Relationship between Motivation and Dispositional Flow State on Football Players Participating in the U13-U16 Football Leagues

Ayşe Türksoy\textsuperscript{a*}, Evren Ebru Altıncı\textsuperscript{b}, Uğur Üster\textsuperscript{c}

\textsuperscript{a}Department of Sports Management Sciences, School of Physical Education & Sports, Istanbul University, Istanbul, 34320, Turkey
\textsuperscript{b}Department of Sports Training and Movement Sciences, School of Physical Education & Sports, Istanbul University, Istanbul, 34320, Turkey
\textsuperscript{c}Football Coach, Istanbul, Turkey

Abstract

The aim of this study is to examine the relationship between the motivation and dispositional flow state among football players of 12-16 age group. 125 football players participating in the U13-U16 Football Leagues were included in this study. For the data collection was used the Sport Motivation Scale and Dispositional Flow Scale-2. Sport Motivation Scale consists of 28 multiple-choice questions. Dispositional Flow Scale-2 consists of 36 multiple-choice questions. In the analyses applied a correlation between the Sport Motivation Scale and sub-dimensions of Dispositional Flow Scale-2. In the analysis applied a Pearson correlation between age and education criteria and all sub-dimensions. As a result of this study, if athletes are not motivated, optimal performance was found to be low. It was determined that sources of external pressures, reward motivation and the desire to respect increased with age. It was observed that Dispositional Flow Scale-2 values decrease with advancing age. The study has shown that the motivation of the football players improves the performance of these athletes in specific sub-dimensions.

1. Introduction

As the impact of psychological factors in both sport and exercise environment on performance as well as the effects of the type of exercise or branch of sport done on individual’s psychological condition have gained importance, studies in this field have picked up speed. Particularly, the states of individuals doing sports and their associated behaviors have recently been in the limelight for researchers in the field of sport and exercise psychology.

* Ayşe Türksoy Tel.: +090-532-422-6686.
E-mail address: ayseturksoy@hotmail.com

© 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
Peer-review under responsibility of Academic World Education and Research Center

Keywords: Motivation, Dispositional Flow State, Football Players, Football Leagues.
Accordingly, the optimal performance state has become an important structure and concept to address in terms of reflecting the optimal performance experience and the resulting mental and psychological condition in a sport and exercise environment. (Jackson et al., 1998; Jackson & Marsh, 1996; Jackson et al., 2001). The concept of optimal performance state was coined in Csikszentmihalyi’s book “Beyond Boredom and Anxiety” (1975) to explain the reasons urging individuals to engage in free time activities. As a result of the interviews conducted by Csikszentmihalyi, he defined the “optimal performance state” as the extensive engagement in a specific task with a feeling of pleasure. This emotional state that can be experienced by individual during many activities like sport, arts or tasks is defined as losing oneself in the task engaged, feeling of cognitive competency and control over the task, and the inner pleasure and joy of the activity performed (Kivikangas, 2006; Moneta, 2004). According to Csikszentmihalyi, the optimal performance state in the sport and exercise environment is the optimal mental state reached as a result of the balance established between the abilities demonstrated by individuals during the physical activity and their perceived state, requirements or struggle at that moment (Jackson & Eklund, 2004). In other words, it is the inner pleasure of an individual resulting from a challenging task and feeling of having the required level of ability to handle such struggle and challenges. If the athlete has a high level of performance and high level of ability, they experience the optimal performance achieving the optimal performance state in case a challenging task is given.

Motivation is among the fundamental subject in sport psychology with an important role in explaining the behaviors in a sport environment. Particularly the efforts to present descriptive approaches regarding the reasons for engagement, maintenance of engagement and quit from the perspective of a sport activity (Hardy et al., 1997). The theory of independent will suggests three types of motivation: inner motivation, external motivation and lack of motivation (Deci & Ryan, 1985). Inner motivation is the most independent form of motivation which occurs when the individual involves in an activity they are interested in or feel pleasure doing it. On the other hand, individual with external motivation involves in an activity to achieve distinguishable results (Lonsdale et al., 2008). Besides all of these, people who fail to perceive the bond between their behaviors and the results of their behaviors suffer from lack of motivation. Those with lack of motivation can feel incompetency or lack of control (Pelletier et al., 1995). This study examines the sport motivation and continuous optimal performance state, as well as the relation between them, in players between the ages of 12 and 16 who is playing football in the U-13, U-14, U-15 and U-16 leagues.

2. Method

2.1. Sample

The study is applied on football players between the ages of 12 and 16 who were actively playing in several teams within the U-13, U-14, U-15, U-16 leagues under Turkish Football Federation and Amateur Sports Clubs Federation in Istanbul during the 2012-13 season.

2.2 Data Collection Tools

“Sport Motivation Scale”, “Dispositional Flow Scale-2” and “Personal Information Form” are applied to participants before and after the activities without any time limit.

Personal Information Form: In addition to demographic features of participants like age and gender, the Personal Information Form created by the researchers was used to identify data including active years in football and the position of the player.

Sport Motivation Scale: Sport motivation scale was developed by Pelletier et al. (1995). The sport motivation scale establishes the source of motivation for the individual by determining the internal, external motivation and the level of motivation in a sport environment based on the rating of answers given to items presented under the main question of “Why Do You Do Sports?” (Kazak, 2004). The scale is comprised of 28 items with seven sub-scales. These sub-scales are internal motivation to know and achieve; internal motivation to experience stimulus, external adjustment, introjection, identification and motivation.

Dispositional Flow Scale: “Dispositional Flow Scale-2 (DFS-2)” is to measure the overall optimal performance
state of individual who is engaged in an activity with an aim to evaluate the optimal performance experience frequency in engagement in the physical activity and sport. Developed by Jackson and Eklund (2004), the scale contains 36 items with 9 sub-scales. These sub-scales are Balance of Task Difficulty and Ability, Combination of Performance and Awareness, Clear Targets, Certain Feedback, Focus On Task, Concentration, Control Feeling, Reduced Self-awareness, Time Cycle, Experience of Achieving Target. The scale was adapted into Turkish by Aşçı et al. (2007).

2.3. Data analysis

SPSS was used for statistical data analysis. Descriptive statistics and Pearson simple correlation technique were used for the statistical analysis of collected data. The correlation applied was between the results of motivation scale and flow state scale. It is also applied by age, education and football history for both scales.

3. Findings and Discussion

| Age       | Frequency | Percent | Age       | Frequency | Percent |
|-----------|-----------|---------|-----------|-----------|---------|
| 12 years  | 16        | 12.8    | 15 years  | 12        | 9.6     |
| 13 years  | 37        | 29.6    | 16 years  | 26        | 20.8    |
| 14 years  | 34        | 27.2    | Total     | 125       | 100.0   |

The study population is composed of participants at the ages of 12 (12.8%), 13 (29.6%), 14 (27.2%), 15 (9.6%), and 16 (20.8%).

Table 2. Correlations between the sub-dimensions of sport motivation scale and Dispositional Flow scale

|                      | Balance of Task Difficulty and Ability | Combination of Performance and Awareness | Clear Targets | Certain Feedback | Focus On Task | Control Feeling | Reduced Self-awareness | Time Cycle | Experience of Achieving Target |
|----------------------|----------------------------------------|------------------------------------------|---------------|-----------------|--------------|-----------------|------------------------|------------|------------------------------|
| Internal motivation 1 | r 0.355                                | 0.259                                    | 0.525         | 0.277           | 0.273        | 0.358           | 0.059                  | 0.172      | 0.395                        |
| P 0.000*              | 0.004*                                 | 0.000*                                   | 0.002*        | 0.002*          | 0.000*       | 0.000*          | 0.056                  | 0.000*      |                              |
| N                    | 125                                    | 125                                      | 125           | 125             | 125          | 125             | 125                    | 125        | 125                         |
| Internal motivation 2 | r 0.275                                | 0.299                                    | 0.453         | 0.242           | 0.243        | 0.213           | 0.245                  | 0.360      | 0.356                        |
| P 0.002*              | 0.001*                                 | 0.000*                                   | 0.006*        | 0.006*          | 0.017*       | 0.006*          | 0.000*                 | 0.000*      |                              |
| N                    | 125                                    | 125                                      | 125           | 125             | 125          | 125             | 125                    | 125        | 125                         |
| External motivation 1 | r -0.149                               | -0.019                                   | 0.028         | -0.090          | 0.047        | -0.115          | 0.026                  | -0.145     | -0.006                       |
| P 0.097               | 0.834                                  | 0.755                                    | 0.316         | 0.604           | 0.201        | 0.771           | 0.107                  | 0.948      |                              |
| N                    | 125                                    | 125                                      | 125           | 125             | 125          | 125             | 125                    | 125        | 125                         |
| External motivation (identification) |                                    |                                           |               |                 |              |                 |                        |            |    |
In the correlation between the sub-dimension of internal motivation to know and achieve and the sub-dimension of continuous optimal performance state within the sport motivation scale, positive, highly significant relations were observed with sub-dimension excluding reduced self-awareness and time cycle.

In the correlation between the sub-dimension of external motivation and sub-dimensions of continuous optimal performance state, no significant relation was found for the external adjustment dimension while positive significant relation was observed between identification sub-dimension and the sub-dimensions of performance-awareness combination and clear targets as well as the introjection sub-dimension of external motivation and clear targets, control feeling and experience of achieving target among the sub-dimensions of continuous optimal performance state.

In the correlation between the motivation sub-dimension and sub-dimensions of continuous optimal performance state within the sport motivation scale, negative significant relations were observed between balance of task difficulty and ability, clear targets, certain feedback, control feeling and experience of achieving target.

Table 3. Correlations between the sub-dimensions of sport motivation scale and the player’s age, education and football history.

|                            | Age | Education | How many years have you been playing football? |
|-----------------------------|-----|-----------|-----------------------------------------------|
| N                           | 125 | 125       | 125                                           |
| External Motivation 1       |     |           |                                               |
| (external adjustment)       |     |           |                                               |
| r                           | 0.179 | 0.157     | -0.012                                        |
| P                           | 0.045* | 0.080     | 0.892                                         |
| N                           | 125 | 125       | 125                                           |
| Lack of Motivation          |     |           |                                               |
| r                           |     |           |                                               |
| P                           |     |           |                                               |
| N                           |     |           |                                               |

A significant relation between sub-dimensions of sport motivation scale and age criterion was identified only with the external motivation 1 (external adjustment) sub-dimension.

Based on the findings of this study conducted to establish the relation between the sport motivation and continuous optimal performance state in players between the ages of 12 and 16, positive, highly significant relations were observed with sub-dimension excluding reduced self-awareness and time cycle in the correlation between the sub-dimension of internal motivation 1 (internal motivation to know and achieve) and the sub-dimension of continuous optimal performance state within the sport motivation scale. Altuntaş et al. (2013) suggested a statistically significant, positive relation between the internal motivation & identification and optimal performance state in a study conducted. Russell (2001) conducted a study with 42 athletes to examine whether the optimal performance state varies by gender or sport type (individual or team sport) and concluded that there was no difference in the optimal performance states by gender; however, he identified that ratings for sub-dimension of performance-awareness combination of athletes in team sports were higher compared to the ratings of athletes engaged in individual sports. In addition, this result from the exercise participants is similar to the results of the studies conducted by Stavrou et al. (2007) and Murcia et al. (2008) on athletes between the ages of 16 and 38 and on adolescent athletes between the ages of 12 and 16, respectively. This finding suggests similar perceptions for the fulfillment of physical activity in male and female exercise participants and that both groups feel they are able to do the moves instinctively without thinking and also feel inner pleasure at similar levels from the activities they do by
focusing in that specific activity. On the other hand, the correlation between the sport motivation scale and age criterion within this study suggested a positive relation with only the sub-dimension of external motivation 1 (external adjustment). This result can be interpreted as the pressure, reward motivation, and desire to be respected increase with age. On the other hand, a statistically negative significant relation was identified between the optimal performance state and external adjustment & lack of motivation. In the correlation between the sub-dimension of lack of motivation and sub-dimensions of continuous optimal performance state, negative significant relations were observed between balance of task difficulty and ability, clear targets, certain feedback, control feeling and experience of achieving target. This result indicates that increased levels of external adjustment and lack of motivation for the players are associated with reduced optimal performance states. These findings are aligned with the result identified by Altıntaş A et al. (2013). A similar study result was identified as Kowall and Fortier (2000) suggested a negative relation between external motivation and optimal performance.

4. Results and Discussion

The results of the study and recommendations in light of these results are given below:

-A significant relation is observed between the optimal performance state and motivation. While a positive significant relation is observed between the sub-dimensions of internal motivation and external motivation within optimal performance state, a negative relation is identified with the external adjustment and lack of motivation dimension of external motivation. In the correlation with the sub-dimensions of motivation scale against the criteria such as age, education and years of playing football, a significant difference was observed only at the level of age and external motivation 1 (external adjustment) in football players between the ages of 12-16. Another study conducted suggested a significant difference at the level of external adjustment by gender with increased level of external adjustment in male athletes compared to female athletes.

References

Altıntaş, A., Kelecek, S. & Aççi, H. F., (2013). Relationships Between Situational motivation and Flow Experience in lite Athletes. Pamukkale Journal of Sport Science, 4, 14-21.
 Aççi, 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.
 Csikszentmihalyi, M., (1975). Beyond Boredom and Anxiety. Jossey-Bass, San Francisco.
 Deci, E. L. & Ryan, R. M., (1985). The general causality orientations scale: Self-determination in personality. Journal of Research in Personality, 19, 109-134.
 Hardy, L., Jones, G. & Gould, D., (1997). Understanding psychological preparation for sport: Theory and practice of elite performers. London, UK: John Wiley & Sons Ltd.
 Jackson, S. A. & Marsh, H. W., (1996). Development and Validation of a Scale to Measure Optimal.
 Jackson, S. A. & Eklund, R. C., (2004). The Flow Scales Manuel. Fitness Information Technology.
 Jackson, S. A., Kimicik, J. C., Ford, S. K. & Marsh, H. W., (1998). Psychological correlates of flow in Sport. Journal of Sport and exercise Psychology, 18, 17-35.
 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.
 Kazak, Z., (2004). A Study on Reliability and Validity of the Sport Motivation Scale –SMS- for Turkish Athletes. Hacettepe Journal of Sport Sciences, 15, (4), 191-206.
 Kivikangas, J. M., (2006). Psychophysiology of flow experience: An explorative study. Thesis, Department of Psychology, University of Helsinki.
 Kowal, J. & Fortier, M. S., (2000). Testing Relationships from the hierarchical model of intrinsic and extrinsic motivation using flow as a motivational consequence. Research Quarterly for Exercise and Sport, 71, 171-181.
 Lonsdale, C., Hodge, K., & Rose, E. A., (2008). "The Behavioral Regulation in Sport Questionnaire (BRSQ): Instrument development and initial validity evidence". Journal of Sport and Exercise Psychology, 30, 323-355.
 Moneta, G. B., (2004). The flow experience across cultures. Journal of Happiness Studies, 5, 2, 115-121.
 Murcia, J. A. M., Gimeno, E. C. & Coll, D. G., (2008). Relationship among goal orientations, motivational climate and flow in adolescent athletes: differences by gender. The Spanish Journal of Psychology, 11, (1), 181-191.
 Pelletier, L. G., Fortier, M. S., Vallerand, R. J., Tuson, K. M., Brière, N. M., & Blais, M. R., (1995). Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: The sport motivation scale (SMS). Journal of Sport and Exercise Psychology, 17, 35–53.
Russell, W. D., (2001). An examination of flow state occurrence in college athletes. *Journal of Sport Behavior, 24*, 1, 83-107.

Stavrou N. A., Zervas, Y., Karteroliotis, K., & Jackson, S. A., (2007). Flow experience and athletes’ performance with reference to the orthogonal model of flow. *The Sport Psychologist, 21*, 438-457.