INVESTIGATING THE ‘RIGID PERSISTENCE PARADOX’ IN PROFESSIONAL RUGBY UNION FOOTBALL

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ABSTRACT
This study sought to extend the findings of Amiot, Vallerand, and Blanchard (2006), which recently provided evidence of the “rigid persistence paradox” in high-achieving sport performers. The paradox amounts to athletes adjusting more easily to the demands of highly competitive sport if they rate highly in obsessive passion, a type of passion characterized as an internal pressure that compels the individual to engage in the passionate activity. The activity controls the person, resulting in an increased risk of experiencing conflict and increased negative affect. Yet, despite this, Amiot et al.’s findings suggest that obsessively passionate athletes adjust to the most competitive environments. The present study examined the levels of harmony and obsession of passion in the high-impact collision sport of rugby union football. Participants were 78 rugby union footballers representing three playing levels of the professional game in Great Britain (International, Club, and Academy). Results indicated that performers playing at the International and Academy standards scored significantly higher in obsessive passion than Club players, as measured by the Passion Scale. However, obsessive passion was not correlated with negative emotional outcomes, as measured by the Positive and Negative Affect Schedule. These findings provide partial supportive evidence of the existence of the rigid persistence paradox. Results are discussed in terms of the acceptance of the dedication and hours of deliberate practice needed to: a) compete at International level and b) become a professional sportsperson. Implications for sports performers and coaches, and future research suggestions, are discussed.

Keywords: rigid persistence paradox, obsessive and harmonious passion, affect, rugby union football, playing standard, positive psychology

INTRODUCTION
A growing literature is emerging on the relationship between “positive psychology” (Seligman & Csikszentmihalyi, 2000) and superior sport performance (Sheard & Golby, 2006). One consequence of this positive psychology focus has been the proliferation...
of new measures based on clear definitions, strong theoretical frameworks, and rigorous methodology. Emanating from this focus is the concept of “passion,” defined by Vallerand and colleagues as representing a strong inclination toward an activity that is valued, liked, and in which significant time and energy are invested (Vallerand et al., 2003; Vallerand, Rousseau, Grouzet, Dumais, Grenier, & Blanchard, 2006; Vallerand & Miquelon, 2007).

The “passionate” activity becomes self-defining and is internalized into a central feature of one’s identity. Reflecting self-determination theory (Deci & Ryan, 2000), over time, this internalization process results in the self becoming more complex through the internalization of environmental elements. For example, athletes who have a passion for playing rugby union football (rugby) do not merely play rugby; they are rugby footballers. Thus, the passionate activity (i.e., playing rugby) becomes a constituent part of their identity (Vallerand et al., 2007).

This behavioral manifestation has been proposed to derive from a dualistic model of passion (Vallerand et al., 2003). Of the two identified types, harmonious passion refers to a motivational force that leads individuals to take part in an activity willingly (i.e., supposedly desirable). This permits the individual to participate fully in the passionate activity with an openness that is conducive to positive experiences (Brunel, Andrianarisoa, & Vallerand, 2005; Hodgins, Yacko, & Gottlieb, 2006; Mageau, Vallerand, Rousseau, Ratelle, & Provencher, 2005). Further, this participation occurs without the presence of undesirable self-activity contingencies. In this situation, because harmonious passion facilitates control over the passionate activity, the individual should experience greater positive affect after task engagement. Finally, flexible persistence should be displayed by the individual. If positive returns are expected, persistence should occur. In the face of negative conditions, persistence in the passionate activity should decrease.

Conversely, obsessive passion results in people obliged to participate in an activity they value (i.e., supposedly less desirable). Obsessive passion entails a controlled internalization of the passionate activity. This internalization arises through intrapersonal and/or interpersonal pressure because contingencies are attached to the activity (e.g., feelings of social acceptance, self-esteem) or because the excitement derived from task engagement is overpowering and difficult to regulate. Consequently, this pressure comes to control individuals, and they feel an internal compulsion to engage in the activity. It has been suggested that this leads to a more rigid and conflicted form of task engagement, interfering with the experience of positive affect (Hodgins & Knee, 2002) and leading to association with general negative affect (Vallerand et al., 2003; Vallerand et al., 2006; Vallerand et al., 2007). Persistence in this situation is likely to occur in the absence of positive emotions and at important personal costs (e.g., weakened relationships; Séguin-Lévesque, Laliberté, Pelletier, Blanchard, & Vallerand, 2003). Further, the individual is likely to ruminate about the passionate activity and experience feelings of psychological dependence if prevented from engaging in the task (Vallerand et al., 2003).

Earlier work on passion used this dualistic model to explain, in particular, individuals’ pathological gambling behavior (see Philippe & Vallerand, 2007; Ratelle, Vallerand, Mageau, Rousseau, & Provencher, 2004; Rousseau, Vallerand, Ratelle, Mageau,
& Provencher, 2002; Vallerand et al., 2003). However, more recently, passion has been conceptualized as an important source of motivational energy underlying persistent involvement that may facilitate successful sport performance (Vallerand, Mageau, Elliot, Dumais, Demers, & Rousseau, 2008). Further, psychometric support for the passion model, in particular the two-factor Passion Scale (utilized in the present study), has been replicated in sport research (Vallerand et al., 2006). Specifically, athletes’ passion for their sport is manifested through their dedication to activities that contribute to the achievement of excellence.

Using a sample comprised of basketball players and aquatic sport performers, Vallerand et al. (2008) showed harmonious passion to be a positive predictor of mastery goal pursuit. Mastery goals positively predicted deliberate practice, which, in turn, positively predicted high levels of performance. In addition to mastery goals, obsessive passion was also shown to be a positive predictor of performance-approach and performance-avoidance goals; the latter, in turn, being a direct negative predictor of sport performance. Therefore, although harmonious passion produced a solely adaptive achievement process, obsessive passion provoked a mixed achievement process constituting both adaptive and maladaptive characteristics.

Moreover, the Vallerand et al. (2008) findings showed that both types of passion are significant positive correlates of mastery goal pursuit, which, in turn, predicts deliberate practice and, subsequently, performance. Vallerand et al.’s results provide supportive evidence for the relationship between deliberate practice and attainment of high levels of performance (Ericsson, 2003). However, beyond the common link with mastery goals and deliberate practice, the pathways to high-level performance attainment are quite different for harmonious and obsessive passion, respectively (Vallerand et al. [2008]). For harmonious passion, high-level performance is attained via deliberate practice exclusively from the pursuit of an exclusive focus on trying to master the activity, leading the individual to engage in activities specifically aimed at skill improvement. In effect, deliberate practice mediates the effect of mastery goals on performance. This mediation occurs also for the pathway that originates with obsessive passion. However, in addition, the obsessive passion pathway takes in performance-avoidance goals, which are a direct negative predictor of high-level performance.

It has been suggested that, as sport performers move up toward elite levels, only those athletes with the appropriate psychological attributes make the transition upward because their adaptive personalities facilitate the adjustment (Deaner & Silva, 2002). According to the Vallerand et al. (2008) model, if both harmonious and obsessive passions contribute positively to such a transition, it is exclusively as a result of deliberate practice influenced by the adoption of mastery goals. Particularly noteworthy are the recent findings of Amiot, Vallerand, and Blanchard (2006), who showed that ice hockey players competing in highly competitive leagues and scoring highly in obsessive passion reported higher psychological adjustment than did harmonious athletes. Conversely, it was in the less competitive league environment that harmonious athletes attained higher psychological adjustment. This interaction suggests that the transition to higher-level competition is indeed facilitated by passion; specifically, via deliberate practice, successful
psychological adjustment is informed by adoption of mastery goal pursuit, but originating with characteristics of obsessive passion.

As previously stated, a high level of obsessive passion results from a controlled internalization of the passionate activity into the person’s identity, with the individual feeling compelled to engage in the task because certain contingencies attached to it become uncontrollable. The activity controls the person, which increases the risk of experiencing conflict and other negative outcomes. Yet, athletes who compete in their sport despite the aforementioned contingencies attached to participation would appear to adjust to the most competitive environments.

This paradox for obsessive passion has been termed “rigid persistence in the activity” (Vallerand et al., 2003; p. 763). Given the total commitment to the pursuit of excellence (Orlick & Partington, 1988), the preoccupation and determination (Williams & Krane, 2001), and the periods of prolonged and deliberate practice (Ericsson, 2003) required to achieve success in the most competitive sporting arenas, high levels of obsessive passion may reflect the necessarily disproportionate space afforded the activity in athletes’ lives, if they are to compete successfully at the highest levels.

In addition to the aforementioned study involving basketball and aquatic sports (Vallerand et al., 2008), high-impact collision sports, like ice hockey (Amiot et al., 2006) and North American football (Vallerand et al., 2003), have also provided the environment for previous research in passion. However, rugby remains a novel domain for such an investigation. Rugby has a high profile in the sporting world and is played in many countries in the northern and southern hemispheres. Although studies have examined the anthropometric (e.g., Nicholas, 1997), biomechanical (e.g., Quarrie & Wilson, 2000), and technical (e.g., Grant et al., 2003) demands of rugby, relatively little attention has been devoted to the psychological characteristics of the game. Research that exists has tended to concentrate on coping strategies (e.g., Corban, Snape, & Taylor, 2003; Dent, Masters, & Ntoumanis, 2003). This lacuna is surprising given that rugby is a popular international sport and that players’ personality profiles have been compiled in North American football (aggressiveness, dominance, leadership, tough-mindedness, work orientation; Garland & Barry, 1990; Schaubhut, Donnay, & Thompson, 2006; Secunda, Blau, McGuire, & Burroughs, 1986) and professional rugby league (hardiness, mental toughness; Golby & Sheard, 2004; Golby, Sheard, & Lavallee, 2003), which are other similarly high-impact collision football codes.

The game of professional rugby union represents an interesting challenge from which to examine some of the psychological attributes that are felt to underpin and/or predict sporting success. Since the emergence of rugby as a professional sport in the mid-1990s, the abilities of players performing at all representative levels have come under increasingly analytic scrutiny, with detailed monitoring of individual key performance indicators (Bracewell, 2003). Whether they are performers who are young and trying to secure an initial playing contract, athletes making a living from playing the game at club representative level, or players who have achieved the highest international representative honors, to succeed in the fiercely competitive modern professional game, individuals must be multi-skilled; that is, players must be equally proficient at attack, defense, and
any other positional responsibilities (e.g., kicking, lineout performance, rucking/mauling, scrumming), as required.

Despite several studies examining the heavy physiological requirements of rugby (e.g., Deutsch, Kearney, & Rehrer, 2002; Deutsch, Maw, Jenkins, & Reaburn, 1998; Reilly, 1997) and factors contributing to the frequency and severity of injuries in it (e.g., Howe, 2001; Lee & Garraway, 2000; Lee, Myers, & Garraway, 1997), little is known about those who play the game professionally in terms of their psychological attributes. Thus, the present research is timely, given that a performer’s psychological response to competition is thought to depend largely on the characteristics and requirements of the sport (Krane & Williams, 1987).

By investigating the relationship between playing standard in rugby union and passion, this research intended to extend the findings of Amiot et al. (2006) by shedding further light on the “rigid persistence paradox” (Vallerand et al., 2003). Specifically, the principal aim of this study was to investigate whether harmonious and obsessive passion would distinguish between professional rugby union players operating at different standards. Further, the present study sought to show further evidence of the construct validity of the passion construct by comparing the intra/interrelationships between harmonious and obsessive passion and between positive and negative affect with findings from previous research (see Brunel et al., 2005; Hodgins et al., 2006; Mageau et al., 2005).

METHOD

PARTICIPANTS

The participants in this study were 78 male rugby union players from the squads of three professional British rugby union teams (competing in either the English Premiership or Celtic League) who gave their written informed consent and signed an institutionally approved statement to that effect. They ranged in age from 17 to 33 years (M = 23.7 years, SD = 4.8 years). The players were drawn from three playing standards in the professional game: International (standard rank number 1; n = 33), Club (standard rank number 2; n = 25), and Academy (young apprentice players typically aged 17-19 years; standard rank number 3; n = 20). Participants were allocated to groups according to the highest competitive playing standard they had attained at the time of the study, thus representing a convenience sample (Cramer & Howitt, 2004).

MEASURES

Passion Scale. The Passion Scale consists of two seven-item subscales that assess harmonious and obsessive passion. Participants were asked to complete the inventory by referring to rugby. Item examples include, for harmonious passion, “Playing rugby is in harmony with the other activities in my life,” and for obsessive passion, “I have difficulties controlling my urge to play rugby.” Items were rated on a seven-point scale ranging from 1 (do not agree at all) to 7 (very strongly agree). Previous research has reported Cronbach alphas ranging from .73 to .79 and from .84 to .91 for harmonious passion and
obsessive passion, respectively (see Ratelle et al., 2004; Vallerand et al., 2003, 2006, 2007, 2008). In the present study, Cronbach alphas of .75 and .70 were obtained for the harmonious passion and obsessive passion subscales, respectively.

**Positive and negative affect.** Participants indicated the extent to which they experienced 20 emotions from the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) in their life in general over the past week. Ten positive (e.g., interested, proud, alert) and ten negative (e.g., distressed, irritable, upset) items were assessed on a five-point scale ranging from 1 (very slightly or not at all) to 5 (extremely). Studies have shown the PANAS to have acceptable psychometric properties (see Miller, Bartholomew, & Springer, 2005; Watson et al., 1988). In the present study, Cronbach alphas of .81 and .83 were obtained for positive affect and negative affect, respectively.

**Procedure**

Permission from the clubs, cooperation of coaches, and consent of players were obtained prior to the administration of the inventories. The Passion Scale and PANAS were completed in respective 2006 pre-season training camps. All players agreed to participate and were currently operating at the highest competitive standard they had achieved to date; that is, players who had represented their countries were still performing at International level. Instructions were given verbally, and participants’ confidentiality was guaranteed. No time limit was imposed for the completion of the inventory, but average completion time was approximately ten minutes.

**Data analyses**

Data were analysed using multivariate analysis of variance (MANOVA), with follow-up univariate analyses (ANOVA) to clarify the source of significant differences. To more specifically establish where differences existed, post hoc comparisons were made using Fisher’s LSD test. It is noteworthy that when using SPSS for Windows, post hoc tests have built in type I error protection (Howell, 2002) and, therefore, have been corrected to account for multiple testing (Dancey & Reidy, 2004). For the MANOVA, highest playing standard achieved to date (i.e., International, Club, or Academy) served as the independent variable, while harmonious passion, obsessive passion, positive affect, and negative affect served as the dependent variables. The partial eta-squared ($\eta^2$) statistic estimated the effect size associated with each statistical difference (Heiman, 2002). Partial correlations were used to ascertain the extent of the relationship between the Passion Scale and PANAS subscales while controlling for the effect of playing standard. Finally, hierarchical regression analyses were used to test the predictability of the rigid persistence paradox. Alpha was set at .05. All statistical analyses were conducted using SPSS for Windows v.13.0 (SPSS Inc., Chicago, IL).
RESULTS

GROUP DIFFERENCES

Preliminary analyses indicated univariate normality for the dependent variables. A one-way MANOVA indicated a significant multivariate effect for highest playing standard achieved to date, Wilks’ $\lambda = 0.75$, $F(8, 144) = 2.79$, $p = .007$, partial $\eta^2 = .13$. Specifically, there was a significant group difference in obsessive passion, $F(2, 75) = 5.99$, $p = .004$, partial $\eta^2 = .14$, where Club players scored significantly lower than both Academy ($p = .001$) and International ($p = .034$) players. Means and standard deviations of all variables are presented in Table 1.

CORRELATIONS

Partial correlations were computed on the data in order to test the relationship between the Passion Scale and PANAS subscales while controlling for playing standard. As can be observed, harmonious passion was significantly ($p < .001$) positively correlated with positive affect and significantly ($p = .033$) negatively related to negative affect. Obsessive passion was significantly ($p = .004$) positively related to positive affect but was not a significant correlate of negative affect.

INTERACTION BETWEEN PLAYING STANDARD AND PASSION TYPE

Hierarchical regression analyses were performed on the data of the whole sample ($N = 78$) in order to test whether higher positive affect was experienced among players who were harmoniously passionate and who play at a lower competitive standard and among players who were obsessively passionate and who play at a higher competitive standard. In two different analyses, which alternated positive affect and negative affect as criterion variables, playing standard was entered (block 1), followed by obsessive passion (block 2), followed by harmonious passion (block 3). Results showed that positive affect was significantly predicted by obsessive passion ($p = .031$) and harmonious passion ($p = .001$), and negative affect was significantly predicted by harmonious passion ($p = .022$). These predictors accounted for 18% and 4% of the variance for the respective affective types (Table 3). No significant interaction was observed between competitive playing standard and passion type.

DISCUSSION

The aims of this study were (a) to provide empirical support for obsessive passion’s “rigid persistence paradox” by investigating whether harmonious and obsessive passion would distinguish between professional rugby footballers operating at different playing standards and (b) to show further evidence of the construct validity of the Passion Scale by examining the relationships between passion types and affectivity. Results showed a difference relative to the degree to which the attribute of obsessive passion was present. The findings also suggested significantly positive relations between harmonious
Table 1. Means and standard deviations of Passion Scale and PANAS subscales and highest playing standard achieved to date

<table>
<thead>
<tr>
<th>Factors</th>
<th>Psychological measures</th>
<th>Harmonious passion</th>
<th>Obsessive passion</th>
<th>Positive affect</th>
<th>Negative affect</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
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<tr>
<td>Highest playing standard</td>
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<td></td>
</tr>
<tr>
<td>International (n = 33)</td>
<td></td>
<td>31.67</td>
<td>4.88</td>
<td>20.36</td>
<td>5.88</td>
</tr>
<tr>
<td>Club (n = 25)</td>
<td></td>
<td>32.20</td>
<td>6.33</td>
<td>16.92</td>
<td>6.02</td>
</tr>
<tr>
<td>Academy (n = 20)</td>
<td></td>
<td>32.00</td>
<td>4.43</td>
<td>23.10</td>
<td>6.23</td>
</tr>
</tbody>
</table>

Table 2. Partial intercorrelations of the Passion Scale and PANAS subscales

<table>
<thead>
<tr>
<th></th>
<th>Harmonious passion</th>
<th>Obsessive passion</th>
<th>Positive affect</th>
<th>Negative affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmonious passion</td>
<td>.23*</td>
<td>.40***</td>
<td>-.24*</td>
<td></td>
</tr>
<tr>
<td>Obsessive passion</td>
<td>.31**</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive affect</td>
<td></td>
<td>-.27*</td>
<td></td>
<td></td>
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<tr>
<td>Negative affect</td>
<td></td>
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</tbody>
</table>


Table 3. Summary of hierarchical regression analysis for variables predicting the “rigid persistence paradox” (N = 78)

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Positive affect</th>
<th>Negative affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predictor</td>
<td>St. β</td>
<td>t</td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing standard</td>
<td>.06</td>
<td>0.51</td>
</tr>
<tr>
<td>F change (1, 76)</td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td>Adj. R² = .01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing standard</td>
<td>.02</td>
<td>0.18</td>
</tr>
<tr>
<td>Obsessive passion</td>
<td>.32</td>
<td>2.87**</td>
</tr>
<tr>
<td>F change (1, 75)</td>
<td>8.21**</td>
<td></td>
</tr>
<tr>
<td>Adj. R² = .08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing standard</td>
<td>.02</td>
<td>0.19</td>
</tr>
<tr>
<td>Obsessive passion</td>
<td>.23</td>
<td>2.20*</td>
</tr>
<tr>
<td>Harmonious passion</td>
<td>.35</td>
<td>3.30***</td>
</tr>
<tr>
<td>F change (1, 74)</td>
<td>10.92***</td>
<td></td>
</tr>
<tr>
<td>Adj. R² = .19</td>
<td></td>
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</table>

* p < .05. ** p < .01. *** p < .001.
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passion and positive and negative affect, respectively. Further, positive affect was also a significant correlate of obsessive passion.

Partial evidence in support of the “rigid persistence paradox,” shown in the research of Amiot et al. (2006), was demonstrated by the fact that International and Academy rugby players were characterized by significantly higher levels of obsessive passion compared with their Club counterparts. This finding may be interpreted as the manifestation of behaviors necessary to a) represent one’s country, which is the pinnacle of a professional sport performer’s career (relative to International players) and b) break through into representative grade rugby and earn a potentially lucrative contract (relative to Academy players). Each of these categories of player is vulnerable to higher levels of obsessive passion because of the pressure-inducing contingencies attached to the activity (Vallerand et al., 2003). An example is the internal compulsion to engage in the activity because of the fear that not doing so may result in being released by a club without a professional contract, being replaced by another international-level player, and/or being approved socially and the importance attached to this perception (see Allen, 2003; Cresswell & Eklund, 2006; Raedeke, 1997).

Not all Academy athletes become Club players, and not all Club players succeed in making the International grade. The requisite commitment (Orlick & Partington, 1988), preoccupation with the activity (Williams & Krane, 2001), and periods of prolonged and deliberate practice (Ericsson, 2003) would suggest a personality profile that includes a high level of passion. However, the resultant obsessive-type passion may be as a consequence of the interaction effect of mediating variables (e.g., extrinsic motivation; Ames, 1992; Dweck, 1986). Previous research (see Vallerand et al., 2007) has shown that, relative to obsessive passion, the adaptive goal of mastering the activity may coexist with the maladaptive goal of trying to avoid failure and beat others (Elliot, 1997). Future research may wish to extend this area of investigation.

Highly competitive sporting environments may promote a rigid and inflexible type of persistence and involvement, which requires individuals to be involved frequently in the activity at the expense of other life domains (see Séguin-Lévesque et al., 2003). However, if the internal compulsion associated with obsessive passion is directed toward mastery goal pursuit, deliberate practice should ensue, resulting in improved sport performance. The expected beneficial effects of which should lead to better psychological adjustment (see Amiot et al., 2006).

However, hierarchical regression analyses revealed no significant interaction between playing standard and passion type. Positive affect was significantly predicted by both passion types (explaining 18% of the variance) but not playing standard. Negative affect was significantly predicted solely by harmonious passion (explaining 4% of the variance). This suggests that higher positive affect was not experienced among players who were harmoniously passionate and playing at the lower standards or among players who were obsessively passionate and compete at the higher standards. Thus, only partial evidence of the “rigid persistence paradox” was shown by the results of the present study.
The finding that obsessive passion is related to negative emotional experience (see Vallerand, 2005; Vallerand et al., 2003; Vallerand et al., 2006) was not replicated in the present study. This may be explained by the timing of the study. Data were collected pre-season when players were eager to commence the season, having successfully completed physically rigorous pre-season training camps. The pre-season training camp environment is likely to reinforce mastery goals, where deliberate practice focuses on activities specifically aimed at skill improvement (Bompa, 1999). Professional players should accept that skill improvement is requisite to beginning a season successfully. For example, collection of data at the mid-point of the competitive season may be a particularly revealing area of inquiry. Players are more likely to have suffered injuries during competition than during training or practice (Van Mechelen, Twisk, Molendijk, Blom, Snel, & Kemper, 1996), and the obsessively passionate injured athlete is likely to experience negative affect when prevented from engaging in the sport’s activities (see Quinn & Fallon, 1999; Tracey, 2003). Further, given that obsessive passion has also predicted highly persistent behavior that is ill-advised for the individual, obsessively passionate players may be at greater risk of training while injured, leading to chronic injuries (Rip, Fortin, & Vallerand, 2006).

A further explanation of the absence of a significant relationship between obsessive passion and negative affect, as intimated earlier, may be because the passionate activity (rugby) is the career of the present study’s participants. Given the exceptional competition, training, and lifestyle demands made on competitive athletes, the passionate activity occupies a substantial space in their lives. However, a cognitive interpretation that such dedication and commitment are necessary to succeed may mitigate the effects of any negative emotional experience.

Further evidence of the construct validity of the Passion Scale was demonstrated with the correlations among the passion and affect subscales. Generally, the relationships were consistent with those found by previous research (see Brunel et al., 2005; Hodgins et al., 2006; Mageau et al., 2005). In particular, the present study showed harmonious passion and positive affect to be significant correlates. This finding is in keeping with previous research (see Vallerand, 2005; Vallerand et al., 2003; Vallerand et al., 2006; Vallerand et al., 2007). Relative to participants in the present study, this relationship reflects the absence of conflict between playing rugby and other activities. Successful adaptation to situations (e.g., competition, training, lifestyle) would appear to lead to positive outcomes.

Particularly noteworthy was the significant relationship identified between positive affect and obsessive passion. One potential explanation might be that participants in the present study derive substantial enjoyment from what they do and this results in positive emotional experiences. They spend much time engaged in rugby activities and gain a strong sense of identity by playing rugby, but, critically, without this resulting in negative emotional outcomes. Adoption of mastery and performance-approach goal pursuit may be particularly influential variables that mediate the affective response in the presence of obsessive passion (Elliot & Moller, 2003; Vallerand et al., 2007). It can be posited that acceptance of the dedication, commitment, and long hours of deliberate sport-specific
practice necessary to achieve the goals of playing professional rugby, maintenance of a playing career, and, ultimately, aspiration to International representative competition, may act as a filtering system.

The relationship between the two passion types was statistically significant. However, the correlation coefficient ($r = .23$) was not of the magnitude exhibited in previous studies (see $r = .46$, Vallerand et al., 2003, Study 1; $r = .48$, Vallerand et al., 2006, Study 1; $r = .35$, Vallerand et al., 2006, Study 2; $r = .69$, Vallerand et al., 2006, Study 3; $r = .41$, Vallerand et al., 2007, Study 1; $r = .36$, Vallerand et al., 2007, Study 2; $r = .43$, Vallerand et al., 2008, Study 1; $r = .43$, Vallerand et al., 2008, Study 2; $r = .68$). Moreover, studies have consistently supported the psychometric properties of the Passion Scale (see Vallerand et al., 2003; Vallerand et al., 2006). Finally, because both types of passion entail a love for the same activity, they are expected to be moderately and positively correlated (Vallerand et al., 2007).

In summary, the findings of the present study provide partial supportive evidence of the rigid persistence paradox in the sport domain (see Amiot et al., 2006). That is, performers operating at the highest and lower echelons of professional rugby (i.e., International, Academy) were characterized by significantly higher levels of obsessive passion than those players competing at Club level. However, using positive and negative affect as criterion variables, no interaction between playing standard and passion type was observed. As previously posited, the highly competitive and stressful environments in which these individuals engage with the activity of rugby may elicit coexisting adaptive [e.g., mastery goal pursuit (task)] and maladaptive [e.g., avoid failure and beat others goal pursuit (ego)] behavioral manifestations of obsessive passion. Future research may wish to examine if, in highly competitive achievement contexts, this facilitates psychological adjustment in the domain of professional rugby (see Amiot et al., 2006). This would have implications for sport performers and, in particular, coaches, who may tailor training programs with the confidence of knowing that prolonged engagement in the activity may not necessarily result in a negative emotional experience. Finally, consideration should be given to the inclusion of passion as an outcome variable in psychological skills training programs and also to the possibility of heredity, particularly as recent research has found other positive psychological constructs responsive to intervention (see Sheard & Golby, 2006) and also shown evidence of an association with genotype (see Golby & Sheard, 2006). Such studies would enable researchers to examine the potentially moderating effect of the interaction between genotype and psychological attributes on, for example, athletes’ interpretations of a highly competitive environment and the subsequent impact on their psychological adjustment and sporting performance.

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