



DOES PASSION TO SPORT HAVE AN INFLUENCE ON THE DISPOSTIONAL FLOW IN ELITE ATHLETES?

Selen Kelecek¹ⁱ,

F. Hülya Aşçi²

¹Başkent University, Faculty of Health Sciences,
Department of Sport Sciences, Turkey

²Marmara University, Faculty of Sport Sciences, Turkey

Abstract:

The purpose of this study was to investigate the role of passion in determining dispositional flow in elite athletes and also to examine sex differences in passion and dispositional flow. One hundred and eighty nine female ($M_{age}= 25.26 \pm 5.16$) and 201 male ($M_{age}= 24.98 \pm 4.80$), a total of 390 ($M_{age}=25.11 \pm 4.97$) elite athletes voluntarily participated in this study. "Passion Scale (Vallerand, Mageau, Ratelle, Leonard, Blanchard, Koestner, Gagne & Marsolis, 2003)" and "Dispositional Flow State Scale-2 (Jackson & Eklund, 2004)" were administered to athletes. Independent sample t-test analysis revealed no significant sex difference in passion and dispositional flow. Stepwise Multiple Regression Analysis indicated that both harmonious passion and obsessive passion are significant predictors of ($R=.21$; $R^2=.04$; $F=6.89$; $p<0.01$) dispositional flow in elite athletes. It can be concluded that types of passion toward sports differently contribute to athletes dispositional flow in elite sport environment.

Keywords: passion, flow, athlete

Résumé

Le but de cette étude était d'investiguer le rôle de la passion dans la tendance structurale chez les athlètes élités et aussi d'examiner les différences entre les sexes dans la passion et la tendance structurale. Cent quatre-vingt-neuf femmes ($M_{age} = 25,26 \pm 5,16$) et 201 hommes ($M_{age} = 24,98 \pm 4,80$), dont un total de 390 athlètes élités ($M_{age} = 25,11 \pm 4,97$) ont volontairement participé à cette étude. «Échelle de la Passion (Vallerand, Mageau, Ratelle, Léonard, Blanchard, Koestner, Gagne et Marsolis, 2003)» et «Échelle d'état de tendance structurale -2 (Jackson et Eklund, 2004)» ont été administrés aux athlètes. L'analyse indépendante du test-t de l'échantillon n'a révélé aucune différence significative entre les sexes dans la passion et la tendance structurale. L'analyse par régression multiple par étapes a indiqué que la passion harmonieuse et la passion

ⁱ Correspondence: email selenkelecek23@gmail.com

obsessionnelle sont des prédicteurs significatifs de la tendance structurale ($R = 0,21$, $R^2 = 0,04$, $F = 6,89$, $p < 0,01$) chez les athlètes élités. On peut conclure que les types de passion envers le sport contribuent différemment à la tendance structurale des athlètes dans un environnement de sport élité.

Mots-clés: passion, tendance, athlète

1. Introduction

Recently the psychological construct of flow has received great research interest in exercise and sport psychology area. The flow is originally introduced by Csikszentmihalyi (1975) and it is defined as an enjoyable psychological state that people feel when they are totally involved in the activity they are doing. The flow is a distinctive psychological state which occurs when individuals become engaged in an activity that is challenging, controllable and intrinsically motivating (Csikszentmihalyi, 1990). In flow experiences, the performer feels strong and positive and he is not worried about himself or of failure (Jackson & Eklund, 2004).

The flow is conceptualized as dispositional flow which describes as a general tendency to experience flow characteristics within a particular setting (Jackson & Eklund, 2004). The general tendency to experience flow can be defined by a set of dimensions or factors, including a merging of action and awareness, clear goals, unambiguous feedback, focused attention, loss of self-consciousness, altered sense of time, a sense of control, and perceived challenge-skill balance (Csikszentmihalyi, 1990). A combination of all these factors may result in the global flow experiences (Jackson & Marsh, 1996; Vlachopoulos, Karageorghis & Terry, 2000).

The development of a sport specific measure of flow (Jackson & Marsh, 1996) provides opportunities to study a range of issues related to flow which will help us to understand more clearly what flow is, how it is generated, and how it impacts on a range of variables that are important in sports and vice versa. Both external (e.g., contextual and social) and internal (e.g., ability to pay attention, fear of ridicule, and selfishness) factors such as perceived motivational climate (Cervelló, Santos-Rosa, Garcia Calvo, Gonzales-Cutre, Sicilia, Moreno & Fernández-Balboa, 2009); goal orientations (Jackson & Roberts, 1992); positive affect (Rogatko, 2009), mindfulness (Kee & Wang, 2008), perception of challenge (Martin & Cutler, 2002), self-concept and psychological skills (Jackson, Thomas, Marsh & Smethurst, 2001) affect flow experiences.

Passion is another important and recent psychological construct in positive psychology which may facilitate or disrupt the flow in sport settings (Vallerand et al., 2003). The passion is defined as *“a strong inclination toward an activity that people like, they find important and in which they invest time and energy”* (Vallerand et al., 2003; pp.757). Vallerand and his colleagues (2003) emphasized two types of passion in a dualistic model, -obsessive and harmonious- that can be distinguished in terms of how the

passionate activity is internalized into one's core self or identity (Vallerand et al., 2003). Harmonious passion (HP) results from an autonomous internalization of the activity into a person's identity, produces a motivational force to engage in the activity willingly and engenders a sense of volition and personal endorsement about pursuing the activity (Vallerand et al., 2003). On the other hand, obsessive passion (OP) refers to an uncontrollable urge to engage in an activity that one loves and results from a controlled internalization of the activity into one's identity (Vallerand et al., 2003).

These two types of passion lead to different affective outcomes in activity engagement. For example, obsessive passion was found to be positively related to negative emotions (e.g. Vallerand, Rousseau, Grouzet, Dumanis, Grenier & Blanchard, 2006), anxiety (Rousseau & Vallerand, 2008), addiction (Wang & Yang, 2008) and perceived stress (Philippe, Vallerand, Andrianarisoa & Brunel, 2009) but, it is negatively related to positive emotions (Vallerand et al., 2006). Conversely, harmonious passion was negatively related to burnout (Carbonneau, Vallerand, Fernet & Guay, 2008), negative emotions (Vallerand et al., 2006) and it is positively related to life satisfaction, psychological adjustment (Philippe, Vallerand & Lavigne, 2009), and positive emotions (Mageau & Vallerand, 2007).

In the case of the flow, it is possible to say that there are a few attempts to examine the role of passion in the flow experiences in sport environment. For example, Vallerand et al. (2003, study 1), examined the relationship between passion and flow in college students and pointed out that harmonious passion facilitates the flow but the obsessive passion does not. This result has been replicated in different fields such as the refereeing (Philippe et al., 2009, Study 1), work domain (Lavigne et al., 2012) and internet usage (Wang, Khoo, Liu & Divaharan, 2008; Wang, Liu, Chyea & Chatzisarantisa, 2011). Addition to results about these related structures, most researchers did not find sex differences in flow (Murcia, Gimeno & Coll, 2008; Stavrou, Jackson, Zervas & Karteroliotis, 2007) and in passion (Mageau et al., 2009; Philippe et al., 2009).

Thus, the present study may have contributed to the existing flow literature by examining the possible influence of passion on the flow in a sport environment. The main purpose of this study was to investigate the role of passion in determining dispositional flow in elite athletes. The study was also aimed to investigate sex differences in passion and flow state. Based on the Dualistic Model of Passion, we expected that harmonious passion would be positively but obsessive passion would be negatively related with dispositional flow. It is also hypothesized that there would be no sex differences in athletes' passion and dispositional flow experiences.

2. Methods

2.1 Participants

The participants were 390 athletes (201 males and 189 females) from different sports including soccer (n=88), basketball (n=58), volleyball (n=113), table tennis (n=26),

handball (n=53) and wrestling (n=25). Participants ranged in age from 16 to 39 years with a mean age of 25.11 years (SD=4.97 years). Their sport experiences were 127.46 ± 53.84 months.

2.2 Measurements

2.2.1 Passion Scale

This scale (Vallerand et al., 2003) was used to assess passion of athletes towards sport. The passion scale has 16 items and it includes two subscales of six items each (the obsessive subscale and the harmonious subscale, and 4 item for the passion criteria). Each item is rated on a 7-point Likert scale. The Passion Scale has shown high reliability and constructs validity (Rousseau, Vallerand, Ratelle, Mageau & Provencher, 2002; Vallerand et al. 2003, 2006). The results of Principal Component Factor Analysis of the Turkish version of the scale showed that two factors explain 52.39% variance of total scale (Kelecek & Aşçı, 2013). In this study, internal consistency was 0.76 for harmonious passion; 0.54 for obsessive passion subscales and total internal consistency coefficients of "Passion Scale" were found 0.83.

2.2.2 Dispositional Flow State Scale - 2

The dispositional flow state scale (Jackson & Eklund, 2004) was used to assess flow as experienced by athletes. The scale has 36 items and 9 subscales (challenge-skill balance, merging of action and awareness, clear goals, unambiguous feedback, concentration on the task at hand, sense of control, loss of self-consciousness, transformation of time, autotelic experience). Each item is rated 5-point Likert scale. In this study, global flow score was used. Confirmatory factor analysis revealed acceptable fit index values of scale which confirming factor structures of Turkish version (Aşçı, Çağlar, Eklund, Altıntaş & Jackson, 2007). Internal consistency coefficients of DFS-2 were found 0.85 for this study.

2.2.3 Procedure and Data Analysis

Scales were administered to athletes in group settings. The verbal and visual information were provided about how to respond to items in each questionnaire. SPSS 17.0 was used to analyze the data. Descriptive statistics, Pearson Product Moment Correlation Analysis, Stepwise Multiple Regression Analysis and independent sample t-test were used in this study. Independent sample t-test was used to test sex differences in flow and passion. Pearson Product Moment Correlation Analysis was used to investigate if there was a relationship between passion and flow states of elite athletes and Stepwise Multiple Regression Analysis was used to determine whether the passion might predict the dispositional flow in elite athletes.

Data was screened to ensure that assumptions of normality, linearity, multi-collinearity, and homogeneity of variance–covariance matrices were met (Tabachnick & Fidell, 2001). The histogram and PP plot of residuals were also examined. The data showed normal distribution and variances were equal. To control for the possibility of

collinearity, we calculated Tolerance (TOL) and Variance Inflation Factor (VIF) for all factors. Values below .10 for tolerance and above 10 for VIF indicate collinearity between the independent variables (Dormann, Elith, Bacher, Buchmann, Carl, Carré, García Marquéz, Gruber, Lafourcade, Leitão, Münkemüller, McClean, Osborne, Reineking, Schröder, Skidmore, Zurell & Lautenbach, 2013). The ranges for TOL and VIF in all independent variables in the present study were 0.65 and 1.54, respectively, indicating no collinearity.

3. Results

3.1 Sex Differences in Passion and Flow

Independent sample t –test analysis indicated no significant sex differences in passion and dispositional flow (Table 1). Cohen’s effect sizes (d) for variables are 0.08 for passion (both harmonious and obsessive passion) and 0.22 for dispositional flow. In line with Cohen (1992), these numbers show a small effect size.

Table 1: Sex Differences in Passion and Flow

	Female (n=189)		Male (n=201)		t	p	d
	M	Sd	M	Sd			
Passion							
Harmonious Passion	5.75	0.90	5.82	0.91	-.84	0.40	0.078
Obsessive Passion	4.44	1.06	4.52	1.00	-.73	0.47	0.078
Flow State							
Total Flow Experience	3.99	0.36	3.91	0.36	1.86	0.06	0.222

3.2 Correlations between Passion & Flow

Pearson Product Moment Correlation Analysis (Table 2) indicated significant relationship between harmonious passion and dispositional flow in female athletes ($r = .23$; $p < 0.01$). Cohen’s effect sizes (d) are 0.59 for female participants’ harmonious passion, 0.24 for male participants’ harmonious passion and 0.1 for both male and female participants’ obsessive passion. According to calculated numbers, the effect size is about medium level in female participants’ harmonious passion. The other correlations have small effect sizes.

Table 2: Correlation between Passion and Flow in Athletes

	Passion			
	Harmonious Passion		Obsessive Passion	
	Female (n=189)	Male (n=201)	Female (n=189)	Male (n=201)
	r	r	r	r
Total Flow Experience	0.23**	0.12	0.05	-0.05
Cohen’s d (effect size)	0.59	0.24	0.1	0.1

** $p < 0.01$

3.3 Role of Passion in Predicting Dispositional Flow

Stepwise Multiple Regression Analysis (Table 3) was used to determine the role of athletes' level of passion in determining dispositional flow. Results showed that both harmonious passion and obsessive passion ($R=.21$; $R^2=.04$; $F=6.89$; $p<0.01$) were significant predictors of flow experiences (Table 3). The relationship between harmonious passion and dispositional flow ($\beta=0.25$; $p<0.01$) was positive, but the relationship between obsessive passion and dispositional flow ($\beta=-0.17$; $p<0.01$) was negative. There were small effect sizes of regression analysis. Calculated numbers were 0.03 for model 1 and 0.04 for model 2. In the first step, harmonious passion entered the model (model 1) and explained only 2% of the variance in dispositional flow. In the second step, obsessive passion entered the model and explained an additional 2% of the variance. These R^2 values are very low.

Table 3: Role of Passion in Determining Global Flow Experience

	Harmonious Passion	Obsessive Passion
	β	β
Global Flow Experience	0.25**	-0.17**
Model 1:		
R=0.16; $R^2=0.03$; Adjusted $R^2=0.02$; $F_{(1,311)}=7.82$; $p<0.01$; Cohen's $f^2=0.03$		
Model 2:		
R=0.21; $R^2=0.04$; Adjusted $R^2=0.04$; $F_{(2,310)}=6.89$; $p<0.01$; Cohen's $f^2=0.04$		

4. Discussion

The purpose of this study was to investigate the role of passion in determining dispositional flow experiences in elite athletes and also to examine sex differences in flow and passion.

Consistent with the hypothesis of the study, two types of passion were differently related with the dispositional flow of elite athletes. Although both harmonious and obsessive passion was significant predictor of dispositional flow in elite athletes, they only explained minor variance of it. As expected harmonious passion was positively related to dispositional flow but obsessive, passion was negatively correlated with it.

In general, results indicated that athletes' passion toward sport is an possible antecedent of the general tendency to experience optimal flow. However, type of passion is important to understand whether or not passion facilitates or disrupt the flow. For example, findings demonstrated that if athletes are harmoniously passionate toward their sport, they may experience flow more frequently and their passion increase the possibility to experience flow. In other words, the more athletes getting harmoniously passionate about their sport; they feel more control of their movements; feel more immersed in the activity. Also, in this case, they are aware of their skills and goals more clearly and they can concentrate on the game and try to overcome the

challenges with no perception of time. These results were in line with previous studies (Curran, Hill, Appleton, Vallerand & Standage, 2015; Forest, Mageau, Sarrazin & Morin, 2011; Lavigne, et al., 2012; Mageau et al., 2005; Vallerand, 2010; Vallerand & Houliort, 2003; Wang et al., 2008).

On the other hand, findings revealed that obsessive passion was negatively related to dispositional flow. It means that as athletes get more and more passionate, they value the activity too much and so their performance gets worse. If athletes think the activity (soccer, basketball, volleyball...etc) all of the time; athletes' goals, feedbacks and sensations will become blurred or in explicit and the control of the activity will be lost. In other words, athletes who are taken with harmonious passion, experience flow with ease. The present research showed that athletes' obsessive passion constrains the flow experience. It can be said that harmoniously passionate athletes experience more flow, they know the requirement of the task, skills, challenges and goals, lose the time perception and get immersed in the activity but the more athletes getting obsessive about their sports, the less they experience flow. This result was noting line with the existing literature. Previous studies (Wang et al., 2008; 2011; Philippe et al, 2009) showed that obsessive passion was not related with flow experience. The differences between the findings of present study and previous studies could be attributed to differences in samples. In the previous studies, students (Wang et al., 2008; 2011) and referees (Philippe et al, 2009) were the major focus of the researchers but this study focused on elite athletes.

The second purpose of this study was to investigate sex differences in passion and flow. Results showed that there were no sex differences in dispositional flow and passion. In line with this result, Mageau, Vallerand, Charest, Salvy, Lacaille, Boufford and Koestner's (2009) study reported no differences in passion between female and male adolescents. Contrary to this finding, Philippe and his colleagues (2009) concluded that males scored higher on obsessive passion than females but females scored higher on harmonious passion than males. Furthermore, the present findings on flow experiences were in line with the previous studies of Russel (2001), Murcia, Gimeno and Coll (2008), Kee and Wang (2008) and Dammyr (2011) which reported no significant sex differences in flow experiences of athletes.

In conclusion, harmoniously passionate elite athletes experience more flow in sport situations and athletes may experience positive or negative affect depending on the type of passion they have. These findings should be interpreted by considering the limitations of the study. Firstly, this is a cross-sectional study, which means that no conclusion about cause-effect can be drawn. Secondly, the sample of this study consisted of athletes, aged between 16 and 39, from only six sport branches (soccer, basketball, volleyball, table tennis, handball and wrestling). That's why the findings could not be generalized to other age and sports groups. Thirdly, year of sports experiences of athletes are not considered in this study sport.

By considering the limitations of this study, future studies could investigate the role of passion in determining flow experiences in different age groups, sport

experiences, sports (including tennis, football, swimming, gymnastics...etc), different competitive and skill level (experienced, novice...) and different settings (exercisers, athletes, coaches, fitness leaders...). In addition to this, the low variance maybe caused by comparably small sample size of the current study, future studies could include larger sample to increase external validity of the study. Furthermore, in future studies the relationship of personality, anxiety, motivation and perceived success with flow and passion could be investigated. These types of future studies could tell us how individual differences affect passion and flow experiences.

References

1. Amiot, C. E., Vallerand, R. J., & Blanchard, C. M. (2006). Passion and psychological adjustment: a test of the person-environment fit hypothesis. *Society for Personality and Social Psychology, 32*(2), 220-229.
2. Aşçı, F. H., Çağlar, E., Eklund, R. C., Altıntaş, A., & Jackson, S. (2007). The adaptation study of dispositional flow scale-2 and flow state scale-2. *Hacettepe Journal of Sport Sciences, 18*(4), 182-196.
3. Carbonneau, N., Vallerand, R. J., Fernet, C., & Guay, F. (2007). The role of passion for teaching in intrapersonal and interpersonal outcomes. *Journal of Educational Psychology, 100*(4), 977-987.
4. Cervelló, E., Santos-Rosa, F. J., García Calvo, T., Jiménez, R., & Iglesias, D. (2007). Young tennis players' competitive task involvement and performance: the role of goal orientations, contextual motivational climate, and coach-initiated motivational climate. *Journal of Applied Sport Psychology, 19*, 304-321.
5. Cohen, J. (1992). A powerprimer. *Psychological Bulletin, 112*(1), 155-159.
6. Csikszentmihaly, M. (1975). *Beyond Boredom and Anxiety*. San Francisco: Jossey-Bass.
7. Csikszentmihaly, M. (1990). *Flow: The Psychology of Optimal Experience*. New York: Harper & Row.
8. Curran, T., Hill, A. P., Appleton, P. R., Vallerand, R. J., & Standage, M. (2015). The psychology of passion: A meta-analytical review of a decade of research on interpersonal outcomes. *Motivation and Emotion, 39*, 631-655.
9. Dammyr, M. Motivation, passion and flow in Norwegian sport high schools. *Norwegian School of Sport Sciences. Department of Coaching and Psychology. Master Thesis in Sport Sciences*. 2011.
10. Dormann, C. F., Elith, J., Bacher, S., Buchmann, C., Carl, G., Carré, G., García Marquéz, J. R., Gruber, B., Lafourcade, B., Leitão, P. J., Münkemüller, T., McClean, C., Osborne, P. E., Reineking, B., Schröder, B., Skidmore, A. K., Zurell, D., & Lautenbach, S. (2013). Collinearity: a review of methods to deal with it and a simulation study evaluating their performance. *Echography, 36*, 027-046.

11. Forest, J., Mageau, G. A., Sarrazin, C., & Morin, E. M. (2011). "Work is my passion": The different affective, behavioural and cognitive consequences of harmonious and obsessive passion toward work. *Canadian Journal of Administrative Sciences*, 28, 27-40.
12. González-Cutre, D., Sicilia, A., Moreno, J. A., & Fernández-Balboa, J. M. (2009). Dispositional flow in physical education: Relationships with motivational climate, social goals and perceived competence. *Journal of Teaching in Physical Education*, 28, 422-440.
13. Jackson, S. A., & Eklund, R. C. (2004). *The Flow Scales Manual*. Fitness Information Technology.
14. Jackson, S.A., & Roberts, G. C. (1992). Positive performance states of athletes: Toward a conceptual understanding of peak performance. *The Sport Psychologist*, 6, 156-171.
15. Jackson, S. A., Thomas, P. R., Marsh, H. W., & Smethurst, C. J. (2001). Relationships between flow, self-concept, psychological skills and performance. *Journal of Applied Sport Psychology*, 13, 129-153.
16. Kee, Y. H., & Wang, C. K. J. (2008). Relationships between mindfulness, flow dispositions and mental skills adoption: A cluster analytic approach. *Psychology of Sport and Exercise*, 9, 352-367.
17. Kelecek, S., & Aşçı, F. H. (2013). Reliability and validity of "Passion Scale" for Turkish college athletes. *Türkiye Klinikleri Journal of Sport Sciences*, 5(2), 80-85.
18. Lafreniere, M. K., Vallerand, R. J., Donahue, E. G., & Lavigne, G. L. (2009). On the cost and benefits of gaming: the role of passion. *Cyber Psychology & Behaviour*, 12(3), 285-290.
19. Lavigne, G. L., Forest, J., & Crevier-Braud, L. (2012). Passion at work and burnout; A two-study test of the mediating role of flow experiences. *European Journal of Work and Organizational Psychology*, 21(4), 518-546.
20. Mageau, G. A., & Vallerand, R. J. (2007). The moderating effect of passion on the relation between activity engagement and positive affect. *Motiv Emotion*, 31, 312-321.
21. Mageau, G. A., Vallerand, R. J., Charest, J., Salvy, S., Lacaille, N., Boufford, T., & Koestner, R. (2009). On the development of harmonious and obsessive passion: the role of autonomy support, activity specialization and identification in the activity. *Journal of Personality*, 77(3), 601-645.
22. Mageau, G. A., Vallerand, R. J., Rousseau, F. L., Ratelle, C. F., & Provencher, P. J. (2005). Passion and gambling: Investigating the divergent affective and cognitive consequences of gambling. *Journal of Applied Social Psychology*, 35, 100-118.
23. Martin, J. J., & Cutler, K. (2002). An exploratory study of flow and motivation in theatre actors. *Journal of Applied Sport Psychology*, 14, 344-352.
24. Murcia, J. A. M., Gimeno, E. C., & Coll, D. G. C. (2008). Relationships among goal orientations, motivational climate and flow in adolescent athletes: differences by gender. *Spanish Journal of Psychology*, 1, 181-191.

25. Philippe, F. L., Vallerand, R. J., Andrianarisoa, J., & Brunel, P. (2009). Passion in referees: examining their affective and cognitive experiences in sport situations. *Journal of Sport and Exercise Psychology, 31*, 77-96.
26. Philippe, F. L., Vallerand, R. J., & Lavigne, G. L. (2009). Passion does make a difference in people's lives: a look at well-being in passionate and non-passionate individuals. *Applied Psychology: Health and Well-Being, 1*(1), 3-22.
27. Rogatko, T. P. (2009). The influence of flow on positive affect in college students. *Journal of Happiness Studies, 10*(1), 133-148.
28. Rousseau, F. L., & Vallerand, R. J. (2008). An examination of the relationship between passion and subjective well-being in older adults. *International Journal of Aging&Human Development, 66*(3), 195-211.
29. Rousseau, F. L., Vallerand, R. J., Ratelle, C. F., Mageau, G. A., & Provencher, P. J. (2002). Passion and gambling: Validation of the Gambling Passion Scale (GPS). *Journal of Gambling Studies, 18*, 45-66.
30. Russell, W. D. (2001). An examination of flow state occurrence in college athletes. *Journal of Sport Behavior, 24*, 83-107.
31. Stavrou, N. A., Jackson, S. A., Zervas, Y., & Karteroliotis, K. (2007). Flow experience and athletes' performance with reference to the orthogonal model of flow. *Sport Psychologist, 21*, 438-457.
32. Vallerand, R. J. (2008). On the psychology of passion: In search of what makes people's lives most worth living. *Canadian Psychology, 49*, 1-13.
33. Vallerand, R. J. (2010). On passion for life activities: The Dualistic Model of Passion. *Advances in Experimental Social Psychology, 42*, 97-193.
34. Vallerand, R. J., & Houliort, N. (2003). Passion at work: Toward a new conceptualization. In S. Gilliland, D. Steiner & D. Skarlicki (Eds.), *Emerging Perspectives on Values in Organizations. A Volume in Research in Social Issues in Management (vol. 3, pp.175-204)*.
35. Vallerand, R. J., Mageau, G. A., Ratelle, C., Leonard, M., Blanchard, C., Koestner, R., Gagne, M., & Marsolais, J. (2003). Les passions de l'ame: on obsessive and harmonious passion. *Journal of Personality and Social Psychology, 85*(4), 756-767.
36. Vallerand, R. J., Ntoumanis, N., Philippe, F. L., Lavigne, G. L., Carbonneal, N., Bonneville, A., Lagace-Labonte, C., & Maliha, G. (2008). On passion and sports fans: A look at football. *Journal of Sport Sciences, 26*(12), 1279-1293.
37. Vallerand, R. J., Rousseau, F. L., Grouzet, F. M. E., Dumais, A., Grenier, S., & Blanchard, C. M. (2006). Passion in sport: a look at determinants and affective experiences. *Journal of Sport and Exercise Psychology, 28*, 454-478.
38. Vallerand, R. J., & Verner-Filion, J. (2013). Making people's life most worth living: On the importance of passion for positive psychology. *Terapia Psicologica, 31*(1), 35-48.
39. Wang, C. C., & Chu, Y. S. (2007). Harmonious passion and obsessive passion in playing online games. *Social Behaviour and Personality, 35*(7), 997-1006.

40. Wang, C., & Yang, H. (2008). Passion for online shopping: the influence of personality and compulsive buying. *Social Behaviour and Personality*, 36(5), 693-706.
41. Wang, C. K. Y., Khoo, A., Liu, W. C., & Divaharan, S. (2008). Passion and intrinsic motivation in digital gaming. *Cyber Psychology & Behaviour*, 11(1), 39-45.
42. Wang, C. K. J., Liu, W. C., Chyea, S., & Chatzisarantisa, N. L. D. (2011). Understanding motivation in internet gaming among Singaporean youth: The role of passion. *Computers in Human Behaviour*, 27, 1179-1184.

Selen Kelecek, F. Hülya Aşçi
DOES PASSION TO SPORT HAVE AN INFLUENCE ON
THE DISPOSTIONAL FLOW IN ELITE ATHLETES?

Creative Commons licensing terms

Authors will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit or adapt the article content, providing a proper, prominent and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions and conclusions expressed in this research article are views, opinions and conclusions of the author(s). Open Access Publishing Group and European Journal of Physical Education and Sport Science shall not be responsible or answerable for any loss, damage or liability caused in relation to/arising out of conflict of interests, copyright violations and inappropriate or inaccurate use of any kind content related or integrated on the research work. All the published works are meeting the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed and used in educational, commercial and non-commercial purposes under a [Creative Commons attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).