Impact of Psychological Variables on Playing Ability of University Level Soccer Players

Dr. Ertan Tufekcioglu,
King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia

Dr. Abdussalam Kanniyan,

Dr. Mustafa Said Erzeybek,

Dr. Fatih Kaya

ABSTRACT

The purpose of the study was to find out the relationship between psychological variables and soccer playing ability among the university level male players. 42 soccer players representing different universities who participated in inter university competitions were selected as the subjects of the study. The dependent variable was soccer playing ability and independent variables were the selected psychological variables. Soccer playing ability was determined through a 10 point scale at the time of competitions. Psychological variables included achievement motivation, anxiety, self-concept and aggression. The data was statistically analyzed using Karl Pearson's correlation coefficient and multiple regression analysis using SPSS. It was concluded that soccer playing ability has a positive correlation with achievement motivation and self-concept whereas anxiety and aggression have a negative correlation with soccer playing ability.

Key words: Soccer Playing Ability, Anxiety, Self-Concept, Achievement Motivation, Aggression.

INTRODUCTION

Better knowledge of psychological traits for each sport can expand the perceptions and communications between the players and coaches and therefore performance. Recent researches have attempted to ascertain psychological characteristics of various categories of people practicing sports, adopting different measures of personality assessment. Psychological variables play a dominant role in deciding the performance level of soccer players, athletes and players (Anshel, 1997).

Researches into sports psychology and performances suggest that the best performers tend to have: higher levels of self-confidence, more task-oriented focus, and control over their anxiety levels, more determination and commitment (Woodman, Lew, 2003). Self-efficacy or self-concept can affect motivation in terms of the amount of effort a performer puts in, and how long they persist at a task (Bandura, 1977).

Arousal has different effects on sports performance depending on cognitive anxiety. Anxiety state is determined with tension fear, unrest, attitude, excitement and automatic nervous system activity. Arousal will increase performance when cognitive anxiety is low, but may lead to a sudden catastrophic decline in

performance when cognitive anxiety is relatively high (www.pearsonschoolsandfecolleges.co.uk).

Recently, researchers have begun to study the effect of specific mental preparation on motor performance. Some of the more popular techniques include imagery, self-efficacy statements, attentional focus, preparatory arousal, and relaxation. In addition, several recent techniques such as stress inoculation training and visuo-motor behavior rehearsal use a combination of the techniques.

The Mental Health Model (MHM) of sport performance purports that an inverse relationship exists between psychopathology and sport performance (Raglin, 2001).

It is important to find out the correct psychological variables and its levels complying with different sports to achieve peak performance which can result in a higher correlation between the physical performance test and actual game performance (Weinberg, 1981).

Some athletes experience pre-competition anxiety. While most athletes will experience some, too much anxiety will interfere with their performances (Krane, 1992). This may negatively affect their ability to achieve peak performance. The advanced sports and games techniques have greatly influenced the psychological factors of the standard of players.

In our study we examined the correlations between psychological variables and playing soccer ability of university level players.

METHOD

Forty two university soccer players who represented their concerned university in inter university competitions were selected as the subjects. All subjects were informed about the study procedures and provided informed consent. The data was collected on achievement motivation, anxiety, self-concept and aggression in 8 weeks of competition period beginning in 2011. For measuring achievement motivation, SAMT (Sports Achievement Motivation Test) designed by Kamlesh (1990) was used. For Anxiety, Competitive State Anxiety Inventory-2 (CSAI-2), by Martens et al, (1990) was used. For Self-confidence, questionnaire developed by Agnihotry (1987) was used. For Aggression, the aggression questionnaire designed by Buss and Perry (1992) was used.

The data was collected from players during the pre-competition training period. The data was collected from all players during the same period and also under identical conditions. Soccer playing ability was determined through a 10 point scale at the time of competitions. Scores were calculated as per the norms of the test. The data was analyzed using Karl Pearson correlation coefficient and multiple regression analysis using SPSS 14.

RESULTS

Table 1. Correlation coefficient between psychological variables and soccer playing ability

		Achievement motivation	Anxiety	Self-concept	Aggression
Soccer	r	0.694 (**)	-0.6264(**)	0.4454(**)	-0.4632(**)
playing	p	0.000	0.000	0.0015	0.009
ability	N	42	42	42	42

Table 1 shows the correlation coefficient between psychological variables and soccer playing ability. Since the correlation coefficient of achievement motivation and self-concept are positive, there exist a positive relationship between soccer playing ability and these variables. At the same time, there is also negative relationship between playing ability with the other two variables namely anxiety and aggression.

Table 2. Multiple regression analysis of soccer playing ability with achievement motivation, anxiety, self-concept and aggression.

Independent Variables	Regression Coefficient	SE of Regression coefficient	t-value	p-value
Constant	6.7047	5.0039	1.3399	0.1873
Achievement Motivation(X1)	0.3617	0.0790	4.5767	0.0000
Anxiety (X2)	-0.3143	0.1451	-2.1653	0.0360
Self-concept(X3)	0.4307	0.1170	3.6814	0.0006
Aggression(X4)	-0.0257	0.1134	-0.2270	0.8215

R=0.8074, R^2 =0.6518, AdjustedR^2=0.6195, F (4.43)=20.1320, p<0.05, S, Std.

Table 2 indicates that, the linear effect or influence of achievement motivation and self-concept of university level soccer players were found to be positive and statistically significant ($p < 0.05$). But the influence anxiety was found to be negative and statistically significant at 0.05 level of confidence. However, the influence of aggression was found to be negative and statistically not significant ($p > 0.05$).

The multiple linear regression equation predicting the playing ability of college level soccer players (Y) in terms of achievement motivation (X1), anxiety (X2), self-concept (X3), and aggression (X4) was found to be under: playing ability (y) = 6.7047+0.3617X1-0.31432+0.4307X3-0.0257X4. The multiple 'R' of the linear regression education was 0.08074. For testing multiple correlation coefficients the 'F'-ratio

(20.1320) was found to be significant at 0.05 level. Significant 'R' suggests that the estimation of the playing ability is possible on the basis of the predictors' achievement motivation (X1), anxiety (X2), self-concept (X3) and aggression (X4). Further, the regression education showed that achievement motivation (X1), anxiety (X2), self–concept (X3), and aggression (X4) can be used as predictors of playing ability of college level soccer players.

The coefficient of multiple determination of R^2 is 0.6518. It can be therefore, be said that nearly 65.18 percent of the variation in playing ability of college level soccer players accounted for whatever was measured by achievement motivation (X1), anxiety (X2), self-concept (X3), and aggression (X4) taken together.

The SE for the regression equation was 1.8987. This means that each time the regression equation for the sample is used to predict playing ability; the chances are about 1 in 2 that predicted playing ability will not miss the actual playing ability of the college level soccer players by more than that of 1.8987. The relative contributions of achievement motivation (X1),anxiety (X2), self-concept (X3), and aggression (X4) independent variables in terms of proportions of variance predicted by each were determined and are given in the following table.

Table 3. Relative contribution of achievement motivation, anxiety, self-concept and aggression on playing ability of soccer players

Independent variables	r-value	Beta value	r.x beta	% of contribution
Achievement motivation(x1)	0.6258	0.5085	0.3182	31.8207
Anxiety (x2)	-0.6161	-0.2575	0.1587	15.8653
Self-concept (x3)	0.4464	0.3640	0.1625	16.2503
Aggression (x4)	-0.4631	-0.0271	0.0125	1.2534
			0.6518	65.1897

Table 3 indicates that 65.1897% of variance in the criterion variable was accounted by 31.8207% of variance in the criterion variable was accounted by 31.8207% in achievement motivation (x1), of 16.2503 percent in self-concept (x3) 15.8653% in anxiety (X2) and 1.2534% in aggression (X 4). Thus the achievement motivation (X1) contributed better than the remaining three potent predictors. Next factor that contributed better for predicting the playing ability of collage level soccer players was self-concept (X3) as its percentage is 16.2503.

DISCUSSION

Psychological factors like anxiety, aggression and motivation are playing a significant role in the present sports and games. In our study we examined the correlations between psychological variables and playing soccer ability of university level players. This study indicated the significant effect of psychological factors on playing ability of university level football players.

Anxiety may affect processing efficiency rather than task effectiveness. Anxious athletes have to work harder to maintain the same level of performance they would display if they were not anxious (www.pearsonschoolsandfecolleges.co.uk).

Some of the determinants of motivation are self-concept and personal goal-setting. They are also considered as predictors of performance. Our results supported the mediating role of self-concept between achievement motivation and performance (Theodorakis, 1995).

In this study, psychological factors such as anxiety and aggression have negative correlation on the performance of soccer player. Level of anxiety and aggression affecting each player differently may also be put in to account in future studies. Achievement Motivation and Self-concept correlated with performance significantly. Practical implications of the findings are discussed.

CONCLUSION

The results of the study showed that there was significant and positive relationship between achievement motivation and playing ability of the college level soccer players. However, there was significant and negative relationship between anxiety and playing ability of the college level soccer players.

It also showed that there was significant and positive relationship between self-concept and playing ability of the college level soccer players. In addition there was significant and negative relationship between aggression and playing ability of the college level soccer players. Future directions for research are offered for the development of an effective psychological model to predict performance in sport.

REFERENCES

Agnihotri, R. (1987). *Manual for Agnihotri's Self-Confidence Inventory (ASCI)*, National Psychological Corporation, 4/230 Kacheri Gate, Agra, India.

Bandura, A. (1977). *Self-Efficacy: Toward a Unifying Theory of Behavioral Change*, Psychological Review, 84: 191-215.

Buss, A.H, Perry, M.P. (1992). *The Aggression Questionnaire*, Journal of Personality and Social Psychology, 63: 452-459.

Raglin, J.S. (2001). *Psychological Factors in Sport Performance*, Sports Medicine, 31(12): 875-890.

Krane, V. (1992). *Minimizing Anxiety in the Competitive Environment*, Coaching Volleyball, 28-29.

Anshel, M.H. (1997). *Sport Psychology: From Theory To Practice* 3RD Edition, Gay L Pauley.

Martens, R, Burton, D, Vealey, R.S, Bump, L.A, Smith, D.E. (1990). *Development and Validation of The Competitive State Anxiety Inventory-2 (CSAI-2)*, In R. Martens, R. S. Vealey, & D. Burton (Eds.), *Competitive Anxiety in Sport* (pp. 117-173). Champaign, IL: Human Kinetics.

Kamlesh, M.L. (1990). *Manual of Sports Achievement Motivation Test*, NIS Scientific Journal, 13(3): 28-39.

Weinberg, R.S. (1981). *The Relationship between Mental Preparation Strategies And Motor Performance: A Review And Critique*. Quest (33(2): 195-213.

Theodorakis, Y. (1995). *Effects Of Self-Efficacy, Satisfaction And Personal Goals On Swimming Performance*, The Sport Psychologist, 9, 245-253.

www.pearsonschoolsandfecolleges.co.uk/*Feandvocational/Sportsstudies/Alevel/Edexcelalevelpe2008/Samples/Samplepagesfromedexcela2pestudentbook/Edexcel%20A2%20PE_SB_CH02_090209.Pdf*

Woodman, T, Lew, H. (2003). *The Relative Impact of Cognitive Anxiety and Self-Confidence upon Sport Performance: A Meta-Analysis*, Journal Of Sports Sciences, 21(6): 443–457.