

The influence of learning styles and academic success motivations on prospective students taking a physical education special skill exam based on a few parameters

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Abstract

Background and Study Aim Learning styles are the foundation of how students learn and the unique paths to individual development. So they must be considered when assessing academic progress. The primary objective of this research endeavor is to investigate the learning styles and academic motivation exhibited by individuals aspiring to enroll in the faculty of sports sciences.

Material and Methods The study's population comprises 4104 candidates who applied to the special talent entrance examination at the Faculty of Sport Sciences in the Selcuk University. The survey was administered to a sample of 378 individuals, consisting of 215 male and 163 female students, who are planning to take the special skill entrance exam for the faculty of sport science. Selcuk and Necmettin Erbakan Universities in Konya used random sampling to select participants from prospective students for the study. The questionnaire served as the primary instrument for conducting descriptive, correlational, and regression analyses. To fulfill the research objectives, the Academic Motivation Scale and Kolb Learning Styles Inventory were employed. The reliability and validity of these scales were rigorously examined by the researchers.

Results The study provides evidence that students who utilized multiple learning styles had significantly higher academic motivation.

Conclusions In conclusion, this study emphasizes the significance of learning styles in evaluating academic progress in sports sciences. Individuals utilizing converging, accommodating, and multiple learning styles show higher academic motivation, emphasizing the need to foster diverse learning approaches for student engagement and success.

Keywords: motivation, learning styles, physical education, skill exam, achievements, academic

Introduction

The modern age of information requires a proactive approach to learning and current information, which has resulted in the development of various learning modalities. The process of learning provides individuals with the necessary skills to adapt to the constantly evolving world, where the acquisition of knowledge holds the utmost importance. The acquisition of knowledge is a multifaceted process that can vary in its development, dependent upon an individual's inherent skills and cognitive capabilities [1]. The educational setting experienced by each person may exhibit distinct characteristics. Individuals exhibit varying preferences in their approach to problem-solving, with some favoring the utilization of factual information, empirical evidence, and experimental methods, while others tend to rely on the examination

of written materials and theoretical frameworks [2]. According to Mutlu et al. [3], individuals possess distinct approaches to learning and diverse strategies for obtaining information. Individual differences may lead to variations in perspectives on concepts. The preceding condition requires continual engagement with the surroundings during the process of acquiring knowledge, and the educational setting is a consequence of prior encounters. These components encompass the methodology, strategies, resources, and procedures, culminating in the assessment. It includes the method, strategy, materials, and process, up to and including the evaluation. Learning styles enable individuals to take an active role in the learning process and make substantial contributions [4].

It is widely acknowledged that people acquire knowledge through a variety of channels. Individuals are motivated to acquire new information due to their diverse interests and preferences [5, 6]. Some individuals may exhibit a preference for visual aids

such as images, videos, drawings, diagrams, or tasks that are grounded in reality and possess a well-defined objective [7, 8, 9]. Conversely, others may feel more comfortable with written literature, sources, and engaging in discussions. This phenomenon, known as learning style, is fundamental to education and all learning disciplines. Learning style is, in a comprehensive sense, the principle of preferences, behaviors, and beliefs that a person actively employs in the present default situation to create learning [10, 11]. The field of psychology has established a strong connection between learning styles and the approach to learning, encompassing activities such as gathering, assimilating, analyzing, and comprehending information [12, 13].

Kolb's theory of learning is a widely recognized framework for this subject matter in academic literature. Kolb's Experiential Learning Theory, developed in the 1960s, highlights the transformation of learning dimensions into diverse forms due to environmental and experiential factors. These experiences are often accompanied by a range of reflections, as noted by Kolb [14]. The model of experiential learning enables the conversion of knowledge into practical experience. The process of learning involves internalization and is not fixed with respect to one's experiences. Furthermore, learning is internalized and conceptualized [15, 16]. The theory under consideration suggests that the dimensions of internalization and conceptualization show up as perception and processing, respectively. These dimensions encompass tangible experience, reflective observation, intellectual conceptualization, and dynamic experience, as stated in reference [17].

In the context of education, learning styles are used to determine the cognitive mechanisms through which students gain knowledge. Educators in the field of physical education utilize these approaches in a similar manner to achieve higher educational goals and promote more extensive critical thinking and problem-solving skills [39]. Based on the evidence given earlier, it has been determined that educators possess an obscure learning style that has its roots in abstract conceptualization and a series of techniques that facilitate efficient learning [18]. According to Kolb's argument, the incorporation of practices into the learning process requires the establishment of customized environments that cater to the unique learning style of each individual [19]. While acknowledging that every learner possesses a distinctive learning style, it is possible to combine groups of students who share similar learning preferences to develop suitable educational resources and curriculum for each phase of the learning process. Furthermore, instructional activities can be specific to allow all learners to engage in the learning process for highest educational benefit.

The identification of individual differences, such as students' levels of readiness, learning requirements, and learning preferences, is a crucial factor in understanding the learning and teaching processes. In the process of creating pedagogical principles, approaches, and strategies, it is essential for educators to take into account the unique characteristics of each student and facilitate the attainment of the curriculum's educational objectives by responding to the diverse learning styles of students [20].

The fields of physical education and athletics are known to offer both physiological and mental benefits to pupils, particularly those in the adolescent stage. The inclusion of physical education and sport lessons as a complementary component of educational and training programs serves to enhance the entire growth of students in the areas of physical, cognitive, affective, and psychomotor domains. Furthermore, participation in leisure activities, including cultural and athletic activities, as well as social interaction, may contribute to the comprehensive development of individuals within educational and instructional frameworks [21]. The implementation of an appropriate training or education program by trainers and educators is essential for optimizing the learning environment in physical and sports education, thereby highlighting the significance of utilizing learning styles as a guiding framework. As a result, optimal levels of learning styles, physical education, and sports courses will be achieved by the students. The majority of physical education learning is credited to engagement in social and cultural activities [22]. The idea is that achievement of educational encounters is essential for the enduring involvement in bodily physical activity. According to Gonzalez et al. [23], the most common learning styles in the field of sports sciences, both locally and globally, are "converging" and "accommodating." According to Guay et al.'s research [24], motivation refers to the fundamental factors that stimulate and direct behavior. As stated by Broussard and Garrison [25], motivation can be defined as the inherent drive that encourages individuals to participate in or stay away from certain actions. Motivation is a psychological factor that can stimulate individuals to take action and drive them towards a specific objective or pursuit. Furthermore, it can be suggested that a behavioral characteristic or a natural mental mechanism motivates an individual to engage in frequent actions [26]. Individuals' actions are influenced by their perspectives, beliefs, goals, desires, needs, and fears. Within this particular context, motivation is regarded as a dynamic and driving influence [27]. Effective educational planning should take into account the unique characteristics and needs of each individual. A variety of differences among individuals has resulted in the emergence of diverse approaches to learning. The integration of

knowledge regarding learning styles is a significant factor in the achievement of effective educational planning and the execution of a pedagogical framework that is customized for the individual needs, understanding, and capacity of students. Learning styles are significant factors that can impact a student's academic drive and achievement. There is present a positive correlation between learning approaches and academic achievement, motivation, and performance. According to research findings, there's a direct and positive relationship between motivation and performance, indicating that a rise in motivation is linked to a corresponding increase in performance [28]. The various findings of the literature review show a lack of comprehensive investigations into the learning behaviors exhibited by students participating in educational instruction within the domain of sports sciences at the faculty level. Thus, the present research will offer different strategies to assess the correlation between students' learning styles and their motivation to achieve academic success, implementing various parameters. This research explores into the effects of various learning approaches on academic achievement with a more comprehensive analysis.

Material and Methods

Participants

According to the information obtained from the web page of Selçuk University Faculty of Sport Sciences, the population of the study consists of 4104 candidates who applied to the special talent entrance exam of the Faculty of Sport Sciences in 2022 Selcuk University Archive [29]. In this respect, it is seen that there are 4104 candidates constituting the universe. According to the 95% confidence interval and 5% margin of error calculation [30], 352 candidates will represent the universe. Within the scope of this study, a total of 378 candidates, 215 male and 163 female, were reached. In this study, the data were collected face-to-face from the candidates by convenience sampling method between 22-28 August 2022 on the basis of volunteerism.

Research Design

The design of this paper was comparative relational screening models [31], as the basis for its design. The present investigation employed a comparative framework to examine the academic motivation and learning styles of students seeking faculty positions in sports science. Multiple factors were taken into account during the analysis. The study was carried out through three separate phases. The initial stage involved obtaining the necessary authorizations from the appropriate departments to apply scale data for prospective students. Subsequently, data collection instruments were implemented during the exam dates set by the academic calendar. In the final stages, the gathered

data went through a technical assessment and was subsequently saved to electronic databases. All the information obtained was distributed using appropriate analytical methodologies. The evaluation of the analysis results was conducted through a comparison with the relevant literature.

Data Collection Tools

The personal information obtained from the questionnaire was utilized for research purposes. The Academic Motivation Scale and Kolb Learning Styles Inventory were examined in alignment with the research objective.

Academic Motivation Scale

The present research employed a measurement tool known as the "Academic Motivation Scale," which consists of seven points. This tool was originally developed by Vallerend et al. [32] and was later translated into Turkish by Karagüven [33]. The scale has been determined to consist of 28 unidimensional items based on both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The evaluation results suggest that the participant possesses a strong academic drive, as evidenced by their high scores. The Likert scale employed a range of categories, namely "not at all agreeable," "somewhat agreeable," "moderately agreeable," "very agreeable," and "fully agreeable." The reliability coefficient of the scale, as determined by Cronbach Alpha, was computed to be 0.85.

Kolb Inventory of Learning Styles

The Learning Style Inventory (LSI) is a tool utilized to assess an individual's preferred method of learning. The utilization of the Learning Styles Inventory, developed by Kolb in 1985, was implemented. Aşkar and Akkoyunlu [34] carried out the adaptation. The learning styles inventory is based on a four-stage cycle comprising of diverging, converging, assimilating, and accommodating processes. It is feasible for an individual to exhibit a plurality of learning modalities. The study's data analyses indicate that the reliability coefficients for the four dimensions of the inventory range from 0.76 to 0.87.

Statistical Analysis

The study conducted an assessment of the mean level of information dissemination prior to evaluating the academic motivation scores of prospective students. The distribution of the data was determined using the skewness and Shapiro-Wilk tests [35], and it was shown that there was no significant deviation from the normal distribution [36]. Parametric tests were employed to assess the academic and motivational achievements of the participants within this framework. The application of χ^2 (Chi-Square) was employed to compare the variables owing to the classification scale format of the learning styles inventory.

Results

Table 1 presents the average academic performance score and average score on the Test of Yearly Progress (TYT) for candidates categorized according to their preferred learning styles. The F value range for the average school achievement score was 1.10, whereas the F value range for the average TYT score was 1.02. The study findings indicate a lack of correlation between academic performance and TYT mean scores among candidates who employed diverse learning approaches during their preparation to the entrance exams for the faculty of sport sciences.

The relationship between the status of exam victory and the learning styles of applicants to the Faculty of Sport Sciences is examined in the table above. The Chi-Square analysis determined the χ^2 value between the two variables to be 9.61 (tabl. 2). It demonstrates a significant connection. Based on their exam performance, the students' learning styles differ significantly. A significant proportion of the students who successfully cleared the entrance exam for the Faculty of Sports Sciences demonstrated a tendency towards implementing an individual and flexible approach.

Table 3 displays the findings of an investigation into the correlation between the genders and learning styles of individuals who took the entrance exams for the faculty of sport sciences. Chi-Square analysis determined the χ^2 value between the two variables to be 11.41. These findings reveal a significant correlation. There is a significant relationship between gender variables and students' learning strategies. The implementation of accommodating and converging approaches is predominantly observed among male candidates applying for the faculty of sport sciences.

The χ^2 value between the two variables in table 4 was determined to be 16.89 through Chi-Square analysis. The findings indicate a significant association between the level of athletic participation among the participants and their choice of approaches to learning. The primary learning methodologies employed by participated athletes have been observed to be divergent, convergent, and accommodating.

The statistical technique of Chi-Square analysis was employed to calculate the χ^2 value that represents the association between the two variables, resulting in an output of 7.31 (tabl. 5).

Table 1. Analysis of the academic success and Test of Yearly Progress (TYT) scores of students enrolling to the faculty of sports sciences based on their learning styles

Variables	Year	N	Mean	Std. Deviation	F	p
School Achievement Score	1	109	337.08	57.35	1.107	.353
	2	72	348.93	67.21		
	3	121	335.71	64.62		
	4	48	353.19	59.12		
	5	28	346.54	68.16		
TYT Exam Score	1	109	231.17	39.69	1.026	.393
	2	72	233.40	34.36		
	3	121	222.92	45.45		
	4	48	231.69	37.85		
	5	28	229.36	39.59		

Note: TYT - Test of Yearly Progress

Table 2. The relationship between the status of winning the exam and learning styles of candidate students applying to the faculty of sports sciences

Variables	Status	N	Learning Style					Total
			Diverging	Coverging	Accommodating	Assimilating	Multiple Style	
Exam Result	Won	N	87	46	96	40	23	292
		%	29.8%	15.8%	32.9%	13.7%	7.9%	100.0%
	Lost	N	22	26	25	8	5	86
		%	25.6%	30.2%	29.1%	9.3%	5.8%	100.0%
Total		N	109	72	121	48	28	378
		%	28.8%	19.0%	32.0%	12.7%	7.4%	100.0%

$\chi^2=9.61$ P=0.046

Table 3. Analysis of the relationship between gender and learning styles among students enrolling to the faculty of sports sciences

Gender	N	Learning Style					Total
		Diverging	Converging	Accommodating	Assimilating	Multiple Style	
Female	N	47	19	61	23	13	163
	%	28.8	11.7	37.4	14.1	8.0	100
Male	N	62	53	60	25	15	215
	%	28.8	24.7	27.9	11.6	7.0	100
Total	N	109	72	121	48	28	378
	%	28.8	19.0	32.0	12.7	7.4	100

$\chi^2=11.41$; $P=0.022$

Table 4. Examining the relationship between active athletics and learning styles of applicants to the Faculty of Sport Sciences entrance examinations

Variables	N	Learning Style					Total
		Diverging	Coverging	Accommodating	Assimilating	Multiply Style	
Sport Branch	N	34	29	30	23	4	120
	%	28.3	24.2	25.0	19.2	3.3	100
	N	75	42	90	25	24	255
	N/A %	29.4	16.5	34.9	9.8	9.4	100
Total	N	109	71	120	48	28	376
	%	29.0	18.9	31.9	12.8	7.4	100

$\chi^2=16.89$; $p=0.019$

Table 5. The relationship between the preparatory course and the learning techniques of students applying to the Faculty of Sports Sciences entrance exams is analyzed

Variable	Status	N	Learning Style					Total
			Diverging	Coverging	Accommodating	Assimilating	Multiply Style	
Preparatory Course	Yes	N	43	17	40	14	8	122
		%	35.2	13.9	32.8	11.5	6.6	100
	Sometimes	N	15	12	16	6	2	51
		%	29.4	23.5	31.4	11.8	3.9	100
	No	N	51	43	65	28	18	205
		%	24.9	21.0	31.7	13.7	8.8	100
Total		N	109	72	121	48	28	378
		%	28.8	19.0	32.0	12.7	7.4	100

$\chi^2=7.31$; $p=0.504$

Hence, no significant association exists between the enrollment of participants in preparatory courses and the implementation of learning styles.

Table 6 presents an analysis of the correlation between the learning styles of students who enrolled in the faculty of sports sciences and the high schools they attended prior to taking the entrance exams. The Chi-Square analysis determined the χ^2 value between the two variables to be 9.72. These findings suggest that there is a significant correlation between the secondary schools from which the participants actively graduated and their learning styles. Based on supplementary analysis, it has been observed that graduates of sport high schools tend to predominantly employ diverging and accommodating learning styles, while graduates of non-athletic high schools tend to utilize all learning styles.

Table 7 indicates a significant difference in academic motivation levels between the two groups. The mean scores for each category suggest that the students who passed the entrance exam show higher levels of academic motivation compared to those who did not pass.

The research investigated the mean scores of academic motivation among students registered in the faculty of sport entrance exams, with respect to their unique approaches to learning as shown in Table 8. The findings of the study revealed that there was a statistically significant difference in the mean academic motivation scores of prospective students depending on their individual learning styles, as demonstrated by the F value of 6.80. There is a significant variation in the average academic motivation scores of candidates applying to the faculty of sport sciences, depending on their preferred learning styles. The findings of Tukey's test indicated that individuals who employed converging, accommodating, and multiple learning styles exhibited notably higher levels of academic motivation.

According to the findings presented in Table 9, the t-value for the mean scores of academic motivation among candidates, based on their high school of graduation, has been calculated to be 3.87. The average academic motivation scores of applicants to the entrance exams for the faculty of sports sciences differ significantly based on the high

Table 6. Analyzing the relationship between the Sport High Schools and other which the applicants for the entrance exam graduated and their learning styles

Variable	N	Diverging	Coverging	Accommodating	Assimilating	Multiple Style	Total
Sport	N	21	4	20	5	6	56
High School	%	37.5	7.1	35.7	8.9	10.7	100
Others	N	88	68	101	43	22	322
	%	27.3	21.1	31.4	13.4	6.8	100
Total	N	109	72	121	48	28	378
	%	28.8	19.0	32.0	12.7	7.4	100

$\chi^2=9.72$; $p=0.045$

Table 7. A comparison of the academic motivation of applicants to the faculty of sports sciences based on their success on the entrance examination

Exam Result	N	Mean	Std. Deviation	t	P
Success	86	2.17	0.37	-2.84	0.00
Failed	293	2.04	0.39		

Table 8. Comparative analysis of the academic motivations of applicants to the faculty of sports sciences entrance examinations based on their learning styles

Sub-Dimensions	N	Mean	Std. Deviation	F	P
Diverging	109	2.25	0.33	6.80	0.000
Coverging	72	2.00	0.41		
Accommodating	121	2.17	0.39		
Assimilating	48	2.00	0.41		
Multiple Style	28	2.21	0.35		

Table 9. Academic motivation of applicants to the faculty of sports sciences entrance exams based on the sport and other schools from which they graduated

Variable	High School Type	N	Mean	Std. Deviation	t	p
Avg.Score of Academic Point	Sport	57	2.32	0.33	3.87	.00
	Other	322	2.11	0.39		

Table 10. Gender differences in academic motivation of applicants to the faculty of sports sciences entrance examinations

Variable		N	Mean	Std. Deviation	t	p
Average Academic Point Score	Female	164	2.18	0.38	1.68	0.08
	Male	215	2.11	0.39		

schools from which they graduated. An analysis of group averages indicated that individuals who completed their secondary education at sport high schools exhibited higher levels of academic motivation compared to those who graduated from other types of high schools.

A comparison was made between the academic motivation point averages of potential students based on their gender, utilizing the data provided in Table 10. The analysis generated a computed t-value of 1.68. This finding indicates that gender is not a determining factor when investigating the average academic motivation scores of applicants to the entrance exams for the faculty of sport sciences

Discussion

The aim of this study was to explore the relationship between students' learning styles and academic achievement motivations using multiple evaluation methods based on various parameters. The study delved into the impact of learning approaches on academic performance in greater detail. By examining the different factors that contribute to academic success, this study aimed to provide a comprehensive understanding of the complex relationship between learning styles and academic achievement motivations. The findings of this study have important implications for educators and policymakers seeking to improve student outcomes and promote academic success. In this context, the findings obtained as a result of the research are interpreted in this section and discussed in relation to the studies in the literature.

The majority of students who participated in the sports sciences entrance examination exhibited a preference for accommodative and divergent learning styles. The individuals who utilized a convergence approach achieved the third rank among the participants. The learning strategies employed by the participants were found to differ according to their gender. The faculty of sport sciences experienced a significant proportion of male applicants who employed both divergent and convergent learning approaches. According

to Riding and Cheema's research [37], students who possess accommodating and converging learning styles tend to view themselves as better in psychomotor fields and demonstrate a distinct desire towards these subjects.

This findings indicate that It highlights the importance of considering individual learning styles when preparing for the entrance exam in sports sciences. Students who employ accommodative or divergent learning styles may benefit from tailoring their study approaches to these preferences. Conversely, those who adopt a convergence approach may also find success in their exam performance. Also emphasize the significance of recognizing and accommodating diverse learning styles and gender differences when designing effective educational strategies and interventions for students preparing for entrance exams in the field of sports sciences. According to their learning styles, prospective students' academic achievement and TYT (higher education entrance exam) average scores were determined to be distinct. This study found a statistically significant difference between the school success and TYT scores of applicants to the faculty of sports sciences based on their learning styles. In contrast, the learning styles of students differ significantly based on their exam performance. It is obvious that a significant proportion of students who successfully cleared the entrance examination for the sports faculty employed an individual and flexible approach. The findings bear resemblance to the outcomes reported by Kara [38] and Boyatzis et al. [39] encompassing Sünbül, Yaz, and Arslan. According to Sünbül et al. [40], students with field-specific learning styles can demonstrate high academic achievement if they are provided with the appropriate learning experiences and opportunities. These findings highlight the importance of considering the interplay between learning styles, academic achievement, and exam performance in the context of sports sciences.

The research investigated the association between the classifications of high school graduates, their involvement in various sport activities, and

their preferred approaches to learning styles. The study's results suggest that significant links were present among the learning styles of the subjects, their degree of involvement in sport activities, and the type of high school they completed. There was a common belief that individuals who engage in sports exhibit a combination of divergent, convergent, and accommodative learning styles. In contrast, students coming from non-sports high schools exhibited a more balanced utilization of various learning styles, while those who graduated from sports-oriented high schools tended to rely greater amounts on divergent and accommodating learning styles. The results presented demonstrate resemblance to the findings reported by Lee, Morell, and Marino [41].

There are connections between a person's interests, academic disciplines, and learning patterns, according to Navarro et al. [42]. These findings emphasize the influence of sports participation and the educational environment on students' learning styles. The correlations observed highlight the potential benefits of sports engagement in shaping students' cognitive processes and problem-solving abilities. Additionally, the findings suggest that educational institutions, particularly sports high schools, may play a role in nurturing specific learning styles aligned with the demands of sports-related disciplines. These results extend to both educators and students. Educators can consider incorporating sports-related activities and tailored instructional strategies that align with different learning styles to enhance student engagement and performance. Students who have a strong interest in sports can leverage their participation to develop and refine their preferred learning styles, maximizing their academic potential.

Lee et al. argued that the learning preferences and involvement in extracurricular activities of adolescents were significantly influenced by their daily activities and academic cultural environments [43]. In a study that examined the learning styles of various groups of athletes by categorizing them based on their performance and sports level, reflective and concrete learning styles were found to be the most prevalent, according to experiential learning circle [44].

The variable of academic motivation was also considered in this study among the participants. Radoslavova and Velichkov [45], treated the participants' academic motivation as a variable. According to findings, a high level of positive motivational preparedness is a significant predictor of academic achievement and an indicator of instructional quality. Academic motivation consists of an active approach to learning, internal self-discipline, and the pursuit of consolidating and expanding acquired knowledge. According to our findings, the academic motivation of the

participants did not differ significantly by gender. This implies that both genders exhibit similar levels of motivation when it comes to their academic pursuits. Bujdos et al. [46], Kaleli [47], Zaytzev et al. [48], Arslantaş [49], Vaskov [50], Sonmez Ektem [51], Warren, Fox, and Pascall [52] all discovered similar outcomes. According to Wu et al. [53], placement exams and decisions are exogenous or outcome-based. Cook and Artino [54] and Linnenbrink & Pintrich [55] provide evidence in support of this theory that low motivation can be observed when candidates' actions and behaviors toward obtaining a job and pursuing a career are not realized. Therefore, students' anxiety regarding their performance on the physical education entrance exam may have reduced their academic motivation and increased their anxiety. Handayani [56] discovered that male employees are highly extrinsically motivated while female employees are highly intrinsically motivated. Numerous empirical studies have demonstrated that intrinsic learners are significantly more motivated and successful with academic tasks [57, 58]. Gender-specific bimodal distribution can be observed in academic motivation. Academic motivation necessitates an active learning approach, internal self-discipline, and the pursuit of complementing and expanding acquired knowledge [59]. Ignatov [60] discovered that academic motivation among Bulgarian students majoring in physical education and sports was high. There may be a bimodal distribution for gender. In this context, a qualitative investigation of the relationship between gender and academic motivation can make substantial contributions to the discipline.

It has been observed that the academic motivations of applicants to the Sport Academy's special skill entrance examination differ based on their learning styles and their secondary schools of graduation. The academic motivation scores of students who utilized diverse, accommodating, and multiple learning styles were also significantly higher. Again, the sort of high school the candidates attendance was a crucial factor in determining their motivation for academic success. Among the participants who took the physical education and sports school special skill examinations, those with sports high school diplomas exhibited significantly higher levels of academic motivation. These findings are comparable to those of Cassidy [61], Chen and Lu [62], Koyuncuoglu [63], Luo, Chau, and Lam [64], Trolan, Jach, Hanson, and Pascarella [65]. According to Lau and Yuen, [66], there were extremely strong correlations between academic motivation, career field, and expectations at different school levels and subdivisions. Individuals are more motivated academically in subjects where they feel competent and have a positive learning experience [67].

The investigation was concluded by analyzing the scholarly drive of potential students in the

Faculty of Sports Sciences, with an emphasis on their preferred methods of learning styles and performance in examinations. To achieve this, the academic motivations of the students in relation to their learning styles were examined. It was believed that students who successfully passed the entrance examination for the faculty of sports sciences exhibited a high level of academic motivation. The diverse learning styles of applicants resulted in varying academic motivations. Furthermore, there was a significant increase in academic motivation among students who employed converging, accommodating, and multiple learning styles. Our findings align with those of previous studies conducted by Shih and Gamon [68], Şimşek [69], and Şentürk and İkikardeş [70]. Alayan suggests that students who adopt an independent learning approach demonstrate high levels of motivation and concentrate their efforts towards attaining their individual educational and professional goals [71]. Frederico states that there exists a correlation between learning styles and the differentiation of academic interest and attitude among students [72]. Kolb's model suggests that individuals who possess an effective accommodating and converging learning style show a preference for learning activities that are concrete, kinesthetic, active, and observational in nature [73]. Within this particular context, significant quantity of potential students possessing tangible, active, and harmonious skills and accommodating and converging styles apply for the faculty of sport sciences' entrance examination.

Conclusions

The research findings suggest that performing multidimensional studies could be a viable approach to determine the influence of learning styles and academic motivations of prospective students in sports sciences faculty on their future learning experiences and teaching effectiveness and success. The role of academic motivation and learning styles in the field of sports sciences has been found to be

noteworthy. The identifiable variables that impact a student's capacity to succeed in studying comprise of their preferred learning styles, academic achievements, and performance on assessments. In order to achieve a more comprehensive understanding, it is essential to analyze the participants through various parameters, including pre-exam psychological factors, stress levels, anxiety levels, the exam environment, and physical conditions.

It is suggested that in order to promote the liberation of students' abilities, learning styles, and motivation, academic counselling services should be utilized in the future for students studying in the faculties of sports sciences. In addition, students should be properly guided and permitted to use their own intelligence to select the most appropriate learning styles applicable to their environment in order to achieve both personal and academic success. Hence, the identification of learning styles in the education of sports science students and the ranking of determinants that foster academic drive are essential components that support this investigation.

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Conflict of Interest

We hereby declare that there is no conflict of interest in this research.

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