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Examination of Problem Solving Skills of Volleyball Trainers

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Abstract

This study was carried out in order to determine how the problem solving skills of volleyball trainers are shaped based on several variables. In line with this purpose; 136 volleyball trainers, whose average of age is 24.52 ± 3.35, were included in the scope in 7 provinces which are Kahramanmaraş, Adana, Osmaniye, Mersin, Hatay, Gaziantep and Kayseri. The trainers were informed of the content of the study and those, who want to participate as volunteers, were included in the research group.

Problem solving inventory, developed by Heppner and Petersen (1982) and validity and reliability of which were made by aylan (1990), Şahin, Şahin and Heppner (1993) and Çam (1995), was used in the study. Cronbach Alpha internal consistency coefficient was found as 0.83 in this study, and analyses were made through the total point. Dual comparisons (independent sample) belonging to the independent variables obtained from problem solving inventory were analysed via t-test, while multiple comparisons were analysed by unidirectional variance analysis (ANOVA) for the data showing normal distribution, and by non-parametric test Kruskal Wallis H test for the data not showing normal distribution. Statistical meaningfulness degree was accepted as alpha (α) while level of error was accepted as $p<0.05$.

Pursuant to the findings obtained from the study data; problem solving skills of volleyball trainers have shown differences based on the variables taken into consideration. According to the results of the study; it is determined that problem solving skills of volleyball trainers do not statistically constitute meaningful differences as per gender variable; however, there are statistically meaningful differences among the trainers included in study group in terms of the following variables: their education status, participation in competitions as athletes, years of coaching, coaching level and attitudes of their parents towards them. In addition to the qualities and skills of athletes, trainers are also significant factors in their sportive success. The trainers should be ready to meet the personal and individual needs.

Keywords: *Problem solving skills, Trainer, Volleyball.*

Introduction

Individuals suggest psychological and learned solutions, which they develop in accordance with their characteristics to overcome obstacles and problems they come across, and employ the one that could be suitable.

According to Bingham (1998), efficient problem solving is utilizing and combining past lives, observations and emotions as beneficial forces to overcome a challenging situation. Another description suggests that problem solving

is a cognitive and behavioural process which includes generating efficient reaction options and employing the most useful one to overcome a problematic situation (D'Zurilla and Goldfried, 1971). Problem solving is also defined as a process containing a series of efforts that has cognitive and psychological aspects towards the removal of obstacles to achieve a certain goal (Oguzkan, 1989). On the other hand, Heppner and Krauskopf (1987) prefer to use "problem solving" as a synonym for the concept of coping with a problem. Personal problem solving in real life is defined as a series of target oriented cognitive, affective and behavioral processes in order to adjust to internal or external desires.

Various methods can be employed once faced with a problem;

Utilizing Instincts: It is the solving of the problem via instincts. It is more common in animals. *Trial and Error:* A person reacts in many ways once faced with a problem. The individual, without taking into consideration the reason of a problem, choses the one that leads to the purpose and tries to renew it and discharges the others. This type of problem solving is not qualified as a conscious learning method. *Memorisation based solution:* People use only the methods they successfully used in the past. If the new solution is similar to the ones they solved before, they can also easily solve it with little effort and thought put into it. However, as problems are often different, the use of this method solely does not bring success. *Benefiting from the lives of the others:* We either get help from others or refer to the works of others when solving a problem. *Reasoning method:* It is the most reliable problem solving method. Benefiting from the lives of the others method is more beneficial when employed with this method. Reasoning is a form of thinking. When the mind engages in reasoning against a problem, it employs all or a few of this methods or processes (Binbasioglu, 1987; Yurttas, 2001).

When faced with a specific problem, analysing and decision making skills gain importance. In addition, individuals can develop their own methods on problem solving and decision making with the light of their own personalities, the way they were brought up and what they learned at school, without even knowing it (Arnold, 1992). Actually, problem solving skill is a learnable skill like other skills. Therefore, the first thing required in solving personal and organisational problems is knowing the problem solving process (Güclü, 2003).

During the course of problem solving, many problems may arise in the individuals' way of approaching the problem, acquiring, keeping, using information related to the problem. Negative attitudes and approaches not only prohibit cognitive flexibility, control of emotions and creativity, but also they increase the level of stress in the individuals. A positive or negative attitude towards a problem can reflect positively or negatively on solution related results (Elliot, Shewchuk and Richards, 2001). Complex problems both provide a chance for psychological development and pose a threat for psychological ailments (Yurttas, 2001).

Problem solving is a work of time, effort, energy and practice. It is very diverse action in that it is related to the individual's needs, purpose, values, beliefs, skills, habits and tendencies and that it combines aspects such as creative thinking and intelligence, emotion, will and action (Taylan, 1990). It is also directly proportional to the individuals' tendency to solve problems, courage, desire and inner emotions (Budak, 1999).

Being often held under intensive pressure both physically and psychologically, sports events, competitions and training environments

may put the trainers on the spot for the solution of various problems. Therefore, considering the significance of trainers who are important in sports environments for the players, trainers' problem solving skills become an important issue in order to meet the requirements of the job.

This study aims to determine how the volleyball trainers' problem solving skills shape according to a set of variables.

Methods

Study Group

The study group consists of 136 volleyball trainers from Kahramanmaras (16), Adana (23), Osmaniye (11), Mersin (28), Hatay (16), Gaziantep (18) and Kayseri (24) with a mean of age; 24,52 ± 3,35. After explaining the content of the study to the trainers, those wishing to participate voluntarily were included in the sample group. The survey method aims at gathering information and describing the individuals' characteristics, backgrounds or current behaviours as for the study pattern.

Data Collection Tools

The problem solving inventory developed by Heppner and Petersen (1982) and tested in terms of validity and reliability by Taylan (1990), Sahin, Sahin and Heppner (1993) and Cam (1995) was employed in the study. Problem Solving Inventory is a 35-clause, 1-6 point Likert type scale. The scale is as follows; (1) I always act this way, (2) I mostly act this way, (3) I often act this way, (4) I sometimes act this way, (5) I scarcely act this was, (6) I never act this was. The answers are assigned points from 1 to 6. The clauses 9, 22 and 29 are not scored. The survey is scored on 32 clauses. The clauses 1, 2, 3, 4, 11, 13, 14, 15, 17, 21, 25, 26, 30 and 34 are scored inversely. The points are inverted as 6=1, 5=2, 4=3, 3=4, 2=5 and 1=6 while scoring these clauses. During scoring, while, in positive factors (Thoughtful Approach, Evaluative Approach, Self-Confident Approach and Planned Approach) low scores show efficiency in problem solving, high scores show the inability to come up with efficient solutions against problems. In negative factors (Hasty Approach, Evasive Approach), high scores stand for a tendency to use these factors more in the concept of problem solving. The score range in the scale is 32-192. The Cronbach Alpha internal consistency coefficient value in the study was found to be 0.83 and analyses were made based on the total points.

Data Analysis

Data obtained via survey from the 136 trainers participating in the study has been examined statistically by the SPSS package program.

The binary comparisons of independent variables obtained from the problem solving inventory have been analysed with t-test, while in multiple comparisons, the data showing normal distribution has been analysed with one way variant analysis (ANOVA) and the data not showing normal distribution has been analysed with a non-parametric test, Kruskal Wallis H test. Statistical meaning ratio has been considered to be alpha (α) while mistake ratio has been considered to be $p<0.05$.

Results

The data and statistical analysis obtained from the study group is presented in tables.

Table 1. Problem solving skill levels according to the gender variable (t-test)

Gender	N	Mean	Sd	t	p
Male	52	87.84	20.47	-.316	.753
Female	84	88.90	16.27		

According to the Table 1, there is no statistical difference in problem solving skills based on the gender variable in the study group.

Table 2. Problem solving skill levels according to the variable as to whether they participate in competitions as players (t-test)

Have you participated in competitions as a player?	n	Mean	Sd	t	p
Yes	102	83.77	19.76	3.449	.001*
No	34	93.81	13.94		

**p<0.05*

According to the Table 2, there is a statistically significant difference in problem solving skills according to the variable as to whether they participate in competitions as players.

Table 3. Problem solving skill levels according to the education status variable (t-test)

Education status	n	Mean	Sd	t	p
University	112	86.35	18.33	-4.098	.000
High School	24	98.50	11.77		

**p<0.05*

According to the Table 3, there is a statistically significant difference in problem solving skills based on the education status variable in the study group.

Table 4. Problem solving skill levels according to the years as a trainer variable (t-test)

How many years have you been a trainer for	n	Mean	Sd	F	p	Diff. LSD
(a) 1-5 years	52	91.26	16.83	5.479	.001*	c<2.1
(b) 6-10 years	50	89.16	18.07			
(c) 11-15 years	34	83.29	18.75			
Total	136	88.50	17.93			

**p<0.05*

According to the Table 4, there is a statistically significant difference in problem solving skills based on the years as a trainer variable in the study group.

Table 5. Problem solving skill levels according to the trainer rank variable (Kruskal Wallis)

Your trainer tank	n	Mean	Sd	X^2	p
(a) 1st rank (assistant trainer)	36	90.00	17.38	2.908	.234
(b) 2nd Rank (trainer)	88	89.27	17.74		
(c) 3rd Rank (senior trainer)	12	85.00	20.48		
Total	136	88.50	17.93		

According to the Table 5, there is no statistically significant difference in problem solving skills based on trainer rank variable in the study group.

Table 6. Problem solving skill levels according to family's financial status variable (Kruskal Wallis)

Your and/or your family's financial status	n	Mean	Sd	X^2	p	Diff. U test
1. Bad	20	104.80	9.82	22.849	.000*	1>2.3
2. Moderate	108	85.66	18.17			
3. Good	8	86.00	8.12			
Total	136	88.50	17.93			

**p<0.05*

According to the Table 6, there is a statistically significant difference in problem solving skills based on the family's financial status variable in the study group.

Table 7. Problem solving skill levels according to the mother's attitude variable (Kruskal Wallis)

Your mother's attitude towards you	n	Mean	Sd	X^2	p	Diff. U test
1. Authoritarian	20	84.73	21.72	17.930	.000*	2>3 4>2.3
2. Protective	60	91.25	15.09			
3. Democratic	48	85.20	3.27			
4. Negligent	8	108.50	.53			
Total	136	88.50	17.93			

**p<0.05*

According to the Table 7, there is a statistically significant difference in problem solving skills based on the mother's attitude variable in the study group.

Table 8. Problem solving skill levels according to the father's attitude variable (Kruskal Wallis)

Your father's attitude towards you	n	Mean	Sd	X^2	p	Diff. U test
1. Authoritarian	24	87.16	16.54	17.561	.001*	1<4 2<4 3<4
2. Protective	52	83.84	17.69			
3. Democratic	44	89.00	17.81			
4. Negligent	16	104.25	12.48			
Total	136	88.50	17.93			

**p<0.05*

According to the Table 8, there is a statistically significant difference in problem solving skills based on the father's attitude variable in the study group.

Discussion and Conclusion

The data obtained the study group was analysed and it has led use come to the following conclusions;

No statistically significant difference was found in problem solving skills based on the gender variable of the study group. The analysis has shown that there is no difference between the problem solving skills of female and male volleyball trainers (Table 1). This conclusion is parallel with the studies of Heppner et al (1983), Güler (2006), Gültekin (2006) and Arin (2006). On the other hand, it is considered to be contradictory with the studies of Brems and Johnson (1988), Katkat (2003), Cilingir (2006), Germi and Sunay (2006), which show a difference in problem solving skills between genders. As an inference from the literature, the approach of trainers from different branches in different groups towards problems in their own sports environment may have caused this difference.

In the analysis made according to the variant as to whether the study group participated in competitions as a player, there is a statistically significant difference between the problem solving skill levels according to the mean score they got (Table 2). According to this, it is clear that having participated in competitions as players in this branch before beginning their career as a trainer can have a positive contribution towards overcoming problems they face and their problem solving skills in their training process. Therefore, it is

possible to say that experiences in dealing with problems as an individual or a team during their player period contribute to the problem solving skills of their cognitive approach during their career as a trainer.

The results of the analysis made according to the study group's training status variable show a statistically significant difference in favour of the trainers who are graduates in the problem solving skill levels of volleyball trainers (Table 3). According to this, the information and experience the volleyball trainers gain during education may have positively affected their approaching skills against problems. Studies by Kasap (1997), Eroglu (2001), Albayrak (2002), Katkat (2005) in the literature show results in the same way as that of the current study. The results are similar in the years as a trainer variable. The study results show that there is a difference in the problem solving skills of those with less experience in training and those who have been practising their profession for a longer time (Table 4). The experience, practice and savings of the trainers who have faced various situations over the years may have helped them gain some feats on how to overcome stressful and problematic circumstances. Therefore, it is reasonable to say that more experienced trainers have better problem solving skills.

There was no difference between the groups according to the analyses based on the trainer rank variable. As a result supporting the aforementioned, the knowledge and experience the volleyball trainers obtain over the course of their career increase their problem solving skills in each trainer experience rank they progress. However, even though the mean scores of problem solving skill levels of 1st Rank, 2nd Rank and 3rd Rank volleyball trainers are relatively different, this is not a statistically significant difference (Table 5). The problem solving skill levels of 3rd Rank trainers are more positive.

There is a statistically significant difference in problem solving skills according to the financial status of the study group's family and/or your. Trainers describing their financial status as Bad compared to those describing theirs as Moderate and Good seem to have a lower problem solving skill level as well (Table 6). Trainers who are forced to maintain their daily lives in financial distress may tend to exercise evasive and unconfident approaches towards problems they face in sports environment. There are studies in the literature showing that the problem solving skill increases as the level of income increases (Cilingir, 2006; Eroglu, 2001; Kasap, 1997).

The analyses on the variable as to the attitude of the study group's mothers and fathers show differences in problem solving skill levels in both variables (Table 7, Table 8). The analysis results show that individuals who are subject to the attitudes of negligent parents tend to have a more negative problem solving skill. The current study findings are parallel to some studies in the literature (Basmaci, 1998 and Terzi, 2000). Considering the importance of parents' attitudes and behaviours in personality development, comprehending events and family environment ever since childhood and the fact that learned information and approach styles may contribute to positive developments with cognitive acquisitions in the family environments, the results of the study show that parents' attitudes have an indirect effect on problem solving skill levels.

A fundamental condition concerning the sports to achieve the desired level is having knowledgeable, skilled, qualified and well-trained trainers who can perform on every level. Educating and improving trainers who will provide training in various sports branches in a model based method on the features of the sports branches is a must (Cushion, Armour and Jones, 2003).

An effective trainer is the one who can carry out a successful performance or can get positive psychological reactions. Since trainers not only affect the players'

the physical performance, but also their psychology, they must be ready to meet the players' many personal or individual needs. Therefore, in addition to technique, knowledge and skills, trainers need to play many other roles in the players' lives such as leader, friend, teacher, role model, boundary setter, psychologist and mentor (Women in Higher Education, 2006). The trainers must find themselves ready to meet the needs and expectations of the players individually and as a team. In order to achieve that, they must increase their own trainer skills and knowledge level to an optimal level and contribute to the player performance positively.

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