home-directed mindfulness program comprising daily meditation sessions. Their results showed that mindfulness intervention enhanced athletes' well-being [62]. In the research literature, there are new emergent ways to cultivate well-being in athletes. In the same vein, Baltzell and Akhtar conducted a research with collegiate athletes from multiple sports who participated in MMT Straining [63]. This intervention proved the improvements in constructs related to well-being [64-68].

Limitations and additional future research

Notwithstanding this research inevitably generates valuable implications for the tennis players, some limitations need to be considered. First, the sample was comparatively limited in terms of size and case study. Our sample was limited to one hundred French tennis players leaving uncertain the extent to which the findings generalize to other athlete groups, such as athletes of different ages, who practice other activities, and athletes from different cultural backgrounds. Second, the value of Cronbach's alpha of shorter scales (life satisfaction scale) is not accurate enough to give the exact interpretation of the coefficient. Third, the particular measure of mindfulness adopted in this study allows determining the level of consciousness and attention to the present moment [69,70].

Further future research is needed to better understand the characteristics of training aimed at changing type of

engagement in the activity. Thus, our results underscore the link between the concept of passion and mindfulness in understanding well-being in sport. In terms of practice, it would be very relevant to add interventions to improve mindfulness, and therefore psychological well-being in order to obtain a complete model for predicting athletic performance. Given the relationship between passion, mindfulness and, subjective well-being, future research can be carried out mainly to expand our understanding of scales measuring different facets of mindfulness. For example, the Five Facet Mindfulness Questionnaire is one of the scales measurement on the five aspects (or facets) of mindfulness to be employed in this respect [72].

Conclusion

The results of this study expand our understanding of the likely antecedents and psychological processes that contribute to well-being. Based on the Dualist Model of Passion, a harmonious passion promotes free engagement resulting from an intrinsic choice without contingencies. With an obsessive passion, a certain inner compulsion pushes the individual to engage in the activity. The emotional experience specific to each type is also different: harmonious passion is positively linked to hedonic well-being during engagement in the activity. On the other hand, obsessive passion is negatively associated with hedonic well-being.

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