

## The validity and reliability of the Persian version of passions athlete adults scale

Parvaneh Shamsipur Dehkordi <sup>1\*</sup> Fatemeh Gerami<sup>2</sup>, Fatemeh Sohrabi<sup>3</sup>, Younes Mir Derikvand<sup>4</sup>

1. Associate Professor of Motor behavior, Faculty of Sports Sciences, Alzahra University of Tehran, Tehran, Iran.
2. Bachelor of Motor behavior, Faculty of Sports Sciences, Alzahra University of Tehran, Tehran, Iran.
3. MSc of Motor behavior, Faculty of Sports Sciences, Alzahra University of Tehran, Tehran, Iran.
4. MSc of Personality Psychology, Faculty of Psychology, Payame Noor Garmsar University, Garmsar, Iran.

\* Correspondence: [pshamsipur@gmail.com](mailto:pshamsipur@gmail.com)

**Citation:** Dehkordi, P, S. Gerami, F. Sohrabi, F. Derikvand, Y. M. The validity and reliability of the Persian version of passions athlete adults scale. Journal of Humanistic approach to sport and exercise studies (HASES), 3(1), 409-420.

**Received:** 16 February 2022

**Accepted:** 11 September 2022

**Published:** 20 February 2023

**Publisher's Note:** HASES stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



**Copyright:** © 2021 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license.

**Abstract:** The passion scale mainly focuses on the passion for achievement or becoming good in some area/theme/skill. This study aimed to translate the passion scale and assess reliability and content and construct validity for the passion scale in athletic adults in Tehran city. A cross-cultural translation was used to generate a Persian-English version of the passion scale. A total of 200 athletes adults with age  $26/79 \pm 5/01$  completed Persian version of passion scale (PS), enabling us to investigate its feasibility, content validity, internal consistency, construct validity and test-retest reliability. 30 athletes adults stated that all the questionnaire items were simple, clear, and related to the objectives. The overall pattern of results suggests that the scale for passion presented here is applicable for the age studied. The calculated CVI and CVR were 0.94 and 0.91, respectively. All individual item scores correlated positively with the total score, with correlations ranging from 0.67 to 0.81. The Cronbach's alpha value for the standardized items was 0.88. Pearson correlations coefficient between total score passion scale and Grit-S scale were 0.53 for athletic adults. Intra class correlation coefficients (ICCs) between test and retest scores for the total score was 0.92. The results of this study showed that this Persian version of passion scale in athletes adults has a good validity and reliability and can be used in investigating passion of athletes adults.

**Keywords:** Reliability, Validity, Athletes, Passion, Grit.

## 1. Introduction

The best thing for man is to believe what he says and to Love what he does. {Mario BargasYosa} As a kid who was born in an athletic family I remember my childhood in gyms experiencing different fields in search of what I'm enthusiastic about. I finally took a field to start official training after spending time on trial and error. And now after several years, investing most of my time and energy on it, my sport has become part of me describing who I really am. Over these years I encountered many temperamental people who could not cope or found it difficult to appear regularly with the difficulties of strict practice, which by its nature was repetitive and tough; therefore they couldn't join the professional team on the expertise level. On the other hand, there were players who refused to quit their field even after a doctor forbade sport activities for them. I always wondered what made some people so eager to become an expert and give up anything for a cause when some people can't even take the trouble to show up in regular practicing session. Passion and the role of deliberate practice This concept has captured the attention of the philosophers through years. Spinoza [1632-1677] who indicated that acceptable thoughts originated from reason while unconscionable thoughts originated from passion. Rene Descartes [1595-1650] described passion as intense emotions that one fundamentally optimistic, as long as reason underlies the actions. Passion is a motivational structure that, due to internalization, exists contextually between the trait and the state level of personality. (Philippe et al. 2009). Passion is described as a strong feeling towards a personal interest /preference that motivates intention and behaviors to express that interest /preference. passion is an intense affective state but it's not necessarily limited to positive emotions alone [Chen XP, Yao X, Kotha S (2009) Entrepreneur Cardon MS, Wincent J, Singh J, Drnovsek M 2009 Vallerand RJ, et al. (2003) Perrewé PL, Hochwarter WA, Ferris GR, McAllister CP, Harris JN (2014) Jachimowicz, J. M., Wihler, A., Bailey, E. R., & Galinsky, A. D. (2018)]. Passion can be domain-specific such as passion for hobbies, relationships, or work [Vallerand RJ, et al, 2003, Bonneville-Roussy A, Lavigne GL, Vallerand RJ (2011) Mageau GA, et al. (2009) Jachimowicz, J. M., Wihler, A., Bailey, E. R., & Galinsky, A. D. (2018)]. Based on Vallerand et al. [2003,2007,2008,2010]' studies, passion can be

defined as a strong inclination which people like ,consider important and they invest time and energy in it. passion finds its way in to one's identity and after a while engaging in the passionate activity, she\he finds it that self-defining that he can't imagine spending his life without it [ Vallerand Vallerand, R. J., Mageau, G. A., Elliot, A. J., Dumais, A., Demers, M.-A., & Rousseau, F. (2008), Arielle Bonneville-Roussy ,Geneviève L. Lavigne ,Robert J. Vallerand 2010]. In fact, Passion, is one important concepts in sports psychology (Duckworth, Kirby, Tsukayama, Berstein, & Ericsson, 2011; Dweck, 2008; Vallerand & Miquelon, 2007, Roberta et al, 2021 ).

The idea of passion is a big motivating source of energy behind this determination, which can contribute to success [ Vallerand, R. J., Mageau, G. A., Elliot, A. J., Dumais, A., Demers, M.-A., & Rousseau, F. (2008).; Arielle Bonneville-Roussy ,Geneviève L. Lavigne ,Robert J. Vallerand 2010]. Expert performance analysis shows that an intensive learning cycle, directed at developing one's abilities, is important to reach a high level of performance [e.g ,Ericsson & Charness, 1994; Starkes & Ericsson, 2003].

Ericsson Krampe and Tesh Romer [1993, Vallerand, R. J., Mageau, G. A., Elliot, A. J., Dumais, A., Demers, M.-A., & Rousseau, F. 2008] have argued that deliberate practice, described as a highly organized task driven by an specific goal of progress, plays an important role in achieving a high level of success, since it provides immediate input and awareness of outcomes related to performance. It should be noted that deliberate practice can vary from actual play or performance conditions, which can be tedious and not always pleasant at the same time, whereas external incentives are rarely present [Vallerand, R. J., Mageau, G. A., Elliot, A. J., Dumais, A., Demers, M.-A., & Rousseau, F. 2008]. In many other domains performers have shown to acquire their skills through hours of solitary deliberate practice effortful activities designed to improve performance which Passion is a significant motivating force that drives one to participate in deliberate practice, providing encouragement to participate in and succeed in demanding activities that are important to the achievement of professional success [Ericsson ,2006 ,2007,2008,2009, Krampe & Tesch-romer, 1993, Ericsson ,ward 2007]. Vallerand and his colleagues (2011) proposed a dualistic model of passion, where two types of passion, harmonious and obsessive (Roberta et al,



2021), are defined, depending on the sense in which the internalization of behavioral regulations takes place, which in effect will produce a more harmonious or obsessive passion. This model is based on previous definitions of positive forms of sustained engagement (Dewey, 1913; Krapp, 2002; Rathunde & Csikszentmihalyi, 1993; Waterman, 1990, 1993, 2004) but also incorporates a more reactive form of activity engagement. According to Vallerand [Curran, T., Hill, A. P., Appleton, P. R., Vallerand, R. J., & Standage, M. (2015)], the dualistic concept of passion consists of seven main components. Such elements are implied in the concept of passion given above and are derived from the philosophical concepts that laid the theoretical foundations of passion. The first main element is that passion occurs in the sense of a particular activity, as opposed to a generic passion for all and all (Joussain 1928; Jean-Jacques Rousseau 1711 1778; Ribot 1907). The second central factor is that enthusiasm encapsulates a strong and lasting enjoyment of action. The third main factor is that enthusiasm only occurs for things that are individually respected or significant. The fourth main factor is that passion is a motivational, not an affective, construct. The fifth main factor is that passion arises when things are self-defining and part of identity. The sixth key element is that passion requires high levels of psychological strength, commitment and determination. Ultimately, the seventh key element is that passion takes a dualistic form and can produce adaptive or maladaptive outcomes.

While work on harmonious and obsessive passion, the study of their intrapersonal associations has proliferated in a variety of areas as [see Vallerand 2008, 2010, 2015]. The first area is well-being and relates to the impact of passion on the subjective indicators of psychological wellbeing, including results (positive and negative), life satisfaction, vitality, cognitive-emotional engagement, self-esteem and burnout. The second field is motivation and represents work that is interested in how passion affects (or affects) acquired and intrinsic regulatory processes such as achievement goals, behavioral regulations and basic psychological needs (i.e. autonomy, competence and relatedness; Deci and Ryan 2000). The third field is cognitive effects and includes work on how excitement influences thought processes and self-perception in emotional behaviors such as focus and flow, as well as obstructive cognitions such as rumination and anxiety. The

fourth field is behavior and performance, which relates to how enthusiasm influences the duration of behavioral commitment (hours / week), intentional practice, which activity dependency, as well as its effect on objective and subjective performance. According to cross-sectional, clinical, and even quantitative research in different fields such as work, education, and sport, harmonious passion brings a range of in-task benefits. These include higher positive effects, resilience, cognitive emotional involvement, integrated sources of motivation (intrinsic motivation, defined regulation), learning goals, flow, intentional practice and performance (Curran, T., Hill, A. P., Appleton, P. R., Vallerand, R. J., & Standage, M. (2015). e.g., Bonneville-Roussy et al. 2011; Philippe et al. 2009; Vallerand et al. 2008; Wang et al. 2011).

In addition, harmonious passion often has a range of broader effects outside the game, such as higher life satisfaction and lower work / life conflict (Caudroit et al. 2010; Przybylski et al. 2009; Vallerand et al. 2010). It also has lower negative influence, burnout and ruminative cognition (e.g., Carbonneau et al. 2010; Donahue et al. 2012; Walker et al. 2011; Young et al. in press). In short, harmonious passion seems to have an enriching effect on our lives.

Conversely, a guided internalization of identity behavior leads to an intense propensity for action (OP). In this form of enthusiasm, individuals are influenced by external pressures (acceptance from peers or teachers) or internal pressures (activity-contingent self-esteem or uncontrollable excitement) that regulate their activity participation. Passionate behavior tends to dominate the life of the person and causes tension with other domains of life. Thus, the value of the activity is overwhelming, and the time expended in the enthusiastic activity always happens to the detriment of education, work, or family life. People will continue to engage in the operation with OP regardless of the emotions and consequences associated with it. As a result, operation results in a stiff persistence towards the task. A clarinetist with an obsessive passion for the instrument, for example, will continue to play the clarinet even though he or she has a bad injury (e.g. tendinitis), with the deplorable effect of delaying or preventing the healing process. When he or she is discouraged from performing for a period of time, the artist may feel guilty for not improving or feeling useless because of the impossibility of engaged in the only essential activity in his or her life. OP is often correlated with



fewer positive effects than HP and rarely contributes to negative consequences. (Mageau et al., 2005; Vallerand et al., 2003., Bonneville-Roussy, A., Lavigne, G. L., & Vallerand, R. J. (2011).

The passion scale is based on Jachimowicz et al.'s (2018) definition of passion and mainly focuses on the passion for achievement or becoming good in some area/theme/skill. This is a self-reported questionnaire which its items are rated on a Likert scale in order to measure mental and psychological factors, such as positive outlook, inner motivation and positive self-perception, and research considers them as an antecedent to the advancement and learning of skills and competence (Sigmundsson et al. 2020; Deci & Ryan, 2008; Ericsson et al., 2007). Some of the test items are developed to seek to demonstrate the interest, dedication and initiative that individuals have shown towards a very significant value / preference so that they emphasize the importance of experience, practice and specificity in order to become skilled (Edelman, 1987, 1992; Ericsson et al., 2007; Gottlieb, 1998; Thelen & Smith, 1994). The main purpose of this research is to investigate the passion scale in order to assess reliability, information, and establish validity of this scale in athletic adults in Tehran.

## 2. Materials and Methods

This cross-sectional, validation study was conducted in Tehran city, Iran in 2020. The studied sample

included 200 healthy adult athletes (103 female and 97 male) with an average age of 26.79 years (SD = 5.01). The average age of the female athletes group was 26.88 (SD=5.17) and the male athletes group 26.69 (SD=4.85). Athletes were recruited from local sports leagues. Volunteered male and female athletes were assigned to the study if they were to be over the age of 18 and participated on competitive levels in futsal, basketball, volleyball, and soccer.

## 2-1. Measures

### 2-1-1. Demographics

Athletes' gender, age, and current level of educational were reported.

### 2-1-2. Passion

Sigmundsson et al. (2020) developed the passion scale in 2020 for Learning and Skill Development. The Passion Scale was used to assess the participants' level of passion for achievement. The participants rated eight items, using the scale of 1=not like me at all to 5=very much like me. The 5-point Likert scale is one of the most common (Likert, 1932) and was used for possible comparison to other important factors related to passion. For an overview of the 8-items, see Table 1. The maximum score on this scale is 5 (extremely passionate) and the lowest is 1 (not at all passionate).

**Table 1.** The eight passion scale questions.

| Passion Scale Questions                                                      | not at all<br>like me | Not<br>like me | neutral | like<br>me | very much<br>like me |
|------------------------------------------------------------------------------|-----------------------|----------------|---------|------------|----------------------|
| 1. I have an area/theme/skill I am really passionate about                   | 1                     | 2              | 3       | 4          | 5                    |
| 2. I would like to use a lot of time to become good in that area/theme/skill | 1                     | 2              | 3       | 4          | 5                    |
| 3. I think I could be an expert in one area/theme/skill                      | 1                     | 2              | 3       | 4          | 5                    |
| 4. I have passion enough to become very good in the area/theme/skill I like  | 1                     | 2              | 3       | 4          | 5                    |
| 5. I work hard enough to fulfill my goals                                    | 1                     | 2              | 3       | 4          | 5                    |
| 6. I have a burning passion for some areas/theme/skills                      | 1                     | 2              | 3       | 4          | 5                    |
| 7. I use lot of time on the projects I like                                  | 1                     | 2              | 3       | 4          | 5                    |
| 8. My passion is important for me                                            | 1                     | 2              | 3       | 4          | 5                    |



### 2-1-3. Grit

Grit S, short grit scale (Duckworth & Quinn, 2009) was used to assess the participants' level of grit. The Persian version of the Grit-S Scale comprises eight items, to which responses are indicated on five-point Likert scales with items rated in terms of how much the item was "true" for the respondent (1=not like me at all and 5=very much like me). As with the original version of the scale (Duckworth and Quinn, 2009), the items arrayed in two sets corresponding to the core features of the grit construct, consistency of interest (COI) and perseverance of effort (POE). A sample item for COI is 'I often set a goal but later choose to pursue a different one' (reverse-scored) and for POE, 'I finish whatever I begin'. The maximum score on this scale is 5 (showing extreme grit), and the lowest score 1 (no grit at all).

In this study, content and face validity were evaluated by ten experts in the field and quantified as content validity index (CVI) and content validity ratio (CVR). The calculated CVI and CVR were 0.89 and 0.92, respectively. Reliability for all items was high. The ICC was 0.99; the Cronbach's alpha coefficient was 0.85-0.93. Test-retest reliability at 10 days was reported to be high (0.89).

## 2-2. Procedure

### 2-2-1. Translation

Four bilingual language professors cooperated with the researcher to translate Passion Scale, using forward-backward method. Two independent translations of the passion items from English to Persian and two from Persian back to English were obtained. After the completion of the four independent translations, all four professionals attended a meeting in which all translated versions were compared with the original English version of the passion scale. The Persian versions were revised, and upon unanimous agreement a final translated Persian version of the passion scale was created for usage with Iranian people.

### 2-2-2. Face Validity

At this stage, for face validity, using convenience sampling, the questionnaire was given to thirty adult athletes. The questionnaire was given to five psychologists and sports psychologists, who were familiar with the concept under investigation and instrumentation. Then the participants were required to evaluate the items with respect to problems, ambiguity, relativity, proper terms and grammar, and

understandability using a 5-point Likert scale ranging from 1 (not like me at all) to 5 (very much like me) (Lacasse et al. 2002 and Mousazadeh et al. 2017). Then, all the questionnaires were collected and analyzed, the impact score was computed for each item, using the following formula and scores > 1.5 were considered acceptable. Impact score = Frequency (%) × Importance (Lacasse et al. 2002).

### 2-2-3. Content Validity

Content validity involves qualitative and quantitative phases, and it was assessed by those experts, who were familiar with the concept under investigation and instrumentation. In this study, convenience sampling and both qualitative and quantitative approaches were used. In the qualitative approach, 13 experts, who were familiar with psychometric methods, were considered. After all, the questionnaire was given to five individuals with PhD in psychology, four PhD students in sports psychology, four individuals with M.Sc. in sports psychology, and two clinical psychologists, who were required to evaluate the items with respect to appropriate wording and grammar, understandability, and relatedness to Iranian culture and to mention their suggestions, if any, next to each item.

Then, the questionnaires were collected and the suggestions were considered. In the quantitative approach, on the other hand, the modified questionnaires were given back to the experts for assessment of content validity ratio (CVR). CVR according to the Lawshe test is computed to specify whether an item is necessary for operating a construct in a set of items or not. For this, the expert panel request to give a score of 1 to 3 to each item ranging from essential, useful but not essential, and not necessary. Then, the questionnaires were collected, and CVR was calculated for each item. Thereafter, the modified questionnaires were returned to 15 experts, who were required to analyze the items concerning relativity, simplicity, and clarity, using a 4-point Likert scale ranging from 1 (the lowest) to 4 (the highest). All of the 15 questionnaires were collected, and content validity index (CVI) was computed for each item as well as for the whole questionnaire.

Then, 200 athletes completed both passion and grit questionnaires. Along with the following questionnaires, a brief outline of the task was provided, stating what would be expected of the participants, as well as a short explanation about





what the study was investigating and the reasons for doing so. Participant information sheets outlined the participant's ethical rights and identified that anonymity and confidentiality would be assured. A consent form was issued to each participant whereby they had to confirm their understanding of the study and what was required of them, and their agreement to take part in the study. The ethical rights of participants were also stated, such as the right "to withdraw at any stage up until the point that the questionnaire was handed back. Assessment of the participants took place in a quiet room. All testing was performed in a group setting (during the normal practice hours). Two trained experimenters explained the procedure and were present when the questionnaires were conducted.

For the test-retest part of the study, 37 athletic adults (mean age=25.41 years, SD=4.79) were tested twice, 10 days apart. Internal consistency of passion was assessed, using Cronbach's alpha method. The construct validity of the passion questionnaire was calculated with grit questionnaire.

### 2-3. Data Analysis

To analyze the clarity and pertinence of the passion items, the Content Validity Index (Lawshe, 1975) were used. Percent agreement was used to analyze face validity of the professionals' responses. The correlation between scores was considered a relational index of agreement (Anastasi&Urbina, 1997). Test-retest reliability for the passion scale was analyzed with intra-class correlation coefficients

(ICC). Internal consistency analysis for the passion scale was examined for the total sample through Cronbach's alpha index. Construct validity of the passion scale was analyzed using correlation between passion scale and grit scale scores.

## 3. Results

### 3-1. Demographic differences

As a first step, we explored demographic differences among the variables of interest. Age had no significant correlation with mean total score passion  $r=0.43$  (Pearson correlation). There was no significant difference in terms of gender ( $t=0/75$ ,  $df=198$ ,  $p=0/45$ ): the females had a mean of total score on passion of 4.25 (SD=0.56) and the males 4.30 (SD=0.50). There was no significant difference in terms of education level ( $f(2,197)=0/51$ ,  $p=0/60$ ): the athletes with a high school diploma had a mean of total score on passion of 4.21 (SD=0.62), the athletes with bachelor's degree 4.27 (SD=0.51) and the athletes with postgraduate education 4.32 (SD=0.48).

### 3-2. Feasibility

All the participants stated that all the questionnaire items were simple, clear, and related to the objectives. The means and standard deviations for the eight questions in the Passion Scale are shown in Table 2.

**Table 2.** Mean and standard deviations for the eight passion scale questions (N=200)

|            | Mean | SD   |
|------------|------|------|
| Question 1 | 4/23 | 0/72 |
| Question 2 | 4/28 | 0/75 |
| Question 3 | 4/27 | 0/76 |
| Question 4 | 4/37 | 0/65 |
| Question 5 | 4/21 | 0/79 |
| Question 6 | 4/28 | 0/61 |
| Question 6 | 4/14 | 0/78 |
| Question 8 | 4/44 | 0/65 |

### 3-3. Content validity

The CVI and CVR were calculated for each item. Minimum and maximum CVR were 0.80 and 1, respectively and for all items, so CVR was higher than acceptance level (0.62). Total CVR for whole questionnaire (average of CVRs of all items) was 0.94. Minimum and maximum CVI (average of

CVIs for relevancy, clarity and simplicity criteria) were 0.80 and 0.96, respectively. All items were satisfactory in terms of CVI (higher than 0.79) and no items were removed. Total CVI (average of CVIs of all items) was 0.91.



### 3-4. Internal consistency

All individual items (see Table 3) correlated positively with the totalscore, with correlation ranging from 0.67 to 0.81. Correlations between

scores on the individual questions were moderate to high (0.35-0.69). The Passion Scale showed good internal consistency with Cronbach's alpha value of 0.88.

**Table3.** Pearson correlation coefficients and 95% confidence intervals for individual questions score and total test score and pearson coefficients for individual test items.

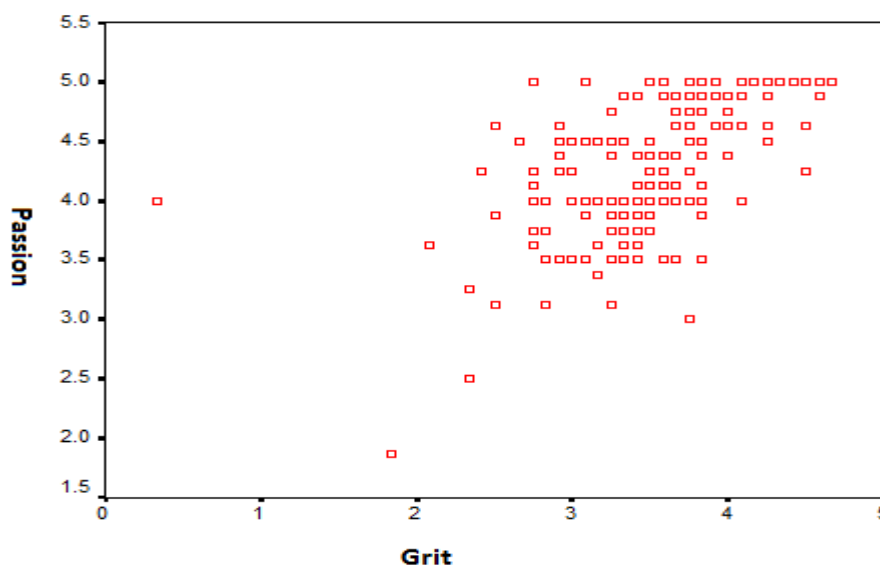
|            | Correlation      |      |      | Correlation with: ? |      |      |      |      |      |      |      |
|------------|------------------|------|------|---------------------|------|------|------|------|------|------|------|
|            | With total score | 95%  | CI   | Q 1                 | Q2   | Q3   | Q4   | Q5   | Q6   | Q7   | Q8   |
| Question 1 | 0/76             | 0/34 | 0/67 | 1                   | 0/59 | 0/51 | 0/50 | 0/53 | 0/45 | 0/45 | 0/44 |
| Question 2 | 0/81             | 0/31 | 0/75 |                     | 1    | 0/69 | 0/62 | 0/47 | 0/55 | 0/44 | 0/43 |
| Question 3 | 0/76             | 0/35 | 0/78 |                     |      | 1    | 0/65 | 0/39 | 0/46 | 0/35 | 0/42 |
| Question 4 | 0/77             | 0/34 | 0/78 |                     |      |      | 1    | 0/47 | 0/55 | 0/37 | 0/41 |
| Question 5 | 0/73             | 0/36 | 0/73 |                     |      |      |      | 1    | 0/51 | 0/42 | 0/47 |
| Question 6 | 0/75             | 0/34 | 0/57 |                     |      |      |      |      | 1    | 0/49 | 0/54 |
| Question 7 | 0/67             | 0/39 | 0/65 |                     |      |      |      |      |      | 1    | 0/43 |
| Question 8 | 0/69             | 0/38 | 0/67 |                     |      |      |      |      |      |      | 1    |

Note. CI= Confidence interval. \*On the basis of the other 7 item scores.

adult athletes (mean age=26.76, SD=5.01, n=200) (see fig.1).

### 3-5. Construct validity

The Pearson correlation coefficient between total score Passion Scale and Grit-S scale was 0.53 for



**Fig1:** Correlation between passion and grit

### 3-6. Test-retest reliability

The Passion Scale showed good test-retest reliability. Table 4 shows the means and standard deviation of test and retest scores. ICCs between test

and retest scores ranged from 0.54 to 0.89. ICCs between test and retest total scores was 0.92 (n=37, mean age 23.67, SD=2.41).

**Table 4.** Means and standard deviations of test and retest scores (N=37).

|  | Test score | Retest Score | ICC |
|--|------------|--------------|-----|
|--|------------|--------------|-----|



|             | M ± SD      | M ± SD      |      |
|-------------|-------------|-------------|------|
| Question 1  | 4/16 ± 0/65 | 4/08 ± 0/72 | 0/92 |
| Question 2  | 3/94 ± 0/91 | 3/97 ± 0/92 | 0/59 |
| Question 3  | 4/19 ± 0/77 | 4/01 ± 0/91 | 0/70 |
| Question 4  | 4/30 ± 0/70 | 4/16 ± 0/86 | 0/74 |
| Question 5  | 4/22 ± 0/71 | 4/22 ± 0/71 | 0/84 |
| Question 6  | 4/21 ± 0/53 | 4/14 ± 0/58 | 0/69 |
| Question 7  | 4/24 ± 0/72 | 4/29 ± 0/62 | 0/94 |
| Question 8  | 4/32 ± 0/66 | 4/35 ± 0/78 | 0/90 |
| Total score | 4/20 ± 0/52 | 4/15 ± 0/41 | 0/92 |

### 3-7. Limitations

Since the study participants were selected from local sports leagues and competitive levels in futsal, basketball, volleyball, and soccer, the results might not be generalizable to other levels of competition. Therefore, future multicenter studies with larger sample sizes at expert and elite athletes are recommended to be conducted on this issue.

### 4. Discussion and Conclusion:

The main reason of this research was to assess content and construct validity and reliability of this new scale, a new measure that aims to quantify passion and achievement in an area/theme/skill. The scale was applied to a group of 200 athletic adults for testing of prior objectives.

#### 4-1. Demographic differences

There was no substantial age, gender and educational variation, indicating that there is no relation between the amount of evaluated passion and these elements.

#### 4-2. Feasibility:

All the participants indicated that all the items in the questionnaire were simple, clear and related to the objectives.

#### 4-3. Internal Consistency of the Scale:

The scale was designed with eight elements that could be combined into a cumulative score to provide an approximate measure of life-long passion. Elements are designed to measure passion, described as a strong feeling or interest for a personal value / preference. All individual items (see Table 3) were positively correlated with the overall score, with a correlation varying from 0.67 to 0.81. The correlation between scores on the individual questions was moderate to high (0.35-0.69). This test homogeneity property implies that all objects tend to be measuring aspects of the same structure, that is,

passion. Test homogeneity was also tested by the analysis of Cronbach's alpha. The Passion Scale showed good internal consistency with Cronbach's alpha value of 0.88. ;which means that this scale has at least acceptable internal consistency.(Bland & Altman, 1986).

#### 4-4. Construct and Content validity

To examine the construct validity of the scale we needed a scale or a standard test to compare the items against. As Duckworth et al. (2011) points out, grit represents the strength of passion and determination to accomplish long-term goals, facing difficulties and challenges. Therefore we used the Grit-S scale to test a significant element of the criterion – related validity. Grit, determined by Grit-S, was evaluated as an important factor showing which individuals are becoming successful in some areas. The Pearson correlation coefficient between total score Passion Scale and Grit-S scale was 0.53 for athletes adults. This total pattern of results shows that the two scales' total scores have a shared variance which we can consider it as moderate construct validity (Cronbach & Meehl, 1955). Jachimowicz et al. (2018) and Sigmondsson et al. (2020) stated that one could argue that grit and passion foreshadow results. The Grit Scale, however, primarily measures perseverance, while the Passion Scale assesses the degree of passion in individuals such as motivation, dedication and effort.

Moreover we also examined content validity in this research. The CVI and CVR were calculated for each item and the results showed that all the items were satisfactory in terms of CVI (higher than 0.79) and no items were removed. Total CVI (average of CVIs of all items) was 0.91. Total CVR for whole questionnaire was 0.94.

#### Reliability of the scale

In repeated administration of the scale to the same participants, we obtained ICC coefficients for





individual ICCs between test and retest scores ranged from 0.54 to 0.89. We are inclined to assume that our ICCs (.0.54) obtained indicate a fairly limited degree of variation in the subtest / total score test-retest and the ICC for the total score was 0.92. The findings of this study are consistent with the findings of Sigmanson et al (2020) and Jachimowicz et al. (2018). These researchers also showed that the scale of passion has acceptable validity and reliability. Therefore, the use of the Persian version of the scale of enthusiasm is recommended for coaches and sports psychologists, educators and researchers.

## 5. Conclusion

The results of this study showed that this Persian version of passion scale in athletes adults has a good validity and reliability and can be used in investigating passion of athletes adults.

**Author Contributions:** All authors have read and agreed to the published version of the manuscript

**Funding:** This research received no external funding.

**Conflicts of Interest:** The authors declare no conflict of interest

## 6. References:

- Anastasi, A., & Urbina, S. (1997). Psychological testing (7th ed.). New Jersey: Prentice-Hall.
- Bonneville-Roussy, A., Lavigne, G. L., & Vallerand, R. J. (2011). When passion leads to excellence: The case of musicians. *Psychology of Music*, 39, 123–138.
- Carbonneau, N., Vallerand, R. J., & Massicotte, S. (2010). Is the practice of Yoga associated with positive outcomes? The role of passion. *The Journal of Positive Psychology*, 5, 452–465.
- Caudroit, J., Stephan, Y., Brewer, B. W., & Le Scanff, C. (2010). Contextual and individual predictors of psychological disengagement from sport during a competitive event. *Journal of Applied Social Psychology*, 40, 1999–2018.
- Csikszentmihalyi, M., Rathunde, K., & Whalen, S. (1993). *Talented teenagers: The roots of success & failure*. New York: Cambridge University Press.
- 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 intrapersonal outcomes. *Motivation and Emotion*, 39, 631–655.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268.
- Deci, E. L., & Ryan, R. M. (2008). *Self-determination theory: A macrotheory of human motivation development, and health*. Canadian Psychology/Psychologie Canadienne, 49, 182.
- Descartes, R. (1649). *Les passions de l’a`me*. In E. S. Haldane & G. Ross (Eds., Trans. 1972), *The philosophical works of Descartes*. Cambridge, MA: Cambridge University Press.
- Dewey, J. (1913). *Interest and effort in education*. Boston: Riverside Press.
- Donahue, E. G., Forest, J., Vallerand, R. J., Lemyre, P. N., Crevier- Braud, L., & Bergeron, E. (2012). Passion for work and emotional exhaustion: The mediating role of rumination and recovery. *Applied Psychology: Health and Well-Being*, 4, 341–368.
- Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the short grit scale (Grit-S). *Journal of Personality Assessment*, 91, 166–174.
- Duckworth, A., Kirby, T. A., Tsukayama, E., Berstein, H., & Ericsson, K. A. (2011). Deliberate practice spells success: Why grittier competitors triumph at the National Spelling Bee. *Social Psychological and Personality Science*, 2(2), 174–181. <https://doi.org/10.1177/1948550610385872>
- Dweck, C. S. (2008). *Mindset: The new psychology of success*.
- Edelman, G. M. (1987). *Neural darwinism*. New York: Basic Books.
- Edelman, G. M. (1992). *Bright air, brilliant fire: On the matter of the mind*. New York: Basic books.
- Ericsson, K. A., & Charness, N. (1994). Expert performance: Its structure and acquisition. *American Psychologist*.
- Ericsson, K. A., Krampe, R. T. and Tesch-Römer, C. (1993) „The Role of Deliberate Practice in the Acquisition of Expert Performance“, *Psychological Review*, 100 (3): 363-406.
- Ericsson, K.A. (2006) „An Introduction to The Cambridge Handbook of Expertise and Expert Performance: Its Development, Organization and Content“, in K.A. Ericsson, N. Charness, P.J. Feltovich, R.R. Hoffman (eds) *The Cambridge Handbook of Expertise and Expert*



- Performance, pp.3-19. New-York: Cambridge University Press.
- Ericsson, K.A. (2007) „An Expert-Performance Perspective of Research on Medical Expertise: the Study of Clinical Performance“, *Medical Education*, 41 (12): 1124–1130.
- Gottlieb, G. (1998). Normal occurring environmental and behaviour influences on gene activity: From central dogma to probabilistic epigenesis. *Psychological Review*, 105,792–802.
- Jachimowicz, J. M., Wihler, A., Bailey, E. R., &Galinsky, A. D. (2018). Why grit requires perseverance and passion to positively predict performance. *Proceedings of theNational Academy of Sciences*, 115, 9980–9985
- Krapp, A. (2002). Structural and dynamic aspects of interest development: Theoretical considerations from ontogenetic perspective. *Learning and Instruction*,12, 383–409.
- Lacasse Y, Godbout C, Series F. Health-related quality of life in obstructive sleep apnoea. *EurRespir J* 2002; 19: 499-503.
- Lawshe CH. A quantitative approach to content validity. *Personnel Psychology*, 1975, 28, 563-575.
- Liu, D., Chen, X. P., & Yao, X. (2011). From autonomy to creativity:A multilevel investigation of the mediating role of harmoniouspassion. *Journal of Applied Psychology*, 96, 294–309.
- Mageau, G. A., Vallerand, R. J., Charest, J., Salvy, S. J., Lacaille, N.,Bouffard, T., &Koestner, R. (2009). On the development of harmonious and obsessive passion: The role of autonomy support, activity specialization, and identification with theactivity. *Journal of Personality*, 77, 601–646.
- 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.
- Mousazadeh S, Rakhshan M, Mohammadi F. Investigation of Content and Face Validity and Reliability of Sociocultural Attitude towards Appearance Questionnaire-3 (SATAQ-3) among Female Adolescents. *Iran J Psychiatry* 2017; 12:1: 15-20.
- Perrewé PL, Hochwarter WA, Ferris GR, McAllister CP, Harris JN (2014) Developing a passion for work passion: Future directions on an emerging construct. *J Organ Behav*35:145–150.
- Philippe, F. L., Vallerand, R. J., Andrianarisoa, J., & Brunel, P.(2009). Passion in referees: Examining their affective andcognitive experiences in sport situations. *Journal of Sport &Exercise Psychology*, 31, 77–96.
- Przybylski, A. K., Weinstein, N., Ryan, R. M., & Rigby, C. S. (2009).Having to versus wanting to play: Background and consequences of harmonious versus obsessive engagement in video games.*CyberPsychology& Behavior*, 12, 485–492.
- Roberta Frontini , Hermundur Sigmundsson, Raul Antunes, Ana Filipa Silva, Ricardo Lima, Filipe Manuel Clemente. (2021). Passion, grit, and mindset in undergraduate sport sciences students. *New Ideas in Psychology* 62(1-5). <https://doi.org/10.1016/j.newideapsych.2021.100870>
- Sigmundsson H, Haga M, Hermundsdottird F. The passion scale: Aspects of reliability and validity of a new 8-item scale assessing passion.*New Ideas in Psychology*, 56 (2020), 100745.
- Spinoza, B. (1953). *E'thique [Ethics]*. Paris: Flammarion.
- Thelen, E., & Smith, L. B. (1994).A dynamic systems approach to the development of cognition and action. Cambridge, Mass: MIT Press.
- Vallerand, R. J. (2008). On the psychology of passion: In search of what makes people's lives most worth living. *Canadian Psychological Association*, 49(1), 1–13
- Vallerand, R. J. (2010). On passion for life activities: The Dualistic Model of Passion. In M.P. Zanna (Ed.).*Advances in experimental social psychology* (pp. 97–193). New York,NY: Academic Press.
- Vallerand, R. J., Blanchard, C. M., Mageau, G. A., Koestner, R., Ratelle, C. F., Leonard, M.,et al. (2003). Les passions de l'ame: On obsessive and harmonious passion. *Journal ofPersonality and Social Psychology*, 85, 756–767.
- Vallerand, R. J., Salvy, S. J., Mageau, G. A., Elliot, A. J., Denis, P.L., Grouzet, F. M., & Blanchard, C. (2007). On the role of passion in



- performance. *Journal of Personality*, 75, 505–534.
- Walker, I. J., Nordin-Bates, S. M., & Redding, E. (2011). Characteristics of talented dancers and age group differences: Findings from the UK Centres for Advanced Training. *High Ability Studies*, 22, 43–60.
- Wang, C. K. J., Liu, W. C., Chye, S., & Chatzisarantis, N. L. (2011). Understanding motivation in internet gaming among Singaporean youth: The role of passion. *Computers in Human Behavior*, 27, 1179–1184.
- Waterman, A. S. (1990). Personal expressiveness: Philosophical and psychological foundations. *Journal of Mind and Behavior*, 11, 47–74.
- Waterman, A. S. (1993). Two conceptions of happiness: Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of Personality and Social Psychology*, 64, 678–691.
- Waterman, A. S. (2004). Finding someone to be: Studies on the role of intrinsic motivation in identity formation. *Identity: An International Journal of Theory and Research*, 4, 209–228.
- young, B. W., de Jong, G. C., & Medic, N. Examining relationships between passion types, conflict and negative outcomes in masters athletes. *International Journal of Sport and Exercise Psychology*. doi:10.1080/1612197X.2014.932822.



## روایی و پایایی نسخه فارسی مقیاس اشتیاق ورزشکاران بزرگسال

پروانه شمسی پور دهکردی<sup>۱\*</sup>، فاطمه گرامی<sup>۲</sup>، فاطمه سهرابی<sup>۳</sup>، یونس میر دریکنوند<sup>۴</sup>

۱. دانشیار گروه رفتار حرکتی، دانشکده علوم ورزشی، دانشگاه الزهرا تهران، تهران، ایران.

۲. کارشناسی رفتار حرکتی، دانشکده علوم ورزشی، دانشگاه الزهرا تهران، تهران، ایران.

۳. کارشناس ارشد رفتار حرکتی، دانشکده علوم ورزشی، دانشگاه الزهرا تهران، تهران، ایران.

۴. کارشناس ارشد روانشناسی شخصیت، دانشکده روانشناسی، دانشگاه پیام نور گرمسار، گرمسار، ایران.

\* نویسنده مسئول: pshamsipur@gmail.com

**چکیده:** مقیاس اشتیاق عمدتاً بر اشتیاق برای موفقیت یا خوب شدن در برخی زمینه ها/موضوعات/مهارت ها تمرکز دارد. این پژوهش با هدف ترجمه مقیاس اشتیاق و سنجش پایایی و روایی محتوایی و سازه مقیاس اشتیاق در بزرگسالان ورزشکار شهر تهران انجام شد. برای تولید نسخه فارسی-انگلیسی مقیاس اشتیاق از یک ترجمه بین فرهنگی استفاده شد. در مجموع ۲۰۰ ورزشکار بزرگسال با سن  $26.79 \pm 5.01$  سال نسخه فارسی مقیاس اشتیاق (PS) را تکمیل کردند که ما را قادر می سازد امکان سنجی، روایی محتوایی، سازگاری درونی، روایی سازه و پایایی آزمون-بازآزمایی را بررسی کنیم. ۳۰ ورزشکار بزرگسال بیان کردند که تمامی گویه های پرسشنامه ساده، واضح و مرتبط با اهداف است. الگوی کلی نتایج نشان می دهد که مقیاس اشتیاق ارائه شده در اینجا برای سن مورد مطالعه قابل استفاده است. CVI و CVR محاسبه شده به ترتیب ۰.۹۴ و ۰.۹۱ بود. همه نمرات آیت های فردی با نمره کل همبستگی مثبت داشتند، با همبستگی های بین ۰.۶۷ تا ۰.۸۱. مقدار آلفای کرونباخ برای اقلام استاندارد شده ۰.۸۸ بود. ضریب همبستگی پیروسون بین مقیاس کل اشتیاق و مقیاس گریت-S برای بزرگسالان ورزشکار ۰.۵۳ بود. ضرایب همبستگی درون کلاسی (ICC) بین نمرات آزمون و آزمون مجدد برای نمره کل ۰.۹۲ بود. نتایج این مطالعه نشان داد که این نسخه فارسی مقیاس اشتیاق در بزرگسالان ورزشکار از روایی و پایایی خوبی برخوردار است و می تواند در بررسی اشتیاق ورزشکاران بزرگسال مورد استفاده قرار گیرد.

**واژه های کلیدی:** قابلیت اطمینان، اعتبار، ورزشکاران، اشتیاق.

**ارجاع:** شمسی پور دهکردی، پ. گرامی، ف. سهرابی، ف. میردریکنوند، ی. (۱۴۰۱). روایی و پایایی نسخه فارسی مقیاس اشتیاق ورزشکاران بزرگسال. فصلنامه رویکرد انسانی در مطالعات ورزشی. ۳(۱): ۴۲۰-۴۰۹.

دریافت: ۲۷ بهمن ۱۴۰۰

پذیرش: ۲۰ شهریور ۱۴۰۱

انتشار: ۱ اسفند ۱۴۰۱



این نماد به معنای مجوز استفاده از اثر با دو شرط است یکی استناد به نویسنده و دیگری استفاده برای مقاصد غیرتجاری.