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The Role of Career Plans in the Relationship Between Sport Science Students' Sportive Self-Regulation Levels and Effective Decision Making in Sport

Ali Rıza ATICI*[1], Mustafa Kayıhan ERBAŞ[1], Hande YAZICIOĞLU ÇALIŞAN[1]

[1]*Aksaray University, Faculty of Sports Science, Aksaray, Türkiye*

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ABSTRACT
Sport science students need to develop a range of personal and professional skills such as self-regulation, effective decision-making and career planning in order to improve both their academic and athletic performance. In particular, self-regulation involves the process of planning, implementing and evaluating one's behavior in order to achieve one's goals. The aim of the study is to examine the role of career awareness in the relationship between sport self-regulation levels of Sport Sciences students and effective decision making in sport. The model of the study is the relational survey model among the survey models. The research group consists of a total of 225 students, 104 female and 121 male, studying in Sports Sciences. Descriptive analysis, regression analysis and correlation analyses were used in the analysis process. For multiple regression, the mediation relationship was analysed using the SPSS PROCESS Macro v4.2 plug-in developed by Hayes. There is a weak and positive relationship between the level of career planning and the level of sportive self-regulation ($r=-.271;p<0.5$); a weak and positive relationship between the level of career planning and the level of effective decision-making in sport ($r=.221;p<0.5$); a weak and positive relationship between the level of sportive self-regulation and the level of effective decision-making in sport ($r=-.173;p<0.5$). As a result, it was concluded that Sport Sciences students make more effective career decisions if their sportive self-organization is high.

1. INTRODUCTION

Sport science students need to develop a range of personal and professional skills such as self-regulation, effective decision-making and career planning in order to improve both their academic and athletic performance. In particular, self-regulation involves the process of planning, implementing and evaluating one's behavior in order to achieve one's goals [1]. This process includes elements such as motivation, attention management and emotional control and has been an important research topic, especially in the field of sport.

Self-regulation is defined as the capacity of an individual to postpone or suppress emerging behaviors, tendencies and desires, to comply with social rules, to control and regulate emotions, to focus on a goal-oriented stimulus and to sustain attention [2,3,4]. Self-regulation facilitates individuals to achieve long-term goals, cope with difficulties and lead a successful life. Sport self-regulation supports individuals' capacity to maintain their motivation, increase their performance and develop their strengths. In the literature, it is stated that this skill positively affects not only athletes' physical performance but also their mental endurance and learning processes [5].

It is seen that individuals with developed self-regulation skills are more determined to achieve sporting success and can effectively manage the challenges they face. Jonker et al. [5] examined how self-regulation skills differ in different sports branches and levels and found that especially in team sports, individuals need more complex self-regulation strategies to adapt to both individual and group goals. In addition, in individual sports, it is emphasized that athletes need to constantly evaluate their own performance and adjust their strategies accordingly. In this context, self-regulation is a critical skill that improves the physical, mental and emotional aspects of athletes.

Decision making is critical at all levels of the sporting world, from athletes to coaches and

*Corresponding author
*e-mail : hendri.uingusdur.ac.id
ORCID ID: 0009-0003-5488-8252

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referees. The dynamic, efficient and pressure-filled atmosphere in the sport environment makes decision-making processes both mentally and emotionally demanding. Therefore, research on decision-making in sport sciences can contribute to improving performance and achieving better results. Effective decision making in sport is the ability to quickly and accurately resolve complex situations encountered in sporting activities. This process is a critical success factor in both individual and team sports. Effective decision making is directly related to the athlete's knowledge, experience and game intelligence [6]. In the literature, it is emphasized that effective decision-making is based on a wide range of information, comprehensive and stress management plays an important role [7]. It is stated that the processes of effective decision-making skills in sport and the use of professionalism have a great impact. Professional athletes are generally able to make faster and more accurate decisions than new athletes. This is mainly because professional athletes have a broad knowledge base and experience. This allows them to process complex information on the field more effectively [8]. For example, a skilled tennis player can anticipate his opponent's next move from his actions and position himself accordingly. Furthermore, stress and pressure management plays an important role in effective decision making. Sport environments often present situations of high stress and pressure. The capacity of athletes to resolve correctly under this pressure can be exploited through their resilience and recordability of stress management [9].

Career planning allows individuals to determine their long-term goals, develop their professional orientations and take strategic steps to achieve these goals. Career planning is seen as a motivating factor on individuals' self-regulation and decision-making skills [10]. It is observed that individuals with a clear career plan use their sport self-regulation skills more effectively and act more consciously in decision-making processes [11]. For sport science students, career planning is a fundamental tool that will enable them to cope with professional challenges they may face in the future.

In this study, it was aimed to examine the relationship between sport science students' sport self-regulation levels and their effective decision-making levels in sport and to determine the role of career plans in this relationship. In this context, in the light of the studies on sport self-regulation, effective decision making and career planning in the literature, it is aimed to provide suggestions for the professional development of sport sciences students. The study is expected to contribute to the fields of sport sciences education and career development and to help individuals become more conscious and successful individuals in both their sport and professional lives.

The aim of the study is to examine the role of career awareness in the relationship between sport self-regulation levels of Sport Sciences students and effective decision making in sport.

The hypothesis of the study is that career planning acts as a mediator between sport self-regulation and effective decision making in sport. That is, students with high levels of sport self-regulation (compared to those with low levels) exhibit more effective decision-making behaviour through career planning.

2. MATERIALS AND METHODS

The model of the study is the relational survey model among the survey models. Relational screening models aim to determine the presence and / or degree of change between two or more variables together. models [12].

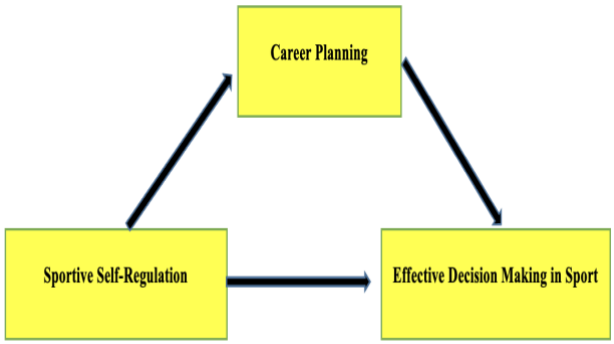

Figure 1. Research model

2.1. Research group

The research group consists of a total of 225 students, 104 female and 121 male, studying in Sports Sciences.

2.2 Data Collection Tools

2.2.1. Sportive Self-Regulation Scale (Ssrs)

The scale consisting of 18 items developed by Akeren and Çingöz [13] is used to measure the self-regulation skills of undergraduate students while engaging in at least one sport. The theoretical background of the scale is based on Zimmerman's Self-Regulated Learning Model. In validity and reliability studies, it was determined that the scale has a cyclic three-factor structure. Cronbach Alpha internal consistency coefficient

implementation, evaluation) respectively. The two-half reliability was found to be .88. In addition, in

the test-retest reliability study conducted on 53 students, a high value of .98 was obtained.

2.2.2. The Scale of Effective Decision-Making in Sport (Sedms)

The scale consisting of 15 items and 2 sub-dimensions developed by Çetin and Kara [14] was developed to measure the effective decision-making levels of 18 and over licensed athletes. In validity and reliability studies, it was determined that the scale has a cyclic two-factor structure. Cronbach's alpha internal consistency coefficient was calculated as .87 for the ''External Decision Making'' sub-dimension and .85 for the ''Internal Decision Making'' sub-dimension.

2.2.3. Career Planning Scale of Students Studied in Sports Sciences (CPS)

Yavuz-Eroğlu and Eroğlu [15] used the 'Career Planning Scale (CPS) of Students Studying in Sports Sciences'. This measurement tool consists of 23 items and is divided into 5 sub-dimensions. The sub-dimensions are Career Awareness (1, 4, 5, 7, 8, 9, 10, 11, 15), Professional Awareness (12, 13, 14, 17), Belief in Career (20, 21, 22, 23), Accuracy of Choice (2, 3, 6) and Adequacy of Education (16, 18, 19). The Likert coding of the scale was made as '1= Strongly disagree, 2= Disagree, 3= Undecided, 4= Agree, 5= Strongly Agree' as in the original. Career planning awareness was calculated by paying attention to Likert scoring. Accordingly, between 1-2,5 was accepted as low career awareness, between 2,51-3,5 as average career planning awareness and between 3,51-5 as high career awareness.

2.3. Analysis of Data

Descriptive analysis, regression analysis and correlation analyses were used in the analysis process. For multiple regression, the mediation relationship was analysed using the SPSS PROCESS Macro v4.2 plug-in developed by Hayes.

The statistical significance of the effects in the model was analysed using PROCESS Macro in IBM SPSS 26 with 5000 Bootstrap samples. While the significance level was set at 0.05, Hayes' contemporary approach was adopted in the analyses. In this approach, it is prioritised to evaluate the indirect effect directly with the Bootstrap test. That is, paths a, b, c or c' do not have to be significant on their own; the 95% confidence interval of the indirect effect does not include zero, which indicates a mediation effect. This is a more flexible method that does not require the sequential steps of the traditional Baron and Kenny approach [16]. PROCESS Macro reduces the margin of error by analysing complex models including mediator and moderator variables in one go. In this way, it is possible to evaluate mediating and moderating effects more accurately [17]. In this study, a more comprehensive analysis was made thanks to this feature.

3. RESULTS

Table 1. Percentage-frequency values of demographic information of the sample group

Variables		f	%
Gender	Woman	104	46.2
	Male	121	53.8
Age	18-21	134	59.6
	22-27	78	34.7
	28 and above	13	5.8
Classroom	1st Class	27	12.0
	2 st Class	52	23.1
	3 st Class	98	43.6
	4 st Class	48	21.3
Section	Teaching	83	36.9
	Coaching	77	34.2
	Management	65	28.9
Year of Sports	1-3 year	36	16.0
	4-6 year	44	19.6
	7-9 year	70	31.1
	10 and above year	75	33.3

While 46.2% of the participants were female (n=104) and 53.8% were male (n=121), 59.6% were 18-21 years old (n=134), 34.7% were 22-27 years old (n=78), 5. 8% were aged 28 and over (n=13), 12% were in 1st grade (n=27), 23.1% in 2nd grade (n=52), 43.6% in 3rd grade (n=98), 21.3% in 4th grade (n=48). grade (n=48), 36.9% of them studied physical education teaching department (n=83), 34.2% of them studied coaching department (n=77), 28.9% of them studied management department (n=65), 16% of them had 1-3 years (n=36), 19.6% of them had 4-6 years (n=44), 31.1% of them had 7-9 years (n=70), 33.3% of them had 10 and more years (n=75) of sports experience.

It is reported in the relevant literature that the skewness/ kurtosis values of the data in Table 2 are between -1.5 and +1.5, and that the skewness/ kurtosis values are between -1.5 and +1.5, indicating a normal distribution of the data [18].

According to Table 3, when the Cronbach's Alpha coefficients of the reliability analysis results of the scales are analyzed, it is seen that the scales have very high reliability.

In the study, KMO values were .890, .799, .797 respectively. Since all scales (890, .799, .797)>0.60 and Barlett's test result was significant (p<0.001), it shows that the scale is suitable for factor analysis (Table 4).

Table 2. Skewness and kurtosis values for normality test

Scales	N	Average statistics	Kurtosis		Skewness	
			Statistics	St.error	Statistics	St. error
Sportive Self-Regulation	225	4.162	7.568	.323	-1684	.162
Effective Decision Making in Sport	225	3.591	2.824	.323	.720	.162
Career Planning	225	4.207	6.203	.323	.691	.162

Table 3. Reliability analysis for scales

Scales Applied	Cronbach's Alpha	Number of questions
Sportive Self-Regulation	%88.8	18
Effective Decision Making in Sport	%84.3	15
Career Planning	%86.1	23

Table 4. Validity analysis for the scales

Scales Applied	Kaiser-Meyer-Olkin (KMO)	Barlett	Total Explained Variance
Sportive Self-Regulation	.890	.000	%66.973
Effective Decision Making in Sport	.799	.000	%59.867
Career Planning	.797	.000	%67.273

Table 5. Correlation Analysis Results of the Relationship Between Career Planning Levels, Sportive Self-Regulation Levels and Effective Decision Making Levels in Sport

		Career Planning (M)	Sportive Self-Regulation (X)	Effective Decision Making in Sport (Y)
Career Planning (M)	r	1	**.271****	**.221****
	P		.000	.000
Sportive Self-Regulation (X)	r		1	**.173****
	P			.000
Effective Decision Making in Sport (Y)	r			1

According to Pearson's correlation analysisgiven in Table 5, it is seen that there is a low level and positive relationship between students' career planning levels and sport self-regulation levels (r=-.271;p<.0.5); a weak level and positive relationship between career planning levels and effective decision making in sport (r=.221;p<0.5); and a weak level and positive relationship between sport self-regulation levels and effective decision making in sport (r=-.173;p<0.5).

Table 6. Regression analysis to determine the mediating effect of career planning

Model		Unstandardized Coefficients		Standardized Coefficients	t	p
		β	Std. error	β		
	(Fixed)	3.115	.367		8.491	.000
1	Sportive Self-Regulation (X)	.177	.067	.177	2.638	.009
2	Career Planning (M)	.308	.077	.269	4.018	.000

Dependent Variable: Effective Decision Making in Sport

The total, direct and indirect effect values of the mediating effect of career planning in the relationship between sportive self-regulation and effective decision making in sport are given in Table 7.

Table 7. Total, direct and indirect impact

Career Planning (Intermediary Effect)	Total Impact	Direct Impact	Indirect Impact	Bootstrap Confidence İnterval
Sportive Self Regulation ⬇ Effective Decision Making in Sport	.25	.1769	.0731	.2368-.8496

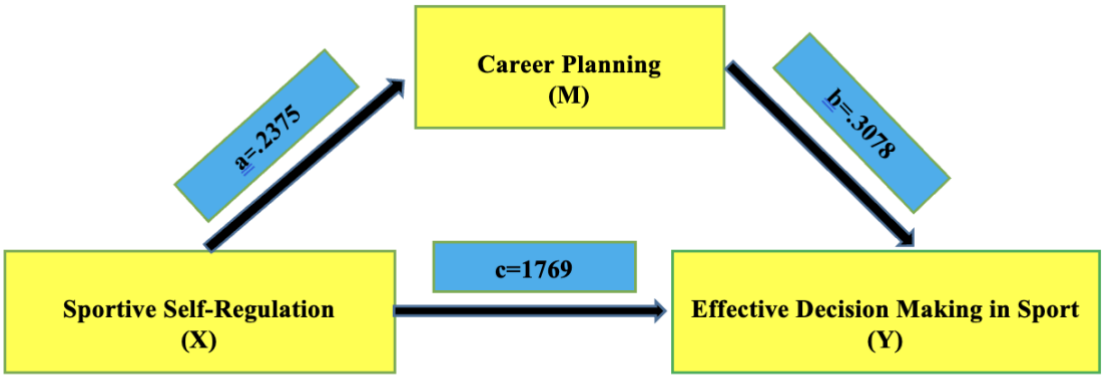

Figure 2. Representation of application example results on the model

PROCESS Model 4 was used with 5000 resampling and 95% confidence interval options to determine whether career plans of Sport Sciences students have a mediating role between sport self-regulation and effective decision on average than students with low levels; this situation positively affected their effective decision-making behaviours in sport. As a result, sport self-regulation indirectly affects students' decision-making behaviours in sport through career planning

4. DISCUSSION

PROCESS Model 4 was used with 5000 resampling and 95% confidence interval options to determine whether career plans of Sport Sciences students have a mediating role between sport self-

regulation and effective decision on average than students with low levels; this situation positively affected their effective decision-making behaviours in sport. As a result, sport self-regulation indirectly affects students' decision-making behaviours in sport through career planning.

The findings obtained in the study were compared and discussed with the scientific results in the literature. It is seen that students with high levels of self-regulation make more effective decisions by considering their career plans. According to these results, our hypothesis was

accepted. It is seen that students who are self-regulated in sports can make more effective decisions while making career planning.

Abdi et al. [19] examined the relationship between self-regulation and career planning of high school students. According to the results of the study, they found a positive and significant relationship between self-regulation and career planning. Eun et al. [20] concluded that self-regulated decision-making behaviors of university students positively affect career choice. Gadassi et al. [21] reported that individuals with high levels of self-regulation make career decisions more easily. It is known that students with high levels of effective decision-making competence also have high levels of career maturity [22].

Prescod et al. [23] stated that career planning courses allow students to explore various majors and interests along with their decision-making skills. The career decision-making process of undergraduate students taking two different general and discipline-oriented courses was examined and it was found that there was no significant difference in the career decision-making processes of the students. In Eren and Kaya's [24] study, which examined the factors related to the career planning of university students, it was determined that they approached negatively to the preferences of their families, especially from the environmental factors where individual decision-making is dominant, to the question of whether there are people they take into account.

A high level of career decision-making self-efficacy leads to increased participation in career decision-making tasks and behaviors, while a low level leads to avoidance of such activities [25]. It is seen that individuals with high career decision-making self-efficacy can complete professional development tasks more successfully and make more accurate career and career choices for themselves [26]. However, low career decision-making competence

In summary, careers are unique to individuals. In order for a career to reflect the individual, it is essential that it takes into account what is and what is not in the individual, his/her needs, expectations and dreams. Therefore, what is effective in career development is primarily the individual's internal motivation and desire to develop towards his/her profession and career. As a result, it was concluded that Sport Sciences students make more effective career decisions if their sportive self-organization is high.

Conflict of Interest

No conflict of interest is declared by tehe authors. In addition, no financial support was received.

Ethics Committee

Aksaray University was taken with the application dated 19.11.2024 and numbered 2024-313 Protocol.

Author Contributions

Design, DR, MKE. HYÇ; Data Collection, DR, MKE; Statistical Analysis, DR, MKE; Data Interpretation, DR, MKE, HYÇ; Manuscript Preparation, DR; Literature Review, DR, MKE, HYÇ. All authors have read and accepted the published version of the article.

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