

ORIGINAL ARTICLE

Open
Access

The Effect of Double Density Foot Orthoses on Frequency Spectrum of Lower Limb Muscles During Running in Adults with Pronated Feet

Shirin Aali¹, Hamed Kheirollahi Meidani², Fariborz Imani³, Farhad Rezazadeh*⁴

1. Assistant Professor in Department of Sport Science Education, Farhangian University, P.O. Box: 14665-889, Tehran, Iran; sh.aali@cfu.ac.ir
2. PhD Student of Sports Management, Department of Sports Management, Faculty of Psychology and Educational Sciences, Mohaghegh Ardabili University, Ardabil, Iran, hamed.kheirollahi1995@gmail.com.
3. PhD Student of Sports Biomechanics, Department of Sports Biomechanics, Faculty of Psychology and Educational Sciences, Mohaghegh Ardabili University, Ardabil, Iran, Fariborzimani@uma.ac.ir
4. Assistant Professor in Department of Sports Biomechanics, Faculty of Educational Sciences and Psychology, University of Mohaghegh Ardabili, Ardabil, Iran. Email: rezazadeh.farhad@uma.ac.ir

Correspondence

Author's Name:

Farhad Rezazadeh

Email:

rezazadeh.farhad@uma.ac.ir

ABSTRACT

Background: Mass media and cyberspace increasingly influence the advancement and promotion of both public and championship sports. In this context, this study aims to examine the role of mass media and cyberspace in economic development and employment opportunities within the sports sector, specifically focusing on East Azerbaijan Province. This research addresses the impact of media on enhancing human, financial, and infrastructural resources and its contribution to the overall development of sports.

Methods: This study utilized exploratory factor analysis to identify the key factors affecting economic development and employment in sports. Before the factor analysis, the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity were applied to assess the appropriateness of the sample size and the intercorrelation of the variables. Additionally, model fit indices, including the Goodness of Fit Index (GFI) and Comparative Fit Index (CFI), were used to evaluate the adequacy of the structural model.

Results: The results of the factor analysis indicated that mass media and cyberspace substantially influence the development of human, financial, infrastructural, scientific, legal, and cultural resources within sports in East Azerbaijan Province. The fit indices for the structural model (GFI = 0.921, CFI = 0.893) demonstrated a good fit to the data, confirming the validity of the model. Furthermore, statistical

How to cite

Aali, S. , Kheirollahi Meidani, H. , Imani, F. and rezazadeh, F. (2025). Investigating the role of mass media and cyberspace in the

advancement and promotion of public and championship sports (Case study of East Azerbaijan Province). *Journal of Advanced Sport Technology*, 9(1), -. doi: 10.22098/jast.2025.16416.1396

tests revealed significant relationships between media influence and various outcomes, such as increased investment in sports, enhanced self-confidence, and the attraction of economic opportunities.

Conclusions: The findings underscore mass media's and cyberspace's pivotal role in promoting sports at the grassroots and professional levels. The media are integral in increasing public awareness, attracting sponsorships, and fostering community engagement in sports activities. However, challenges such as unequal access to digital technologies and inadequate investment in sports infrastructure remain barriers to fully realizing the potential of media in sports development. The study concludes that for the sustainable development of sports in East Azerbaijan Province, there is a need for enhanced collaboration between the media, sports organizations, and government authorities. Long-term policies that focus on improving infrastructure and media access are essential for maximizing the benefits of mass media and cyberspace in advancing public and championship sports.

KEY WORDS

Championship Sports, Cyberspace, East Azerbaijan Province, Economic Development, Exploratory Factor, Mass Media, Public Sports, Sports Development, Structural Equation Modeling.

<https://jast.uma.ac.ir/>

Introduction

In today's society, inactivity has become a growing concern. With the increase in sedentary lifestyles and technological advances, people find it difficult to incorporate physical activity into their daily routines. In this context, the expansion of public sports plays an important role in promoting an active lifestyle and improving the overall well-being of society. In addition, as a social and cultural phenomenon, sports are one of the most important components of ensuring the health and well-being of the body and mind, as well as a key social and cultural indicator in today's life. Sports are also considered the key to the health, well-being, and dynamism of a society, and their development leads to increased social vitality and cultural richness. Accordingly, many developed countries have accepted sports with a health sector approach among the different approaches to sports and act on it [1].

In the contemporary world, sports have gained considerable power. Sport is not just a hobby but also has great social, political, and economic importance for participants [2]. Sports, as one of the most important factors influencing social, cultural, and economic development, have a special place in the macro-planning of countries. Despite numerous efforts in recent years to develop

sports in Iran, problems such as a lack of coordination between relevant institutions, a lack of sports infrastructure, and weakness in using modern communication tools have prevented achieving the desired results [3]. In the meantime, mass media and cyberspace, as low-cost and widespread tools, can play an important role in culture building, education, and the promotion of sports [4].

In the contemporary world, sports have gained considerable power. Sport is not just a hobby but also has great social, political, and economic importance for participants [2]. Sports, as one of the most important factors influencing social, cultural, and economic development, have a special place in the macro-planning of countries. Despite numerous efforts in recent years to develop sports in Iran, problems such as a lack of coordination between relevant institutions, lack of sports infrastructure, and weakness in using modern communication tools have prevented achieving desired results [3]. In the meantime, mass media and cyberspace, as low-cost and widespread tools, can play an important role in culture building, education, and the promotion of sports [4].

One of the effective factors in the development of mass sport is the role played by the media. The media can reach a large audience, influence public opinion about sport, and ultimately shape the public perception of sport. In the absence of in-person opportunities for sport and physical activity, the use of new technologies in the world of sport has become more central. Today, radio and television, as forms of technology, are still used to encourage physical activity and sports. Television has become the leading medium in sports due to its access to a large population. Currently, the number of television channels is more than in the past, and as a result, the growth of televised sports has accelerated. People have become interested in sports through the broadcast of these programs and prefer to watch live television broadcasts at home in the comfort of their homes instead of going to the stadium. Sporting events have become more popular among television viewers, allowing sports fans to gain a greater understanding of a wider range of sports [2].

In the era of communication and information, the media is considered one of the most important tools for reaching goals. Today, media is the most powerful tool for projecting and spreading ideas and the most efficient means for penetrating cultures and attitudes into the hearts of societies [5].

The most important roles that are proposed for the mass media include informing and raising awareness, supporting the law and monitoring the proper implementation of laws, creating a suitable environment for the encounter of different opinions, providing a basis for continuous education, contributing to the cultural and intellectual growth of society, providing educational entertainment, and creating a spirit of participation and cooperation for development programs, and the most important roles they play are culture building, education, information, and creating social participation [6].

Theorists such as Innis, McLuhan, Perry Bram, George Granber, McQuail, and others, in their positive attitude towards the media, believe that mass communication media, including satellite, television, and radio networks, the press and cyberspace, play an effective role in expanding social relations in society. Based on the theories of Lasswell, Charles Wright, Hobbes, and Pascal and the dominance of the media over the visible and hidden corners of society, their importance and

influence on public opinion are fundamental. Harold Adams Innis and Marshall McLuhan recognize communication media as a scepter and civilization, and both believe that the dominant media guides history in every era and time. The magic bullet theory is based on the idea that mass media relate events worldwide to the images in people's minds. The Frankfurt School, as a school of thought, considers the media as a means of culture-building, which is among the examples of mass communication theories [7].

To develop and expand our sport, we need promotion and encouragement. Development and participation in the development of sports are not possible without motivation. To achieve this goal, the media must identify the correct and rational motivations of the audience. Media audiences usually get information from sources that align with their thoughts and beliefs. That is, message recipients and audiences watch a program and do not read an article unless they like it. Therefore, they do not pay attention to programs that they are not interested in or have no motivation to follow [8].

In this regard, studies have shown that the media, especially television, the Internet, and social networks, have a profound impact on the development of mass and championship sports; extensive coverage of sports events and targeted advertising through the media can increase public participation in mass sports as well as the growth of championship sports [9]. On the other hand, mass communication theories such as the magic bullet theory and the Frankfurt School also emphasize the vital role of the media in shaping public attitudes and beliefs [5].

Given the increasing use of cyberspace and social networks, these tools can serve as an effective platform for promoting sports and attracting young audiences to sports activities. Studies have shown that more than 65% of young social media users believe that social media has a great impact on the sports industry [10]. However, the strategic use of media in sports development, especially at the provincial and local levels, has still received less attention.

Babai et al. (2018) [11], in a study titled "Identifying the Current Status and Obstacles to the Development of Public Sports in the Country," using quantitative and qualitative methods among public sports professors and specialists and sports management, heads of federations, provincial sports and youth directors, and senior experts from the Ministry of Sports and Youth, showed that the state of public sports in the country is desirable in some cases, and in other cases, such as "institutionalization of sports in families," is at an undesirable level. The lack of sports facilities and equipment, along with the neglect of other organizations towards public sports, are considered to be the most important obstacles to the development and growth of public sports in the country.

The findings of the research of Askarian et al. (2021) [12], through a qualitative method of analysis and interviews with 16 knowledgeable elites in the field of sports indicate the existence of 8 cultural, economic, political, systemic-human, managerial, infrastructural, technological, and media obstacles to the development of sports in Iran. Some of these obstacles, such as cultural, economic, and political, are contextual and create the basis for other obstacles.

Moshtaghi et al. (2021) [10], concluded in a study that the identified indicators included development barriers, facilitating factors, development factors, development strategies, and outcomes of the development of public sports concerning the role of the media. It can be said that

the media is one of the most important factors in the development of public sports and championships, and the result of this development is an increase in the health index in society, which requires the attention of media officials to this serious issue.

Zare Abandansari et al. (2024) [13], in a study, identified six factors of gender equality, role modeling, sports promotion, support, management, and culture as factors of tendency toward mass and championship sports; they also stated that specialized sports networks, with specific planning, create programs, documentation, and sports reports in the field of sports, especially for women, which promotes and motivates participation in sports nationwide.

Given the young population composition of the country and the increasing importance of sports in promoting the physical and mental health of society, the development of public and championship sports is essential [14]. On the other hand, mass media and cyberspace, especially in the last decade, have become a powerful tool for communication and advertising. Also, given the position of cyberspace among youth and other segments of society, as well as the role of mass media in building culture and providing sports information, it can be used as a capacity for the development and promotion of public and championship sports.

Despite the great potential of the media, there is still insufficient knowledge of the impact of these tools on the development of sports. This issue reinforces the need for a comprehensive study to identify the influential components of the media and cyberspace on the development of sports at the local and provincial levels. Since East Azerbaijan Province is one of the metropolises of Iran and in this regard has a significant part of championship and public sports. This issue increases the need to pay attention to the infrastructural dimensions of the sports industry in this province. This study aims to investigate the role of mass media and cyberspace in developing public and championship sports in East Azerbaijan Province. The results of this study can help sports and media policymakers design and implement effective programs for sports development and clarify the media's potential capacities in this field.

Material and Methods

This study investigates the influence of mass media and cyberspace on the advancement and promotion of public and championship sports, with a specific focus on East Azerbaijan Province. Conducted as a cross-sectional, descriptive-analytical study, data collection relied on a field method. In this research, mass media and cyberspace were treated as predictor variables, while the progress and promotion of public and championship sports served as the criterion variables. The statistical population comprised athletes, coaches, physical education students, faculty members, and employees of the General Directorate of Sports and Youth in East Azerbaijan Province. A stratified random sampling method was applied across 21 regions of the province to ensure representative coverage of the target groups. Using the Krejcie and Morgan table, the required sample size was determined to be 384 participants. Of the 500 questionnaires distributed to account for potential non-responses, 398 were completed and deemed valid for analysis.

Data were collected through a researcher-developed questionnaire designed based on a comprehensive review of theoretical frameworks and relevant literature. The instrument consisted of 51 items categorized into six main dimensions: scientific environment development, human resources, legal environment, facilities and infrastructure, cultural environment, and financial resources. Responses were measured using a five-point Likert scale ranging from "strongly disagree" to "strongly agree." Content and face validity were established through consultations with 15 sports management experts, whose feedback guided necessary refinements.

Construct validity was examined through exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The EFA retained items with factor loadings above 0.4, while the CFA demonstrated good model fit, as indicated by key indices such as RMSEA (<0.08), CFI (>0.9), and TLI (>0.9). Reliability analysis in a pilot study involving 30 participants yielded a Cronbach's alpha of 0.81 for the overall questionnaire and values ranging between 0.78 and 0.85 for individual factors, indicating acceptable internal consistency.

Data analysis was conducted using SPSS (version 25) and AMOS (version 24). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used for summarizing data. Inferential statistics involved the Kolmogorov-Smirnov (K-S) test to assess data normality, EFA to identify factor structures, CFA to validate the measurement model, the KMO test to determine sampling adequacy, the chi-square test to examine relationships among qualitative variables, and the Friedman test to rank factors based on mean scores.

Ethical principles were strictly adhered to throughout the study. Participation was entirely voluntary, and respondents were informed about the study's objectives and assured of the confidentiality and anonymity of their responses. This robust methodological approach provides reliable insights into the significant role of mass media and cyberspace in fostering the development and promotion of public and championship sports in East Azerbaijan Province.

Results

Table 1. Frequency distribution and percentage of frequency of research samples based on demographic characteristics

Demographic Feature	Groups	Frequency	Percentage (%)
Gender	Female	163	40.9
	Male	211	53.0
	No response	24	6.1
	Total	398	100.0
Age	Under 30	28	7.0
	31 to 40	103	25.9

	41 to 50	98	24.6
	51 to 60	73	18.3
	Over 60	45	11.3
	No response	51	12.8
	Total	398	100.0
Education	Associate Degree	86	21.6
	Bachelor's Degree	186	46.7
	Master's Degree	95	23.9
	Doctorate	10	2.5
	No response	21	5.3
	Total	398	100.0
Field of Study	Sports Sciences	169	37.1
	Other Fields	209	45.9
	No response	45	9.9
	Total	398	100.0

In this study, exploratory factor analysis was used to determine and identify factors affecting economic development and employment in sports. For this reason, before conducting factor analysis, to ensure the sufficiency of the number of samples, the KMO criterion was used, and to determine the correlation between variables (items), the Bartlett test was used; according to the findings in Table 2, the KMO value obtained was 0.894. This value indicates that the number of research samples is sufficient for factor analysis, and that factor analysis is possible for the data in question, and the data can be reduced to a series of latent factors. Also, the results of the Bartlett test (Sig=0.001, $\chi^2=14505.229$) show that there is a high correlation between the items, therefore, it is permissible to continue and use other stages of factor analysis. The results obtained from the factor analysis of the components are presented below, separated by the factor loading value obtained for each factor.

Table2. The results of the Bartlett and KMO test

Measure	Value
Kaiser-Meyer-Olkin Measure (Sample Adequacy)	0.894
Bartlett's Test of Sphericity	
Chi-Square (χ^2)	14505.229
Degrees of Freedom	4095

Fit indices are used to determine the fitness and validity of the designed models. Model fit shows how well a theoretical model is compatible with an empirical model. Table 3 shows the results of the fit of the model measuring the role of the media in the development of sports in East Azerbaijan Province. The values of goodness of fit indices (GFI) and comparative fit index (CFI) as the main fit indices were higher than 0.9, which indicates the optimal fit of the model. Also, other fit indices (AGFI, NFI, IFI) have acceptable values. Finally, based on the values of root mean square residual (RMR=0.041) and root mean square error of estimation (RMSEA=0.062), it can be said that the model has sufficient fit.

Table 3. The goodness of fit indices of the final drawing model

Fit Index	(χ^2/df)	GFI	AGFI	RMR	IFI	NFI	CFI	RMSEA
Acceptable Fit	Between 1 and 5	> 0.90	> 0.80	< 0.05	> 0.90	> 0.90	> 0.90	< 0.10
Obtained Fit	2.011	0.921	0.918	0.048	0.909	0.909	0.893	0.055

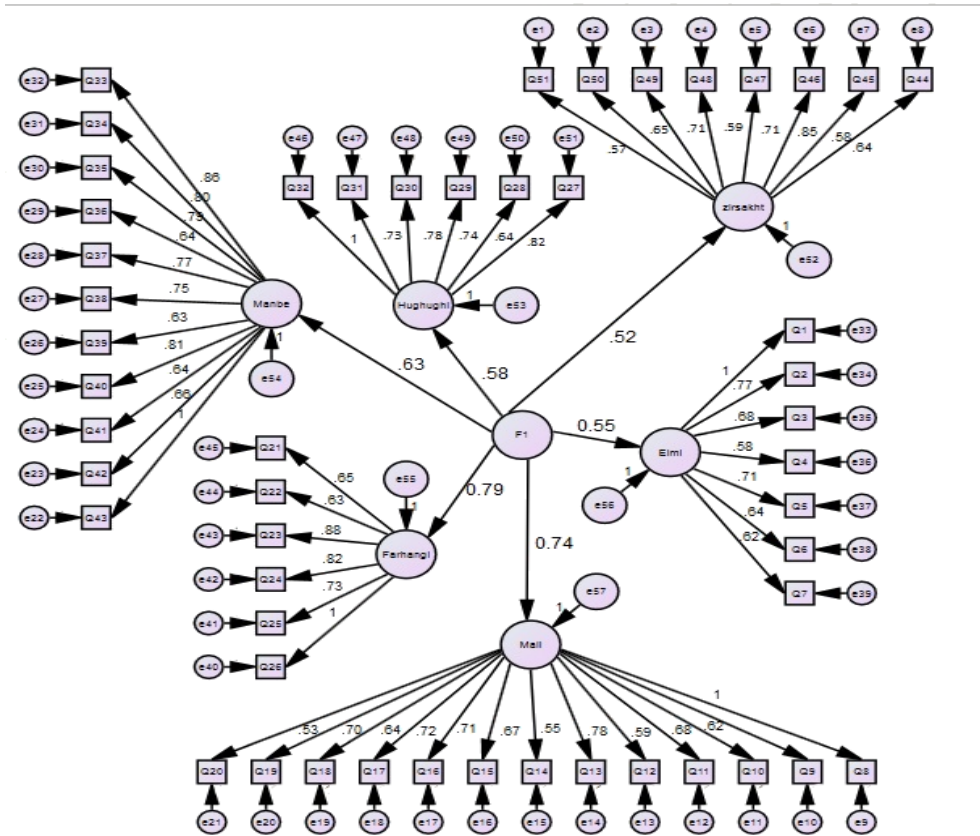


Figure 1. The structural equation of the role of the media in the development of sports in East Azerbaijan province in the standard mode

The results of Table 4 show that the model of the role of the media in the development of sports in East Azerbaijan province is appropriate and all numbers and parameters of the model have acceptable t-values and factor loadings and are significant at a significance level of less than 0.05.

Table 4. Structural equation model of the role of media in the development of sports in East Azerbaijan province

Variable	Path	Statement	Factor Loading	t-Value	Significance Level
Role of Media	--->	Development of Human Resources in Sports of East Azerbaijan Province	0.626	11.89	0.001
	--->	Development of Financial Resources in Sports of East Azerbaijan Province	0.742	13.73	0.001
	--->	Development of Facilities and Infrastructure in Sports of East Azerbaijan Province	0.518	6.18	0.001
	--->	Development of Scientific Environment in Sports of East Azerbaijan Province	0.547	6.43	0.001
	--->	Development of Legal Environment in Sports of East Azerbaijan Province	0.583	6.94	0.001
	--->	Development of Cultural Environment in Sports of East Azerbaijan Province	0.794	14.34	0.001

Table 5 shows that in all questions, the P-value is less than 0.05, which means there is a significant difference between what was expected and what was observed, and indicates significant relationships between mass media and cyberspace with changing attitudes, attracting economic opportunities, increasing self-confidence, and investing in sports.

Table 5. Chi-square test for different questions

Chi-Square	df	P-Value	Test Result
85.846	16	0.010	There is a significant difference between the observed and expected values.
96.895	14	0.001	There is a significant difference between the observed and expected values.
89.154	21	0.020	There is a significant difference between the observed and expected values.
54.042	18	0.001	There is a significant difference between the observed and expected values.
80.664	15	0.001	There is a significant difference between the observed and expected values.

To prioritize and examine the differences between factors affecting economic development and employment in sports in terms of research samples, the Friedman ranking test was used.

Based on the findings of the Friedman test (Table 6), there is a significant difference between the factors affecting the development of sports in East Azerbaijan province through the media from the perspective of the research samples (Sig=0.01, $\chi^2=28.632$). After the significant difference between the factors affecting the development of sports in East Azerbaijan province through the media, these factors were prioritized based on the results obtained. According to the results obtained (Table 6), from the perspective of the research sample, "Development of financial resources for sports in East Azerbaijan province through the media" has the highest rank among the factors affecting the development of sports in East Azerbaijan province through the media from the perspective of the research sample, and "Development of sports facilities and infrastructure in East Azerbaijan province through the media" has the lowest rank.

Table 6. Ranking of factors affecting the development of sports in East Azerbaijan Province through the media from the perspective of the research sample

Rank	Statement	Mean Rank
1	Development of Human Resources in Sports of East Azerbaijan Province	2.98
2	Development of Financial Resources in Sports of East Azerbaijan Province	4.12
3	Development of Facilities and Infrastructure in Sports of East Azerbaijan Province	2.82

4	Development of Scientific Environment in Sports of East Azerbaijan Province	3.09
5	Development of Legal Environment in Sports of East Azerbaijan Province	3.58
6	Development of Cultural Environment in Sports of East Azerbaijan Province	4.03

Discussion

Mass media and cyberspace, as key communication tools, have a significant impact on economic development and the enhancement of sports infrastructure. The findings of this study indicate that the media in East Azerbaijan Province have significantly influenced various aspects of sports development. Exploratory factor analysis demonstrates that the media have effectively strengthened the financial and human resources in sports. Fitness indices, such as GFI and CFI, with values above 0.9, confirm the suitability of the proposed model for economic development and sports-related employment. Additionally, the root mean square residual (RMR) and the root mean square error of approximation (RMSEA) indicate favorable values, highlighting the media's facilitating role in attracting investments and creating economic opportunities.

The role of mass media and cyberspace in the development of mass and championship sports is a multifaceted and complex issue, and their impact on various aspects of this field, such as economic development, employment, changing public attitudes, and attracting economic capital, has been examined from various angles. The findings of the present study in this field indicate the advantages and limitations of using media in this field, and at the same time, highlight the role of cultural, social, and infrastructural contexts. In the field of economic development and employment in sports, social media can play an effective role in the economic growth of sports by increasing public awareness, promoting brands, and attracting sponsors. For example, digital media are used as a tool for marketing and increasing the income of sports clubs. This study confirms that digital media has a positive impact on the sports industry by creating new job opportunities, generating revenue (advertising and sponsorship, broadcasting rights, digital content production, holding sports events), and creating employment (content production, technology, and platform management, event management and indirect employment with a focus on increasing the popularity of sports and attracting an audience). In this regard, Hashemian et al. in 2024 [15], in a study titled *Conceptual Framework for Using Media Power for Sports Development*, showed that revenue generation, employment generation, trust building, ability to create a flow, demand, authority, legitimacy, transparency, and type of media ownership are the underlying factors. These factors create a bridge between the sports industry, audiences, and sponsors. Also, the results of the study by Khajeh Salehani et al. (2024) [16] entitled *"Interpretive Structural Model of Student Sports Development through Media"* showed that factors such as the development of economic resources, the development of human resources in sports, and the development of scientific resources in sports have a great impact, and paying attention to these factors through the media has significant results in the development of public sports and championship sports.

However, conflicting research emphasizes that the positive effects of media are not felt directly in all sectors of the sports economy and that these effects are more limited in some regions and sports. Some studies have also concluded that sustainable economic growth in sports still requires strong infrastructure long-term policies and greater support from sports sponsors and governments.

In this regard, the findings of Jafari and his colleagues' research in 2019 showed that media, managerial, technical, structural, and financial factors affect the willingness of sports sponsors to support sports for the

blind and visually impaired in Ardabil province. Therefore, to develop championship sports, more support for sports for the blind and visually impaired should be considered necessary for all conditions for companies and organizations to enter sports.

Human resource development in sports is considered a key component for improving the level of public and championship sports. The research findings show that mass media and cyberspace have a significant impact on this area through informing, educating, and creating professional development opportunities for athletes, coaches, and other sports executives. The statistical models of the present study, with acceptable fitness indices, indicate a significant relationship between media use and the development of sports human resource skills and knowledge. Indices such as the KMO value and the Bartlett test confirm that the data of this study are suitable for factor analysis and the results can be relied upon. In this regard, numerous studies have been conducted abroad, including DeCornis (2023) [17], Kim (2022) [18], Saputra (2022) [19], and Bye (2022) [20] who believe that the role of educational and motivational media content in promoting sports skills and impact of investment in producing quality media content on the interest and participation of young people in sports activities are highlighted, and they have also emphasized the importance of access to educational resources and the role of the media in reducing educational gaps in sports. Therefore, the media play a prominent role in creating expert and efficient human resources in the sports industry, because these media, by using new technologies, special training, and extensive advertising at the regional and national levels, bring talented, innovative, and creative forces to work, and therefore we witness the attraction of expert human resources and athletes in the sports industry. In our country, and especially at the provincial level, media specialists such as directors and sports science specialists who are aware of the needs and motivations of individuals should have the necessary cooperation and sufficient exchange of information, the result of which is the attraction of expert human resources, talented athletes, and spectators. The result of this meritocracy and selection of experts in the organization includes the success of public sports and championships at the provincial level, and as a result, nationally and internationally.

However, other studies have been conducted in this field that are inconsistent with the results of the present study. For example, the study by Kolotouchkina et al. (2020) [21] shows that excessive media focus on popular sports can lead to the neglect of other sports, which can negatively affect human resource development. Jiang et al. (2021) [22] also pointed out the issue of the spread of false information in cyberspace as well as unequal access to technology in certain regions and pointed out its negative effects on the process of education and skills development, and consequently its impact on human resource development.

As one of the most important means of mass communication, the media plays a key role in expanding sports culture, encouraging the general public to participate in sports activities, and supporting competitive sports. By covering news, producing content, and creating interaction with audiences, the media can help develop infrastructure for popular and competitive sports and pave the way for improving the status of sports in society. The media's attention to the development of venues and infrastructure must be expert and accurate because structural weaknesses in this area are identified and made available to the general public in the form of a comprehensive report, which in turn draws the attention of relevant officials and managers to the gaps in the infrastructure and seeks to address those problems. The lack of necessary infrastructure has very negative effects on the development of popular and competitive sports, and the lack of suitable venues has a direct impact on people's lack of motivation to participate in these activities. In this regard, competent and efficient managers and officials should be selected in the field of management. To select these managers, the necessary indicators for selecting managers can be identified with the presence of experts

and made available to relevant organizations and individuals in the community. Also, by reviewing the work records of managers and officials in this field, qualified officials and managers can be identified and appreciated in the IRIB.

Razavizadeh et al. (2023) [2] conducted a sociological study of the challenges of sports development, emphasizing the role of the media, and expressed the results as follows: About structural factors, we can point to the weak relationship between sports organizations and their lack of updating, the unequal distribution of equipment and facilities according to the population of each region, and the lack of financial resources for creating sports facilities. Weakness in human and financial resources is one of the most important obstacles to the development of sports. Optimal use of the country's existing resources can be a solution. Utilizing the facilities and resources of the private sector is one of the mechanisms for developing sports worldwide, just as in our country, we can also benefit from the capacities of the private sector to participate in sports activities.

Yousefian (2022) [23] has studied the challenges of mass and championship sports in a study in Yazd province. The results of this study show that the media, as one of the most influential tools, plays a dual and vital role in the development of sports. By promoting sports culture, informing, motivating, and attracting capital, the media can contribute significantly to the development of infrastructure and increasing public participation. Studies by Goodarzi et al. (2023) [24] and Kruszynska et al. (2019) [25] also emphasize the importance of the role of the media in the development of sports. They believe that the media's attention to infrastructure, and structural and economic factors is a key factor in the progress of sports. The widespread influence of the media in everyday life and their ability to change people's attitudes and motivation have made the media one of the most important tools for the development of sports. Media attention to a particular sport can lead to improved public perception of that sport, attracting financial and economic support, and ultimately, branding and development. To achieve greater success in sports development, the media must pay attention to all sports and utilize all their capacities to create a dynamic sports community.

The media plays a key role in the development of sports, especially from a scientific, legal, and cultural perspective that directly and indirectly affects the development of popular and champion sports. The scientific environment of sports is greatly strengthened through the media. The media can increase general and specialized knowledge related to sports by publishing articles, educational programs, and scientific analyses. Providing scientific information about the impact of physical activities on the health and performance of athletes is one of the clearest examples of this role. Also, by introducing sports research and innovations such as wearable technologies and sports data analysis, the media creates effective communication between researchers, athletes, and managers, which helps to advance this field.

On the other hand, the legal environment of sport is also heavily influenced by the media. By covering issues such as athletes' rights, anti-doping laws, and contractual issues, the media contributes to the transparency of the rules and fairness in sports. Raising awareness about legal principles and legal requirements not only prevents violations but also improves the management and executive structures in sports. The media can also help to reform the rules and change public attitudes by highlighting injustices and inequalities in sports.

The cultural environment also finds a suitable platform for the development of sports through the media. The media contributes to the formation of a richer culture by producing content that promotes moral values,

cooperation, and mutual respect in sports. This content encourages audiences to participate more in sports through documentaries, sports events, and even advertisements. In addition, the media can adapt sports culture to the needs of different communities and strengthen national identity by localizing it. For example, introducing traditional sports or highlighting the success of local champions is an example of this approach.

Overall, the media can contribute to the sustainable development of sports by influencing the scientific, legal, and cultural environments. This role will only be fully realized through collaboration between sports institutions, policymakers, and the media, as each of these areas plays a complementary and synergistic role in the growth of sports.

In this regard, Aliabadi et al. (2023) [26] identified 6 factors in a study focusing on the role of mass media in the development of competitive sports: "The function of mass media in the development of human resources in competitive sports, the development of financial resources, the development of places and infrastructure, the development of the scientific environment, the development of the legal environment, and the development of the cultural environment." Tabatabaei et al. (2022) [27] and Peserkolo et al. (2021) [28] showed in their research that sports managers of various organizations, considering human capital, including staff and task force, can increase media transparency and solidarity of their forces in sports through constructive media interaction in mass media and benefit from cultural, educational, financial support, and promotional roles.

In a study conducted by Al-Ghali et al. (2024) [29] in Iraq, it was found that participation in sports activities and an active lifestyle, in general, does not have much place in the general culture of this country. The results showed that sports activities are not a priority for a significant part of Iraqi society, and on the other hand, the country also has a small number of sports champions in national and international forums. These findings indicate that despite Iraq's large oil resources, not enough attention is paid to public sports and championships in this country. In these circumstances, the role of the media becomes more important than ever. The media can increase public participation in sports activities by utilizing their capacity and, on the other hand, challenge senior sports managers for their lack of attention to this area. These measures can pave the way for reforming and improving the situation of sports in this country.

The results of the structural equation model analysis showed that all the identified factors have an impact on the development of sports in East Azerbaijan Province through the media, and the research model was confirmed with good fit indices. The findings show that sports, especially in the championship sector, are of particular importance to governments due to economic, political, and advertising benefits. In our country, extensive investments are also made in this area to increase international honors and strengthen national prestige.

However, it is necessary to pay attention to other sports sectors, such as public and educational sports, which play a key role in promoting the health of the community. In this regard, the development of sports in provinces, including East Azerbaijan, requires more planning and support, to enhance championships, as well as public participation in sports and social health.

Conclusion

Mass media and cyberspace have a significant impact on the development of mass and championship sports in East Azerbaijan Province. The role of the media in raising public awareness, attracting capital, and

increasing social participation is especially prominent in championship sports. The media helps improve the status of sports by strengthening environmental, cultural, and scientific factors and through the production of educational content, strengthening human resource skills, and creating appropriate infrastructure. However, the limitations of the media in some regions and sports, especially in the field of unequal access to technology and the lack of appropriate financial budget allocation, lack of infrastructure, and the failure to identify and use experts and specialists in activities are obstacles to the sustainable development of sports. Improving these challenges requires long-term support policies and extensive cooperation between sports institutions, the media, and governments.

Ethical Considerations:

Compliance with ethical guidelines

The authors commit to adhering to ethical guidelines.

Funding

Authors state no funding involved.

Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this manuscript

Acknowledgment

We would like to express our sincere gratitude to all individuals who participated in this study, including athletes, coaches, faculty members, and staff of the General Directorate of Sports and Youth in East Azerbaijan Province. Their invaluable contributions were essential to the success of this research.

References

1. Allahmoradi M, Razavi SMH, Doosti M. Presenting the conceptual model of citizen sports. Research in Sport Management and Motor Behavior. 2019;9(18):17-35. <http://dx.doi.org/10.29252/JRSM.9.18.17>
2. Razavizadeh SN. A Sociological Study on Challenges of the Development of Public Sports with an Emphasis on the Role of The Provinces''Media (Case: Markazi Province). 2024. <https://doi.org/10.22082/cr.2023.2009850.2585>
3. Sajjadi N, Ghahfarkhi AD, Bayat M. The role of sporting events and the deployment of international caravans in the social and cultural development of communities (Case study of Iran). Journal of Iranian Social Development Studies. 2022;54(14):49-64. <https://doi.org/10.30495/jisds.2022.67733.11745>
4. Miryousefi SJ, Bakhshndah H. Explanation and Prioritization of Mass Media Factors Affecting Political Culture Development of Championship Sport. Sport Management Journal. 2020;12(2):501-20. <https://doi.org/10.22059/jsm.2019.274462.2216>
5. Ghadimi E. Redefining Public Relations in the Information and Communication Age: A Review of the Public Relations Book 2. Information and Communication Book Review. 2015;5(2):73-84. <https://www.magiran.com/p1440151>

6. Asadi N, Tojari F, Nik Aeen Z. Place of Sports in Laws of the Iran's Five-Year Plans. Strategic Studies on Youth and Sports. 2020;19(47):165-88. https://faslname.msy.gov.ir/article_364.html?lang=en
7. Yamini Firouz M, Yamini Firouz M. An introduction to the role of mass media in the development of public sports. Media Management. 2020;8(52):41-50. <http://noo.rs/64A7n>
8. Fathinia MA, Abdolrahman. Football fan aggression and the role of media in controlling it. Evolution and research. 2005(42-43):81-0. <http://dx.doi.org/10.5937/socpreg56-35221>
9. Ghiamirad Amir MM. The Study Of Marketing Approaches To Promote And Develop Sport Fields In Iran. Movement (Iranian Journal). 2009;39(39):175-92. https://joh.ut.ac.ir/article_27775.html?lang=en
10. Motallebi N, Davoodzadeh K, Borjalilu S, Kashanimovahhed B, Anbari M, Nikfarjad H, et al. The Influential Aspects of Cyberspace in Promotion of Sports. Asian Journal of Sports Medicine. 2018;9(3). <http://dx.doi.org/10.5812/asjasm.64627>
11. Babaei M, Fattahi Masroor F, Shakeri N. Identifying the Current Situation and Obstacles to the Development of Sport for All in the Country. Strategic Studies on Youth and Sports. 2018;17(41):235-47. https://faslname.msy.gov.ir/article_280.html?lang=en
12. Askarian F, Rahbar M, Raghfar H, Saffari M. Industry Identify of development barriers of Iran Sports. Journal of Sport Management and Motor Behavior. 2021;17(34):98-81. <https://doi.org/10.22080/jsmb.2020.14283.2871>
13. Abandansari MZ, Kohan NA. Effective Factors in Improving the Sports Diplomacy of Iran and the Arab Countries of the Persian Gulf Region. Journal of New Studies in Sport Management. 2024;5(2):1118-30. <http://dx.doi.org/10.22103/jnssm.2023.22251.1223>
14. Moharram Zadeh M, Kheirollahi Meidani H, Hasanzadeh N. Investigating the Impact of the Environmental and Spatial Dimension of the Health Sidewalks of Ardabil on People's Tendency to Participate in Physical Activity. Research in Sport Management and Marketing. 2023;5(1):1-12. <https://doi.org/10.22098/rsmm.2023.12498.1211>
15. Hashemian S, Ghasemi H, Hosseini M. Conceptual framework of using media power for sports development. Communication Management in Sport Media. 2025. <https://doi.org/10.30473/jsm.2023.68127.1761>
16. Khajeh Salehani M, Ghasemi H, Doroudian AA, Khojasteh Bagherzadeh H, AzadFada S. Interpretive structural model of student sports development through the media. Communication Management in Sport Media. 2024;11(3). <https://doi.org/10.30473/jsm.2022.63013.1603>
17. De Corniere A, Sarvary M. Social media and news: Content bundling and news quality. Management Science. 2023;69(1):162-78. <https://doi.org/10.1287/mnsc.2022.4341>
18. Kim DY, Kim H-Y. Social media influencers as human brands: an interactive marketing perspective. Journal of Research in Interactive Marketing. 2022;17(1):94-109. <https://doi.org/10.1108/JRIM-08-2021-0200>
19. Saputra F. The Role of Human Resources, Hardware, and Databases in Mass Media Companies. International Journal of Advanced Multidisciplinary. 2022;1(1):47-55. <http://dx.doi.org/10.38035/ijam.v1i1>

20. Bye B, Fæhn T. The role of human capital in structural change and growth in an open economy: Innovative and absorptive capacity effects. *The World Economy*. 2022;45(4):1021-49. <https://doi.org/10.1111/twec.13184>
21. Kolotouchkina O, Llorente-Barroso C, García-Guardia ML, Pavón J. Disability, sport, and television: Media visibility and representation of Paralympic Games in news programs. *Sustainability*. 2020;13(1):256. <https://doi.org/10.3390/su13010256>
22. Jiang M, Gao Q, Zhuang J. Reciprocal spreading and debunking processes of online misinformation: A new rumor spreading–debunking model with a case study. *Physica A: Statistical Mechanics and its Applications*. 2021;565:125572. <http://dx.doi.org/10.1016/j.physa.2020.125572>
23. Yousefian J. Challenges to Develop Sport for All, Professional and Vocational, Women's and Educational Sports in Yazd Province. *Strategic Studies on Youth and Sports*. 2022;20(54):171-92. <https://doi.org/10.22034/ssys.2022.480>
24. Goodarzi M, Hamidi M, Behrouzi A. Designing and Explaining the Optimal Scenario for the Development of Triathlon in Iran. *Sport Management Journal*. 2023;15(3):213-195. <http://doi.org/10.22059/JSM.2023.354714.3113>
25. Kruszyńska E, Poczta J. Hierarchy of Factors Affecting the Condition and Development of Sports and Recreation Infrastructure-Impact on the Recreational Activity and Health of the Residents of a City (Poznan Case Study). *Int J Environ Res Public Health*. 2019;16(4). <http://dx.doi.org/10.3390/ijerph16040556>
26. Aliabadi S, Sajjadi SN, Ghasemi H, Kordi M. The role of mass media in the development of human resources, financial resources and facilities and championship sport infrastructure. *Sport Management Studies*. 2023. <https://doi.org/10.30473/jsm.2020.56279.1485>
27. Tabatabaei SA, Ghasemi H, Farahani A. Designing a paradigm model for the development of sports of the Armed Forces of Iran through mass media Authors. *Defence Studies*. 2022;20(78):168-95. <https://dor.isc.ac/dor/20.1001.1.17351723.1401.20.78.6.4>
28. Peserkolo S, Isfahaninia, Akram, Fallah, Zainal Abedin, & Ghorbani, Saeed. Investigation and prioritization of factors affecting the quality and success of sports teams of the Armed Forces of the Islamic Republic of Iran in international competitions. *Quarterly Journal of Standards and Quality Management*. 2021;11(1):120-41. <https://doi.org/10.22034/jsqm.2021.266205.1286>
29. Alghali A, Mirsafian H, Naderian Jahromi M. The Model of Disabled Sports Development in the Championship Field (Case Study: Iraq). *Sport Management Journal*. 2024. https://jsm.ut.ac.ir/article_98363.html?lang=en

«مقاله پژوهشی»

بررسی نقش رسانه‌های جمعی و فضای مجازی در پیش‌برد و ترویج ورزش همگانی و قهرمانی (مطالعه موردی استان آذربایجان شرقی)

شیرین عالی^۱ , حامد خیراللهی میدانی^۲ , فربرز ایمانی^۳ , فرهاد رضازاده^۴ 

- ۱- استادیار، گروه آموزش تربیت بدنی، دانشگاه فرهنگیان، صندوق پستی ۸۸۹-۱۴۶۶۵ تهران، ایران. ir.ac.aali@cfu.Sh
- ۲- دانشجوی دکتری تخصصی، گروه مدیریت ورزشی، دانشکده علوم تربیتی و روانشناسی، دانشگاه محقق اردبیلی، اردبیل، ایران
- ۳- دانشجوی دکتری تخصصی، گروه بیومکانیک ورزشی، دانشکده علوم تربیتی و روانشناسی، دانشگاه محقق اردبیلی، اردبیل، ایران
- ۴- استادیار، گروه بیومکانیک ورزشی، دانشکده علوم تربیتی و روانشناسی، دانشگاه محقق اردبیلی، اردبیل، ایران

چکیده

هدف: این تحقیق به تأثیر رسانه‌ها بر افزایش منابع انسانی، مالی و زیرساختی و سهم آن در توسعه کلی ورزش می‌پردازد.

روش‌شناسی: این مطالعه با استفاده از تحلیل عاملی اکتشافی به شناسایی عوامل کلیدی موثر بر توسعه اقتصادی و اشتغال در ورزش پرداخته است. قبل از تجزیه و تحلیل عاملی، اندازه‌گیری کایزر-مایر-اولکین (KMO) و آزمون کرویوت بارتلت برای ارزیابی مناسب بودن حجم نمونه و همبستگی متقابل متغیرها استفاده شد. علاوه بر این، شاخص‌های برازش مدل، از جمله شاخص برازش (GFI) و شاخص برازش مقایسه‌ای (CFI)، برای ارزیابی کفایت مدل ساختاری استفاده شد.

نتایج: نتایج تحلیل عاملی نشان داد که رسانه‌های جمعی و فضای مجازی بر توسعه منابع انسانی، مالی، زیرساختی، علمی، حقوقی و فرهنگی ورزش استان آذربایجان شرقی تأثیر بسزایی دارند. شاخص‌های برازش برای مدل ساختاری ($GFI = 0.921$, $CFI = 0.893$) از وضعیت خوبی برخوردار بود و اعتبار مدل را تأیید کرد. علاوه بر این، آزمون‌های آماری روابط معناداری را بین نقش رسانه‌ها و نتایج مختلف، مانند افزایش سرمایه‌گذاری در ورزش، افزایش اعتماد به نفس و جذب فرصت‌های اقتصادی نشان داد.

نتیجه‌گیری: یافته‌ها بر نقش محوری رسانه‌های جمعی و فضای مجازی در ترویج ورزش در سطوح پایه و حرفه‌ای تأکید می‌کند. رسانه‌ها در افزایش آگاهی عمومی، جذب حمایت‌های مالی و تقویت مشارکت جامعه در فعالیت‌های ورزشی نقش مهمی دارند. با این حال، چالش‌هایی مانند دسترسی نابرابر به فناوری‌های دیجیتال و سرمایه‌گذاری ناکافی در زیرساخت‌های ورزشی همچنان موانعی برای تحقق کامل پتانسیل رسانه‌ها در توسعه ورزش هستند. نتایج مطالعه حاضر نشان داد توسعه پایدار ورزش در استان آذربایجان شرقی، نیاز به همکاری بیشتر رسانه‌ها، سازمان‌های ورزشی و مسئولان دولتی وجود دارد.

واژه‌های کلیدی

اشتغال، استان آذربایجان شرقی، تحلیل عاملی اکتشافی، توسعه اقتصادی، رسانه‌های جمعی، فضای سایبری، ورزش‌های همگانی، ورزش‌های قهرمانی.

نویسنده مسئول

نام نویسنده: فرهاد رضازاده / rezazadeh.farhad@uma.ac.ir

استناد به این مقاله:

Aali, S. , Kheirollahi Meidani, H. , Imani, F. and rezazadeh, F. (2025). Investigating the role of mass media and cyberspace in the advancement and promotion of public and championship sports (Case study of East Azerbaijan Province). Journal of Advanced Sport Technology, 9(1), -. doi: 10.22098/jast.2025.16416.1396

<https://jast.uma.ac.ir/>