THE EFFECT OF COGNITIVE FLEXIBILITY OF ATHLETES ON PERSON-ORGANIZATION

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Abstract:  
This study was conducted to determine the effect of cognitive flexibility of athletes on Person-Organization Fit. With this, it was aimed to determine the levels of cognitive flexibility and Person-Organization Fit of athletes and to show their differences according to their descriptive characteristics. This research was restricted to amateur soccer players and the athletes who played in amateur football teams in Kilis, Niğde, Karaman and Konya. A total of 269 athletes were given a personal information form, a cognitive flexibility scale and a Person-Organization Fit scale. It has been determined that cognitive flexibility in work is a determinant of individual organizational alignment. When the cognitive flexibility sub-dimensions are examined, it is determined that the ability to control cannot be related to the individual organization fit, and that the alternative solution making team influences the individual’s organization fit. Also in the study, cognitive flexibility and Person-Organization Fit did not differ according to the descriptive characteristics of the athletes, and the result was that the athletes were at similar level.

Keywords: amateur football players, cognitive flexibility, person-organization fit, athlete

1. Introduction

Cognitive flexibility refers to the ability of a person to front alternative choices in any situation and to adapt to new situations (Martin and Anderson, 1998:1-9). Cognitive flexibility is also a basis for cognitive awareness concept (Martin and Rubin, 1995:623-
Martin and Anderson (2001:69-76) expressed that people with high cognitive flexibility are in advance on formulating strategy. People with high cognitive flexibility are aware of the options, they can create ideas and opinions and they can adapt to new situations (Altunkol, 2011:1-80). In society, people face many problems, and they solve these problems via their learned abilities and cognitive mentality. Stevens (2009) stated that having high cognitive flexibility considerably increases the problem solving ability. Person-organization fit is defined as harmony is defined as the degree of similarity and similarity between person and organization values (Mitchell, 2006:26). Studies about person-organization have passed psychological science by the management. Since 1950s, harmony theories have been started to taken into consideration in topics such as job, job selection, organizational environment (Xiaojun ve Shizong, 2010:120).

Person-organization fit is known as one of the most popular topics investigated in the fields of management and organizational behavior. Person-organization fit includes the appropriateness of organizational qualities (goals, resources, values) and qualifications (targets, abilities, values) of individuals. The harmony between person and organization is gained through complementary and supplementary methods. Complementarity harmony is achieved when person and organization add characteristic features that are missing to complement one another. Supplementary harmony emerges at times when personality and organization characteristics are similar. Harmony in from the point of complementary is gained by organizations attracting people with similar values and targets. Complementarity harmony is achieved through satisfaction of the specific needs of the persons through the duties and resources provided by the organizations. The literature proves that person-organization fit is positively influenced by employee attitudes and behaviors. In this context, it is possible to say that the search for harmony between the organization and the employee makes the employees more satisfied and productive (Bright, 2007). It is noteworthy that cognitive flexibility and person-organization alignment are not related in the literature.

2. Cognitive Flexibility

Cognitive flexibility is defined as the ability to change cognitions according to changing environmental factors (Dennis and Vander, 2010: 241-253). In individuals with high cognitive flexibility, mentality tends to change negative thoughts that force the individual to be more compatible and positive. This adapts individuals to cope with difficulties and develop alternate perspectives. Individuals with high cognitive flexibility are more skilled at strategic thinking (Martin and Anderson, 2001:69-76). Martin and Rubin (1995:523-636) described cognitive flexibility as a basis for cognitive
awareness concept. Just like the rumination concept, the concept of cognitive flexibility has also been analyzed in connection with depression. Deveney and Deldin (2006: 43) stated that cognitive flexibility is associated with depression.

Cognitive flexibility can be summarized as the individual's ability to change perception or attitude towards a responsibility. Namely; while individuals with high cognitive flexibility allows making changes quickly and easily, individuals with low cognitive flexibility is difficult to change (Cox, 1980). This change can occur like approaching problems with alternative perspectives, adapting to new situations, or passing on another thought. Cognitive flexibility improves the communication power of the individual and the ability to establish relationships positively. In people with flexibility, self-confidence in interpersonal relationships is high. This allows the individual to believe that his attitudes and attitudes will bring successful results and feel safe in relationships. On the other hand, it is known that cognitive flexibility is related to competence expectancy (Bilgin, 1999: 7-15). Competence expectancy affecting feelings and thoughts has influence on one’s cognitive attitude.

Cognitive flexibility primarily involves three domains. These are the ability of perceiving the difficulties as feasible, the ability of perceiving the attitudes and manner can have possible alternatives (2), and the ability of showing different approaches to cope with the difficulties (3). In other words, cognitive flexibility can be defined as the situation of a person’s being aware of there are different alternatives, being adapted, belief on self-competency, and being willing to adapt to different situations and changes (Martin ve Anderson, 1998:1-9). Individuals with higher cognitive flexibility are usually highly responsive and enterprising.

They avoid being anxious or pessimistic attitudes in their preferences; on the contrary they logically approach to the existing options and make an effort to produce alternative options. These attitudes give them superiority in confronting innovations and coping with difficulties. Their self-confidence and self-efficacy appear especially in communication with individuals. They see themselves as fulfilling and skillful in the relationships, they tend to show alternative approaches to possible communication problems and adapt themselves to maintain communication. The effect of cognitive flexibility in an individual's communication show itself in emotional relationships. Emotional relationships, which are an important part of the disruptive socialization process and experience gaining communication with the opposite gender, play a teaching role in cognitively flexible behavior in the individual.
3. Person-organization Fit

Person-organization fit is defined as the similarity between a number of basic qualities such as values, goals, personality and attitude and a set of basic qualities such as culture, climate, values, goals and norms (Chatman, 1989 / Akti Polatci and Cindiloglu, 299-318). Person-organization fit is one of the building blocks of organizational behavior because individual and organizational factors represent two main areas of human relations. Individual and organizational factors are in constant mutual interaction. For this reason, person-organization fit is important in human relations research, theory and practice. It is aimed that theoretical studies on person-organization fit build person-organization integration in practice.

Many different approaches have been done on the classification of person-organization fit, but these approaches are often bear trace of classifications expressed by Kristof. According to Kristof, person-organization fit is the compatibility that occurs when three possible forms of interaction occur between persons and organizations. Kristof expresses these three possible interaction forms as (1) the situation of at least one of the sides supply the needs of the other side, (2) the situation of both sides having similar basic qualities, (3) the situation of both sides being together. This statement overlaps with four complementary and supplementary adaptation approaches by Muchinsky and Monahan and four different person-organization approaches including needs-supplies and demands-abilities approaches by Caplan and Edwards (Piasentin, 2007: 8-9).

3.1 Supplementary Fit

Supplementary harmony is defined as the character or qualities of a person overlapping or similar to the characteristics of the individuals in the rest of the organization. It has been observed that people have a more positive approach to their manners and attitudes when they accommodate themselves with the organization. In Piasent’s study (2007: 8-9), he arrayed these positive approaches as (1) increase in work efficiency, (2) organizational support feeling, organizational commitment, greater inclusion and satisfaction in work, (3) decrease in quitting the job or shelving to quit.

3.2 Complementary Fit

Complementary fit is the organization’s identification and preference of individuals who match its characteristic dynamics. Complementary adaptation of new individuals involved in the organization has an important place in generating effective workforce and loyalty to work.
Employee-organization fit which is an important example of person-organization fit is the situation of the opinion that employees are compliant with their qualities and organization qualities. These qualities can be listed as; the goals and needs of the individual and the organization, their mutual expectations, the identity of the individual and the systematic structure of the organization. The greater the overlap of these qualities, the more likely they tend to have the working-organization fit. Situations where the qualities do not overlap cause incompatibility. In the same way, the greater the common values of the employee and the organization, the greater the satisfaction of the employees' productivity and the ability to achieve the goals of the organization will be.

Employee-organization integration is directly related to attitudes such as job satisfaction, social integration, provision of task management, inadequacy of role ambiguity, organizational loyalty - sense of belonging, and reduced tendency to quit work (Gruman et al., 2006: 94). Studies in the literature on the subject indicate that employee-organization fit has positive results in terms of job efficiency.

Since primitive times, our ancestors have struggled with various difficulties such as survival, feeding, sheltering, and finding a partner. Over time, the human brain has evolved through the efforts to overcome these difficulties. Evolutionary psychology advocates that the cognitive skills of the brain are a biological endeavor to adapt to this environment and to tackle the challenges. As biological evolution continued, people faced different challenges and cognitive skills progressed.

We can observe the impact of the challenges on the development of cognitive skills in today’s societies, which have experienced different difficulties without a historical journey. For example, the cognitive skills of the communities living on the earthquake zone are higher than those of other societies. This ability is lost in societies accustomed to ready-to-eat foods, while communities without access to ready-to-eat food retain their primitive cognitive skills of providing nutritional needs through natural means.

In the light of these definitions, it can be said that the concept of cognitive flexibility and the approach of evolutionary psychology overlap. The cognitive flexibility that we call the ability to overcome by developing alternative perspectives against difficulties and adaptation to changing environmental factors provides the adaptation of human kind by being directed with the effect of evolution process.

The efficiency of cognitive flexibility depends on the person’s having alternative thinking skills. Individuals with this skill, rather than accepting organizational and other environmental phenomena in an absolute way, perceive themselves with an internalized and self-determined attitude, using a critical approach and using past experience and common sense. However, individuals who are far from cognitive...
flexibility and are more likely to accept situations and phenomena as they are, will have difficulty in adapting because they will not develop alternative perspectives when they are exposed to situations or phenomena different from their usual ones. Therefore, they will be more incapable in the face of difficulties, more unsolved to the problems, and weaker in the face of the changes. These approaches show that the individual’s critical thinking ability is not a simple component of cognitive flexibility; Critical thinking constitutes the backbone of cognitive flexibility.

Some of the researches on the determination of cognitive flexibility in the literature have been dealt with as "Task Switching" task. In these studies, participants are asked to follow their duties within the rules of the work by giving them tasks that are expected to be complemented with participant’s cognitive abilities rather than subjecting them to a certain scale or test. The researcher examines the participants' performance of this unexpected change and adaptation to the new situation by making changes in the task or the rules of the work that are expected to be done in the process. Higher cognitive flexibility ratings have been given to those who have adopted the new task more quickly and started working on it. It is anticipated that such shift-oriented directional studies, which are experimentally designed, will also affect the intra-organizational performance.

4. Method

4.1 Research Model
Relational screening model has been designed in order to reveal the correlation between person-organization fit and cognitive flexibility, and to define the level of cognitive flexibility and person-organization fit.

4.2 Working Group
Athletes in amateur football clubs of Kilis, Niğde, Karaman, and Konya have been taken as working group in the study. Range of descriptive features of the athletes is as follows;

<table>
<thead>
<tr>
<th>Tables</th>
<th>Groups</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>10-20</td>
<td>114</td>
<td>42.4</td>
</tr>
<tr>
<td></td>
<td>21-30</td>
<td>122</td>
<td>45.4</td>
</tr>
<tr>
<td></td>
<td>31-40</td>
<td>33</td>
<td>12.3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>269</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 1: Range of Descriptive Features of the Athletes
The athletes vary according to the age groups as; 114 (42.4%) of them are 10-20, 122 (45.4%) of them are 21-30, 33 (12.3%) are 31-40; according to the marital status variable, 43 (16.0%) are married and 226 (84.0%) are single; According to the educational status variable 128 (47.6%) of them are Primary education, 90 (33.5%) are high school, 38 (14.1%) are under graduate, 13 (4.8%) as a post-graduate; According to the variable of professional experience, 234 (87.0%) are 1-5, and 35 (13.0) of the participants are 6-10.

### 4.3 Data Collection Tools

A 20-item scale developed by Dennis and Vander Wal (2010) has been used to determine the level of cognitive flexibility in the study. The scale includes alternative thinking skills, harmonious and balanced thinking in the face of difficult situations. The expressions in the scale split into two- sub dimensions. These are alternative solution producing skill (1, 3, 5, 6, 8, 10, 12, 13, 14, 16, 18, 19, 20) and control tendency (2, 4, 7, 9, 17). The appropriateness of the scale to Turkish culture was analyzed by Gülüm ve Dağ (2012). In Gülüm ve Dağ (2012), they obtained internal consistency coefficient Cronbach Alpha = 0.900. In this study, the reliability of the scale was found to be 0.845.

Person-organization fit has been measured in the research with combination of scales which were developed by Cable, Judge and Person (1996) and Cable and DeRue (2002), and Netemeyer et al. (1997). The final reliability and validity test of the scale was conducted by Yıldız (2013). Yıldız has found the reliability of the scale as Cronbach alpha = 0.920, the factor load as 0.863 with revealing factor analysis of the scale and he has found as one factor. Yıldız has found the confirmatory factor analysis of the scale and goodness of fit as $X^2/\text{sd} = 1.619$; RMSEA= 0.000; GFI= 0.993; NFI= 0.996; CFI= 0.998. The reliability of the scale which consists 5 articles has been found high as 0.920.
4.4 Statistical Analysis of the Data
The data obtained in the study have been analyzed using SPSS (Statistical Package for Social Sciences) for Windows 22.0 program. Numerical, percent, mean, standard deviation have been used as descriptive statistical methods in the study. Correlations between individual organizational adjustment and cognitive flexibility were tested by correlation and regression analysis. Differences in individual organizational adaptation and cognitive flexibility levels according to their descriptive characteristics were analyzed with Anova and T-test. The findings have been evaluated at the 95% confidence interval and at the 5% significance level.

5. Findings and Commentary
In this section, descriptive statistics, correlation, regression, t-test, ANOVA tests were used to determine the correlation between individual organizational fit and cognitive flexibility, and the distribution of individual organizational fit and cognitive flexibility according to their descriptive features.

The level of "individual organization fit" of the athletes are weak as 2,325 ± 1,144; "The ability to produce alternative solutions" are as low as 2,298 ± 0,430; The "tendency to control" level are as low as 1,970 ± 0,521; The level of "cognitive flexibility general" is as low as 2,183 ± 0,422.

| Table 1: Correlation between Cognitive Flexibility and Person-organization Fit |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                | Mean           | Standard Deviation | Person-organization Fit | Ability to Produce Alternative Solutions | Tendency to Control | Cognitive Flexibility General |
| Person-organization Fit        | 2,325          | 1,144            | 1,000                    |                                 |                   |                               |
| Ability to Produce Alternative Solutions | 2,298          | 0,430            | 0,275**                   | 1,000                        |                   |                               |
| Tendency to Control            | 1,970          | 0,521            | 0,064                     | 0,657**                      | 1,000            |                               |
| Cognitive Flexibility General  | 2,183          | 0,422            | 0,210**                   | 0,946**                      | 0,867**          | 1,000                      |

There is a weak positive correlation between the Ability to Produce Alternative Solutions and person-organization fit (r = 0.275; p = 0.000 <0.05). There is a medium significant positive correlation between the Control Tendency and the ability to
produce an alternative solution \((r = 0.657, p = 0.000 <0.05)\). There is a very weak positive correlation between Cognitive Flexibility general and individual organizational fit \((r = 0.21, p = 0.001 <0.05)\). There is a very high positive correlation between cognitive flexibility and ability to produce general and alternative solutions \((r = 0.946; p = 0.000 <0.05)\). There is a significant, positive correlation between Cognitive Flexibility general and tendency to control \((r = 0.867, p = 0.000 <0.05)\). Correlations between other variables were not statistically significant \((p> 0.05)\).

**Table 2**: Cognitive Flexibility’s Effect on Person-organization Fit

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>(\beta)</th>
<th>(t)</th>
<th>(p)</th>
<th>(F)</th>
<th>Model (p)</th>
<th>(R^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-organization Fit</td>
<td>Stable</td>
<td>1.085</td>
<td>3.011</td>
<td>0.003</td>
<td>12.291</td>
<td>0.001</td>
<td>0.040</td>
</tr>
<tr>
<td></td>
<td>Cognitive Flexibility General</td>
<td>0.568</td>
<td>3.506</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The performed regression analysis has been found statistically significant which is conducted to determine the cause effect relationship between cognitive flexibility and general organizational fit \((F = 12.291, p = 0.001 <0.05)\). It has been found that it has a weak (explanatory power) correlation with the general variables of cognitive flexibility \((R^2 = 0.040)\) as a determinant of organizational fit. The general level of cognitive flexibility of the athletes increases the level of individual organizational fit \(\beta = 0.568\).

**Table 3**: Cognitive Flexibility Sub-Dimensions’ Effect on Person-organization Fit

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>(\beta)</th>
<th>(t)</th>
<th>(p)</th>
<th>(F)</th>
<th>Model (p)</th>
<th>(R^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person-organization Fit</td>
<td>Stable</td>
<td>0.709</td>
<td>1.955</td>
<td>0.052</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ability to Produce Alternative Solutions</td>
<td>1.090</td>
<td>5.308</td>
<td>0.000</td>
<td>14.700</td>
<td>0.000</td>
<td>0.093</td>
</tr>
<tr>
<td></td>
<td>Tendency to Control</td>
<td>0.141</td>
<td>1.052</td>
<td>0.294</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The performed regression analysis has been found statistically significant which is conducted to determine the cause effect relationship between ability to produce alternative solutions, the tendency to control, and person-organization fit \((F = 14.700; p = 0.000 <0.05)\). The ability to produce alternative solutions as a determinant of individual level of organization fit was found to be weak \((R^2 = 0.093)\) in relation to the variables of tendency to control (explanatory power).

The level of ability of the athletes to produce alternative solutions increases the level of person-organization fit \(\beta = 1.090\). The level of tendency to control of the athletes does not affect the level of person-organizational fit \((p = 0.294> 0.05)\).

**Table 4**: Range of Cognitive Flexibility and Person-Organization Fit According to
It has been determined that person-organization fit, the ability to produce alternative solutions, the tendency to control, the cognitive flexibility general scores of the athletes do not significantly differ according to age, marital status, educational status, work experience (p>0,05). The athletes’ person-organization fit and cognitive flexibility show resemblance according to descriptive features.

6. Discussion

The general cognitive flexibility level of the athletes has been determined to be weak. When similar studies in the literature have been examined; Pesce, Tessitore, Casella, Pirritano and colleagues (2007) emphasized that football players have a higher level of
decision-making and executive functions, especially attention-seeking flexibility for football players. Similarly, Taddei, Bultrini, Spinelli, and Di Russo (2012) also have studies indicating that managerial functions and cognitive flexibility are higher in the athletes. In this respect, it is necessary to obtain comparable data with equivalent results in order to evaluate the results.

As cognitive flexibility increases, the ability to produce alternative solutions significantly increases. Relevant studies indicate that competition increases the ability to produce alternative solutions, cognitive flexibility is also positively affected (Eriksen, 1995). So the obtained finding is not surprising. Similarly, the athletes’ ability to produce alternative solutions level increases the level of person-organization fit. Problem solver person’s fit to organization is accepted to effect this result. Chan (1996) was seen to indicate that problem solving ability is also useful for adaptation to the organization.

Another finding is that as the cognitive flexibility increases, the tendency to control also significantly increases. It is stated that a certain sports branch increases the control of stability (Cisek, 2006). The increase in control also increases the skills for cognitive activities. From this point of view, it is possible to say that the result is in accordance with the literature.

The cognitive flexibility level of the athletes increases the level of person-organization fit. It is emphasized that especially prejudices of the individual, the ability to cope with the problem, and the situation-related disability perceptions should be evaluated within the context of cognitive flexibility (Edwards and Rothbard, 1999). Within the scope of the study, similar results have been achieved. As a result, as the cognitive flexibility increases, the level of competence of the athletes to produce alternative solutions increases the level of the person-organization fit. The tendency to control significantly increases as the cognitive flexibility increases. The increase in control also increases the skills for cognitive activities. Individuals who show inappropriate adaptability and flexibility may be provided with counseling services and contributions to ensure they have corrective relations. It is believed that the athletes can be more successful in their personal, social, academic and professional lives by increasing their level of happiness and flexibility.

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