

## INVESTIGATION OF DECISION MAKING AND PROBLEM SOLVING ABILITIES OF AMATEUR SPORTSMEN DURING THE COMPETITION<sup>5</sup>

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### ABSTRACT

In this study, it was aimed to investigate decision making and problem solving abilities of football players in super league during the competition. 101 sportsmen of 6 teams voluntarily participated in the study who finished the league as first two, middle two and last two and played football in super amateur league of 2012-2013 season in Muğla. "Melbourne Decision Making Scale I-II" developed by Mann et al. (1998) was used in order to investigate decision making ability of sportsmen during the competition and "Problem Solving Inventory" developed by Heppner and Petersen (1982) was used to determine their problem solving abilities. A negative correlation ( $r = -.261^*$ ) was determined between problem solving abilities and avoidant levels of amateur league football players. Avoidant levels in individuals playing football in amateur leagues do not show parallelism with problem solving levels in competition or out of competition. As a result; it was found that amateur football players with high self-respect had high level of decision making and those who had inadequate self-respect and self-esteem values escaped from the events during the competition and had shy behavior.

**Key Words:** Football, Decision Making, Problem Solving

### AMATÖR FUTBOLCULARIN MÜSABAKA ANINDA KARAR VERME VE PROBLEM ÇÖZME KABİLİYETLERİNİN İNCELENMESİ

### ÖZET

Bu çalışmada süper amatör küme futbolcularının müsabaka anında karar verme ve problem çözme kabiliyetlerinin incelenmesi amaçlanmıştır. Çalışmaya Muğla ilinde 2012-2013 sezonunda süper amatör kümede futbol oynayan, ligi ilk iki orta ve son iki sırada bitiren 6 takımın 101 sporcusu gönüllü olarak katılmıştır. Sporcuların müsabaka anındaki karar verme kabiliyetlerini incelemek için Mann ve ark. (1998) tarafından geliştirilen "Melbourne Karar Verme Ölçeği I-II" ile problem çözme kabiliyetlerini belirlemek için Heppner ve Petersen tarafından geliştirilen "Problem Çözme Envanteri (Heppner ve Petersen 1982) kullanılmıştır. Amatör küme futbolcularının problem çözme becerileri ile kaçınanlık düzeyleri arasında negatif korelasyon ( $r = -.261^{**}$ ) saptanmıştır. Amatör liglerde futbol oynayan bireylerin müsabaka veya müsabaka dışında kaçınanlık düzeyleri ile problem çözme düzeyleri arasında paralellik bulunmamaktadır. Sonuç olarak; amatör futbolcularda; öz saygısı yüksek olan bireylerin karar verme düzeylerinin yüksek olduğunu, müsabaka anındaki durumda olaylardan kaçan, utangaç yapıya sahip olan futbolcuların öz saygılarının ve benlik değerlerinin yetersiz düzeyde olduğu bulunmuştur.

**Anahtar Kelimeler:** Futbol, Karar Verme, Problem Çözme

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## INTRODUCTION

Since people are social beings, they come face to face with many small or big problems that should be solved and they have to make a selection. The most important property that separate them from each other is the ability to make a decision and to solve a problem. Problems might be simple or complex, short or long-term depending on the crux of the problem. In addition to this, economical, emotional and physical problems are also present in human lives and these various types of problems interact with each other and become more complex (Cüceloğlu, 1999).

When one comes face to face with decision making process, it is mostly not possible to assess all possible choices, the properties of each choice and their possible results simultaneously. For this reason, these processes are carried out according to an order. The order of processes might leave an indelible impression on decisions (Hastie and Dawes, 2001; Newell et al., 2004). Decision making is an orientation that lets up "when there are more than one way take the individual to the object to meet his/her need" or "while it is not certain for that object to be a suitable target or not to meet the need" (Kuzgun, 2000). Decision making is one of the most important life skills present in all activities of human life. While sound decisions suitable for situations result in positive changes in human life, misjudgments might affect his/her life negatively. All these situations are also discussed for sportsmen. The sportsmen should adjust their positions and motions in the court, ring or gym according to both position and motions of opponents and situations of their team-mates (Gurcay, 1998).

Problem solving ability, on the other hand, helps individuals and group to

comply with their environment effectively. For this reason, all people should learn problem solving in order to comply with the environment they live in effectively. While there are correct answers or exact solutions of some problems, the solutions of some problems are not exact. The solutions of these problems necessitate interdisciplinary information, life-wide thinking and creativeness (Senemoglu, 1997). Problem solving ability is a learnable ability as other abilities. It is inevitable to meet with some obstacles in daily life and some problem solving methods are tried to negotiate them. Most of the energy and time of people are consumed for problem solving and decision making periods (Korkut, 2004).

As it is the case in all branches of sports, decision making and problem solving abilities are also important in football. Football necessitates rapid decision making during the play and behaviors that require responsibility in fulfilling tactical duties. Football information and tactical experiences of team players are very important in terms of success. The football player should present immediate and correct responses during unexpected and unprepared positions encountered during the play in the field and under the repression of opponents and similarly, he should repress his opponents and shock them with confronted surprise positions (Heddergott, 1977).

When a football player comes into action, there are two possible actions. He will either dribble or will make a pass at someone. For this, he should make a decision first. He requires some information in order to make this decision (Baser, 1994). In the studies, it can be understood that decision making has a significant effect on problem solving.

The aim of this study was to determine the decision making and problem solving abilities of football players in super amateur league during competitions.

## METHOD

Among 12 teams in 2012-2013 Mugla Super Amateur league, 6 teams (Ortaca Municipality Sports, Akyaka Municipality Sports, Dalyan Municipality Sports, Yatağan Municipality Sports, Marmaris Municipality Sports, New Milas Sports) were randomly determined and survey model was applied. Totally 108 sportsmen including 18 ones from each team participated in the survey. The questionnaires which were deficient and wrong were eliminated and just 101 of them were taken into consideration. In the research, Melbourne Decision Making Inventory developed by Mann et al., (1998) and adapted to Turkish by Deniz (2004) was used in order to determine decision making levels of sportsmen while Problem Solving Inventory developed by Heppner and Petersen (1982) and adapted to Turkish by Taylan (1993), Savasir and Sahin (1997) was used in order to determine the problem solving levels of sportsmen.

**Melbourne Decision Making Inventory (MDMI):** In this research, "Melbourne Decision Making Questionnaire I-II" whose validation and reliability studies were carried out was applied to the football players. Melbourne Decision Making Questionnaire: Melbourne Decision Making Questionnaire the original of which was developed by Mann et al., (1998) was then adapted to Turkish by (Deniz 2004) and its validation and reliability studies were performed. The grading was carried out as 2 points for "Correct", 1 point for "Sometimes Correct" and 0 point for "Not Correct"

answer. The maximum grade that can be taken from the questionnaire is 12 points. Higher grades are indicators of high self-respects in decision making. The II<sup>nd</sup> Part constituted of 22 items and there were four sub-factors (Deniz 2004). These sub-factors were;

**Careful Decision Making Style:** is a situation for an individual to search necessary information delicately before decision making and to make a selection after assessment of alternatives carefully. This factor was defined with six items (2, 4, 6, 8, 12, 16).

**Avoidant Decision Making Style:** is a situation for an individual to avoid from decision making and to be in a tendency to leave decisions to others and thus to climb out of making decision by hand over the baton to others. This factor was defined with six items (3, 9, 11, 14, 17, 19).

**Postponer Decision Making Style:** is a situation for an individual to postpone, to delay and to leave in fabian persistently without showing a valid reason. This factor was defined with five items (5, 7, 10, 18, 21).

**Panicky Decision Making Style:** is a situation for an individual to effort reaching immediate solutions with impatient behaviors by feeling himself under repression when he comes face to face with a decision case. This factor was defined with five items (1, 13, 15, 20, 22).

**Problem Solving Inventory (PSI):** It was developed by Heppner and Petersen by taking problem solving stages such as "general orientation", "definition of problem" "alternative production", "decision making" and "assessment" into consideration revealed as a result of various researches in order to determine how he perceives himself about his competence in problem solving as well as dimensions of problem solving method (Heppner and Petersen, 1982).

Turkish translation of inventory was first carried out by Akkoyun and Öztan, then by Taylan, Savaşır and Şahin (Taylan,1993; Savaşır, Şahin , 1997). PSI constitutes of 35 items and is a six-point likert scale graded between 1 and 6.

In statistical analysis of the data, SPSS 18.0 software program was used in

computer environment. The average values and standard deviations of the data were calculated and the relationship between them was investigated after correlation. Level of significance was taken as  $p < 0.05$  –  $p < 0.01$ .

## RESULTS

Table 1. Marital Status, Educational Background, Level of Income and Sports Year of football players

Demographics	Variables	F	%
Marital Status	Married	10	9.9
	Single	91	90.1
Educational Background	High school	36	35.6
	University	65	64.4
Level of Income	0-999 TL	52	51.5
	1000-1499	30	29.7
	1500-1999	11	10.9
	2000-2499	5	5.0
	2500 and above 2500	3	3.0
Sports Year	1-5 years	12	11.9
	6-10 years	57	56.5
	11-15 years	23	22.6
	16-20 years	8	8
	20 and above 20 years	1	1
Total		101	100

As it can be seen in Table 1, it was observed that 90% of sportsmen were single and 64.4% of them were graduated from university.

When levels of income belonging to sportsmen in the study were investigated, the level of income

belonging to 51.5% of them was between 0–999 TL and when they were grouped according to their years in sports, it was found that sports year of 56.5% of them was in the range of 6 – 10 years.

Table 2. Correlation between variables

No	Variable	1 (S-R)	2 (CDM)	3 (ADM)	4 (PoDM)	5 (PaDM)	Problem Total
1	Self-respect	1	.360*	-.238	-.108	-.231*	-.076
2	Careful Decision Making		1	-.355**	-.135	-.253*	-.111
3	Avoidant Decision Making			1	.493**	.643**	-.261**
4	Postponer Decision Making				1	.527**	-.190
5	Panicky Decision Making					1	-.096

$P < 0.05$ \*,  $p < 0.01$ \*\*

A positive correlation ( $r=.360^{**}$ ) was determined between careful decision making levels and self-respect levels of amateur football players. Self-respect in individuals playing football in amateur leagues shows parallelism with careful decision making in competition or out of competition.

A negative correlation ( $r=-.238^*$ ) was found between avoidant levels and self-respect. Self-respect in individuals playing football in amateur leagues does not show parallelism with avoidant levels in competition or out of competition.

A positive correlation ( $r=.493^{**}$ ) was found between postponer decision making and avoidant levels of amateur league football players. Avoidant levels of football players show parallelism with postponer decision making in competition or out of competition.

A negative correlation ( $r=-.231^*$ ) was determined between panicky levels and self-respect levels of amateur league football players. Self-respect levels in individuals playing football in amateur leagues do not show parallelism with panicky levels in competition or out of competition.

A negative correlation ( $r=-.253^*$ ) was determined between panicky levels and careful decision making of amateur league football players. Careful decision making levels in individuals playing football in amateur leagues do not show parallelism with panicky levels in competition or out of competition.

A positive correlation ( $r=.643^{**}$ ) was found between panicky levels and avoidant levels of amateur league football players. Avoidant levels of football players playing in amateur league show parallelism with panicky levels in competition or out of competition.

A negative correlation ( $r=-.261^*$ ) was determined between problem solving abilities and avoidant levels of amateur

league football players. Avoidant levels in individuals playing football in amateur leagues do not show parallelism with problem solving levels in competition or out of competition.

## DISCUSSION and CONCLUSION

This research was aimed at determining decision making and problem solving abilities of super amateur league football players during competition.

According to the findings of our research, the answers of 101 amateur football players participated in our survey were considered and a positive correlation ( $r=.360$ ) was found between careful decision making levels of amateur football players and their self-respect levels. It can be concluded that the individuals with high self-respect have high decision making levels.

When our results were taken into consideration, it can be seen that many studies in literature show parallelism with our study. There is a positive correlation between self-respect and decision making. It can be resulted that people with high self-respect also have high immediate decision making abilities.

In another different study, it was determined that the people with high self-respect decided correctly and they used logical strategy more in this situation (Tiryaki 1997).

It was stated by Deniz (2004) together with Mann et al., (1998) that there was a positive significant relationship in decision making between self-respect and careful decision making style.

It was determined by Guçray (2003) that the individuals with low self-respect were prevented to assess systematically and logically and to make decision and on the other hand, the people with high self-respect had lower difficulty in making decision and experienced less stress.

In a study performed by Brown and Mann (1991), it was indicated that individuals with high self-respect were more adequate and qualified in decision making behavior and moreover, they thought more systematically and detailed while deciding.

In the study of researcher Katkat, it was determined that as education levels increased, problem solving abilities also increased. These results are in accordance with those of our study (Katkat, 2005).

Lukmana and Maksum (2014), in their study, have showed that there was significant relationship between sport activity and problem solving skill of college students.

Basak et al. (2014), have aimed to identify the effects of sports on the student female nurses' problem-solving skills and academic achievement. This study found that students practice the following approaches toward the problem-solving process: considering, evaluation, self-confidence and planning. Well-developed problem-solving skills are significant for school nurses for efficient and high-quality health care services.

Acar et al. (2013), in their study, have aimed to research problem solving skills and non-functional attitudes of children who train for football. As a result of this study, they have showed that it was determined that football exercises applied in this study positively affect problem solving skills and non-functional attitude levels of participants.

Hristovski et al. (2012), in their study about problem solving, have showed that in general they emphasize that analysis of the performer-environment system can provide a full account of the emergence of creative behaviors in sport performance contexts.

After a literature survey, studies including a negative correlation

between avoidant levels and self-respect, a positive correlation between postponer properties and avoidant levels, a negative correlation between panicky levels and self-respect levels, a negative correlation between panicky levels and careful decision making of sportsmen, a positive correlation between panicky levels and avoidant levels of sportsmen, a negative correlation between problem solving abilities and avoidant levels of sportsmen were not encountered. Therefore, this study will be new information in literature.

Consequently; it was observed that individuals among amateur football players having high self-respect had high decision making level and those who escape from the events during competition and have shy personality had self-respect and self-esteem at inadequate levels. It can be concluded that sportsmen who are shy and unsocial had postponer attitude towards decision making as expected whereas sportsmen who are self-confident, take risk in foregone difficulties and control critical situations had inevitable low panicky levels. Individuals having high panicky levels for any events except competition cannot decide carefully and sportsmen having high panicky behavior displayed during competition revealed shy and avoidant personality correspondingly. For football players having inadequate problem solving ability on any subject, increasing situations might be expected such as being shy at that event, escaping, taking risk and being under pressure.

It can be also concluded that football players in Mugla super amateur league cannot have healthy decisions at any panicky situation during competition and problem solving abilities of sportsmen who had avoidant decisions during instant decisions.

## REFERENCES

1. Acar, K., Akandere, M., & Bastug, G. (2013). A study of problem solving skills and non-functional attitudes of children who get training for football. *Turkish Journal of Sport and Exercise*, 15(3), 69-74.
2. Başer E. (1994), 'Futbolda Psikoloji ve Başarı', Sporsal Kuram Dizisi 4,13-45-78-84-92, Ankara [In Turkish]
3. Basak, T., Kok, G., Unver, V., & Cevirmez, D. (2014). Effects of the Sports Activities of Female Nursing Students on their Problem-Solving Skills and Academic Achievement. *International Journal of Caring Sciences*, 7(2), 583.
4. Brown Ej., Mann L. (1991) "The Relationship Between family Structure and Process Variables and Adolescent Decision-Making", *Journal of Adolescence*, 13: 25-37.
5. Cüceloğlu D. (1999) "İnsan ve Davranışı". Remzi Kitapevi. 219-221- 222-277. İstanbul [In Turkish]
6. Gürçay S. S. (1998) ".Aile Ve Arkadaşlardan Algılanan Sosyal Destek, Bireyler Arası İlişkilerde Yeterlik ve Karar Verme ilişkileri". *Psikolojik Danışma ve Rehberlik Dergisi*. Cilt 2, sayı 9, [In Turkish]
7. Deniz, M. (2004). Investigation Of The Relation Between Decision Making Self-Esteem, Decision Making Style And Problem Solving Skills Of University Students. *Eurasian Journal of Educational Research (EJER)*, (15).
8. Gürçay S.S. (2003) The Analysis of Decision Making behaviors and Perceived Problem Solving in Adolescent, *Çukurova University Faculty of Education Journal*, 2, 2, Article 5.
9. Hastie Dawes (2001), *Newell, Rakow, Weston and Shanks*, (2004).
10. Heddergott K. H. (1977) "Neue Fussball Lehre", 5.Auflage, Limpert Verlag gmbh., BadHamburg
11. Heppner, P.P. & Petersen, C.H. (1982). "The Development And Implications Of A Personal Problem Solving Inventory." *Journal Of Counseling Psychology*, 29(1), 66-75.
12. Hristovski, R., Davids, K., Passos, P., & Araújo, D. (2012). Sport performance as a domain of creative problem solving for self-organizing performer-environment systems. *The Open Sports Sciences Journal*, 5, 26-35.
13. Katkat D. (2005) Türkiye profesyonel Futbol Liglerindeki Antrenörlerin Liderlik Yönelim Analizleri ve Problem Çözme Becerileri. *Yayımlanmamış Doktora Tezi*. Gazi Üniversitesi Sağlık Bilimleri ve Spor Anabilim Dalı. Ankara [In Turkish]
14. Korkut F. (2004) "Okul Temelli Önleyici Rehberlik ve Psikolojik Danışma", Anı Publications, Ankara [In Turkish]
15. Kuzgun Y. (2000). "Meslek danışmanlığında kuramlar ve uygulamalar". Nobel Publication Distribution Ankara. [In Turkish]
16. Lukmana, R. C. H., & Maksun, A. (2014). Hubungan Antara Aktivitas Olahraga Dengan Kemampuan Memecahkan Masalah. *Jurnal Pendidikan Olahraga dan Kesehatan*, 2(1).
17. Mann L., Radford M., Burnett P., Ford S., Bond M., Leung K., Nakamura H Vaughang., Yang K.S. (1998) Cross-Cultural Differences in Self-Reported Decision-Making Style and Confidence, *International Journal of Psychology*
18. Savaşır İ., Şahin N. H.(1997) *Bilişsel- Davranışçı Terapilerde Değerlendirme: Sık Kullanılan Ölçekler*, Turkish Psychologists Association Publications, Ankara. [In Turkish]
19. Senemoğlu N.(1997) "Gelişim, Öğrenme ve Öğretim": Ertem Printing. Ankara [In Turkish]
20. Taylan S. ( 1993). "Heppner'in Problem Çözme Envanteri' nin Uyarlama, Geçerlik ve Güvenirlik Çalışmaları. *Unpublished Master's Thesis*. A.U. Graduate School of Social Sciences. Ankara [In Turkish]
21. Tiryaki M.G. (1997) "Üniversite Öğrencilerinin Karar Verme Davranışlarının Bazı Değişkenler Açısından incelenmesi", Investigation of Decision Making Behaviors of University Students in terms of different Variables", Hacettepe University Graduate School of Social Sciences Department of Psychological Counseling and Guidance, *Unpublished Master's Thesis*, Ankara [In Turkish]