

Factors affecting leisure-time physical activities to promote public health: a systematic literature review

Abstract

Objective: It has been observed that sports activities are intended to promote weight loss and public health maintenance among individuals in Saudi Arabia. The purpose of this study is to explore the factors that influence leisure-time physical activity to promote public health among (KSA) university male students.

Methods: This study employed Scopus, Science Direct, Google Scholar, and other databases to examine studies on the most common components in leisure-time physical research. These and other databases made it possible to find relevant theses in the study's area of interest.

Results: This study identified 7 factors that might improve leisure-time physical activity to promote public health. They are as follows: (human resources, the culture of the society, facilities, financial, tools, programs, and policies). Universities should therefore play a part in boosting students' motivation to participate in LTPA by building more locations where students can access integrated sports facilities, tools, and human resources. They should also consider offering financial support to athletes who have achieved particularly high levels of success. In addition, special attention should be paid to the type and nature of the programs that are offered to students.

Conclusion: This study suggests that other factors, such as psychological and built-environmental resources, university-offered programs, cultural and health, should be taken into account when formulating legislation. Together, this would help us determine the best practices for encouraging male students to participate more on campus.

Keywords: leisure-time, physical activities, factors affecting, public health, Saudi Arabia

Introduction

It has been noted that adult sports involvement in the KSA is frequently driven by weight loss and maintaining good health. However, it has been shown that time constraints and a lack of facilities are the primary problems that have a negative impact on sports participation.¹⁻³ Additionally, it was discovered in the study by Black et al.,³ that adults who frequented a gym believed that women's barriers to participating in sports activities were brought on by a lack of social support and resources, whereas men's barriers were caused by a lack of energy, motivation, self-confidence, and time. Notably, the risk of individuals aged 33 to 50 not exercising is significantly increased by attending a school with poor sports facilities.³ Sports activities in schools will be naturally promoted if habits are formed early in life that encourage sports participation and the development of sports skills.³ Additionally, investing in other tactics will speed the control of all sports-related health issues and circumstances for an active life cycle.

Therefore, this research's data set contained a variety of sources from top publications in the fields of the factors that influence leisure-time physical activities to promote public health. I only planned to address the following research question: (RQ) what are the factors that influence leisure-time physical activities to promote public health among (KSA) university male students?

Table 1 shows a systematic literature review (SLR) on LTPA most used factors from the literature. Based on the frequencies of factor use, the performance of those factors in this domain. As reported in previous studies, and emphasis on the significance of facilities in the KSA universities for the smooth introduction of sports. Seven factors will adopt in this study, the seven factors are: Facilities; Tools; Finance;

Volume 6 Issue 1 - 2023

Sameer Mohammed Sayyd,¹ Hassan Abu Hassna²

¹Faculty of Education, Department of Physical Education and Sports Sciences, Taibah University, Saudi Arabia

²Faculty of Social Sciences & Humanities, Universiti Teknologi Malaysia, Malaysia

Correspondence: Sameer Mohammed Sayyd, Faculty of Education, Department of Physical Education and Sports Sciences, and Head of Department of Scientific Publishing and Scientific Societies, Taibah University, Madinah 41411, Saudi Arabia, Tel 00966553583321, Email ssayy@taibahu.edu.sa

Received: December 31, 2022 | **Published:** January 12, 2023

Human Resources; Policies; Programs; and Culture of Society. More discussion on the factors is provided below.

Table 1 illustrates a SLR on the most used factors in LTPA in previous studies. With regard to LTPA, a model is developed to examine the factors that are mainly related to LTPA. The focus of this present study is to understand some of the factors that are important to sport development, with a strong emphasis on the combination of those factors that have a positive impact on participation in sport and individuals. In the model for sport development, recruitment is also the first stage. This will involve individuals, family, and the level of the sport delivery system, which affect the decision-making process of an individual to either participate or not in sport activity. In sport, programme factors play a major role, indicative of the level of the system, increasing the likelihood that the individual will show an interest in a sport that can meet their essential requirements and motivate them to do more.

Maintaining availability and trying to increase involvement in sport is very challenging, it requires a critical analysis of the things that affect the individual decision to either stay or leave. Some of the limitations that usually affect the pledge of individuals are lack of financial resources, skills, and social support. Also the lack of stable programs or training staff at the system level will definitely disturb their commitment Green,⁴ Grima⁵ stipulates the economic time allocation, Breuer,⁶ Throughout their work on LTPA, they implemented a micro-level model test, with a model that consisted of two levels the demand side and the supply side. The demand side has factors on the individual level, and the supply side has factors on the infrastructure level, which can also be referred to as the micro- and macro-levels, respectively. In the study by Wicker et al.,⁷ sport programs and facilities were incorporated by adding macro-

level factors, which eventually transform into a multi-level analysis approach. A lot of time has been spent by researchers on analysing the accessibility of sport facilities, identifying their quantity and location.

Sport infrastructure or macro-level factors of/in a sport facility is of utmost priority. Few or inadequate facilities will prevent LTPA.⁸ The infrastructure in sport is the basic facilities, amenities, services serving organization in charge of sport. Sports participants communicate with those who provide sporting activity for members to participate for leisure, competitive purposes, and training. This infrastructure includes pitches, swimming pools, courts, indoor sports halls. Participation also includes sport programs organized by sport clubs and cities, etc. Different researchers included park and leisure areas in their studies.^{7,9} Macro-level factors are considered as facilitators of LTPA because they play a positive role in sport activity. The increment in the supply of sport amenities and programs has a positive effect on sport activity programs. The availability of appropriate sport facilities and infrastructure ensure the correlation of sport activities; thus, this is established in many studies. In participating in sport activity, sport facilities availability is not really significant in classifying the decision of whether to partake or not. It is always challenging to match the results, because different studies operationalize sport supply in different ways Green.⁴

The role of infrastructure in sport is very important in LTPA, although it depends on the type of sport and facility.⁷ When facilities are well utilized, this brings a feeling of satisfaction and as a result this encourages more sport participation.¹⁰ In the situation of fewer sport facilities, it has been shown that this discourages participation in sport activity. In addition, a major obstacle in sport activity is the lack of sufficient infrastructure.⁸ The social relations of an individual are instrumental in sport participation. Stahl et al.,¹¹ stated that the physical environment setting, such as sport participation with amenities, is important in terms of guaranteeing that people undertake physical activity. Hague et al., discovered the connection between the readiness of sport amenities in secondary schools and student sport involvement during the break time. An independent study carried out in Germany by Wicker et al.,⁷ shows that regardless of differing social economic situations, the accessibility of the sport structure affects the level of sport activity.

Hallmann and Breuer¹² in their study, claim that social status influences the level of sport activity and participation in a lot of ways. The study stated that the social movement of an individual influences the decision to participate in sport, positively affecting sport activity and participation in a significant way. Ruseski and Maresova¹³ did a comparative analysis and stated that country-level policies directly and indirectly related to sport and have an effect on sport activity and participation. This recognizes the role of government policies in shaping the choice of people to be physically active, which should be focused on social considerations and legislation linked to exercise. A significant point in this report is that wide-ranging involvement is not established by providing resources for elite athletes. A strong relationship was formed between policy efficiency and spending on public health, and sport activity Van Tuyckom,¹⁴ Wheeler¹⁵ explored the importance of participation of family in sport with outstanding results. Parent support for their sons' sport participation entails the setting of goals, and strategies that ensure encouragement and support in the background, either with sports experience or not, have a lot of impact on sons' participation. Their support in transporting them to training and watching them perform have a lot of positive impact.

Downward et al.,¹⁰ presented a comprehensive list of sport activity indicators using evidence from the 2009 Euro-barometer indicator

by concentrating on many indicators, including traditional variables such as cultural way of life and socio-demographics, and the quality of sport amenities, motivations, and support from the government. Studies show that funding policy, club attachment and some incentives will bring improvement in sport activity. The availability of sports amenities is more important for the male gender who plays sport solely for social integration, as opposed to the female gender who target the development of self-esteem. Policymakers in sport in European nations have observed that Scandinavian and Nordic countries are highly successful in accomplishing high levels of sport activity and participation, this being achieved through the implementation of the same initiatives in their countries.⁵

In sum, based on the SLR above, as reported in previous studies, and emphasis on the significance of facilities in the KSA universities for the smooth introduction of sports. Seven factors were adopted in this study, The seven factors are Facilities; Tools; Finance; Human Resources; Policies; Programs; and Culture of Society.

Table 2 and Figure 1 illustrate Summary of suggested factors based on the SLR of the previous literature.

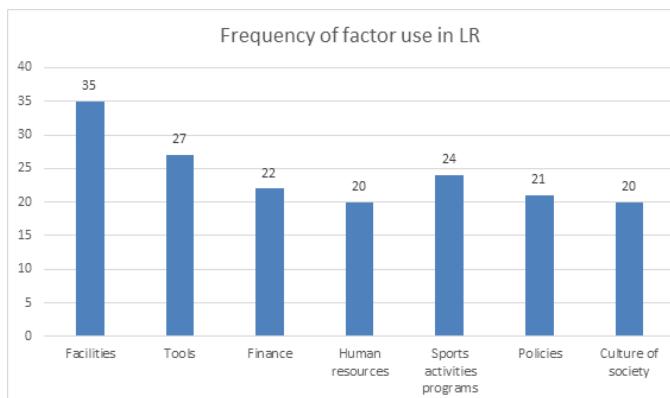


Figure 1 Summary of suggested factors based on the SLR of the previous literature.

Based on the extracted factors from the literature.

Methodology

The current research on the most prevalent determinants of leisure-time physical activity to promote public health from the literature was reviewed in this study using a variety of internet databases. The effectiveness of those factors in this domain is determined by the frequency of their application. Prior studies have highlighted the value of infrastructure at KSA institutions for the seamless integration of sports. Science Direct, Google Scholar, Scopus, and other databases were utilized in this study to find relevant theses in the study's focal area up until February 25, 2021. In addition, the authors have three criteria to use when deciding whether or not to include a work. These prerequisites include the publishing year, the publishers, and the frequency of factor use in SLR of leisure-time physical activity. The words "leisure-time," "physical exercise," and "factors of influence" were utilized by the authors.

Results and discussion

The purpose of this study is to explore the factors that influence leisure-time physical activity to promote public health among (KSA) university male students. This objective was addressed by conducting a systematic literature review (SLR) of the previous studies that studied the most factors that are related to LTPA in the literature. The

results of the SLR helped the research to identify the most related factors to achieve this study objective, based on the SLR (Table 1). A research study by Wicker et al.,⁷ suggested that sport programs and facilities were incorporated by adding macro-level factors, which eventually transform into a multi-level analysis approach. A lot of time has been spent by researchers on analysing the accessibility of sports facilities, identifying their quantity and location. Moreover, Breuer,⁶ The demand side has factors on the individual level, and the supply

side has factors on the infrastructure level, which can also be referred to as the micro and macro levels, respectively. Furthermore, Grima,⁵ It is important to know that limited time and money affect to a large extent the decision to take part in sporting activities. Additionally, Green,⁴ Some of the limitations that usually affect the pledge of individuals are lack of financial resources, skills, and social support. Also, the lack of stable programs or training staff at the system level will definitely disturb their commitment.

Table I SLR on the most used factors in LTPA in previous studies

Authors	Factors that enhance LTPA	Outcomes
Green ⁴	- Financial resources Skills Social support Programs (training staff)	Some of the limitations that usually affect the pledge of individuals are lack of financial resources, skills, and social support. Also, the lack of stable programs or training staff at the system level will definitely disturb their commitment.
Grima ⁵	Economic time allocation Financial supports (The demand side) skills social support	It is important to know that limited time and money affect to a large extent the decision to take part in sporting activities.
Breuer ⁶	programs (training staff) (The supply side) Financial supports Facilities Sport programs	The demand side has factors on the individual level, and the supply side has factors on the infrastructure level, which can also be referred to as the micro- and macro-levels, respectively
Wicker et al., ⁷	Facilities Financial supports Basic facilities Amenities, Services Sport programs	sport programs and facilities were incorporated by adding macro-level factors, which eventually transform into a multi-level analysis approach. A lot of time has been spent by researchers on analysing the accessibility of sport facilities, identifying their quantity and location.
Hallmann et al. ⁸	Sport programs Services Facilities Amenities, Services Sport programs	The infrastructure in sport is the basic facilities, amenities, services serving organization in charge of sport. Sports participants communicate with those who provide sporting activity for members to participate for leisure, competitive purposes, and training.
Humphreys and Ruseski ⁹	Sport programs Services Facilities	Participation also includes sport programs organized by sport clubs and cities, etc. Different researchers included park and leisure areas in their studies
Downward and Rasciu ¹⁰	Facilities Sport programs	it has been shown that this discourages participation in sport activity. In addition, a major obstacle in sport activity is the lack of sufficient infrastructure
Stahl et al. ¹¹	physical environment setting, Basic facilities Amenities Sport amenities	stated that the physical environment setting, such as sport participation with amenities, is important in terms of guaranteeing that people undertake physical activity
Hague	Facilities Sport programs	Discovered the connection between the readiness of sport amenities in secondary schools and student sport involvement during the break time.
Hallmann and Breuer ¹²	Social status Social movement	The study stated that the social movement of an individual influences the decision to participate in sport, positively affecting sport activity and participation in a significant way
Ruseski & Maresoa ¹³	country-level policies	stated that country-level policies directly and indirectly related to sport and have an effect on sport activity and participation.
Van Tuycko ¹⁴	policy efficiency	A strong relationship was formed between policy efficiency and spending on public health, and sport activity
Wheeler ¹⁵	Parent support Sport programs	Parent support for their sons' sport participation entails the setting of goals, and strategies that ensure encouragement and support in the background, either with sports experience or not, have a lot of impact on sons' participation
Downward et al. ¹⁶	Cultural way of life socio-demographics Quality of sport Amenities Motivations Support from the government	Most indicators to enhance LPTA are traditional variables such as cultural way of life and socio-demographics, and the quality of sport amenities, motivations, and support from the government.

More studies in regard to the factors that could influence LTPA among university students, study by Breuer⁶ claimed that demand side has factors on the individual level, and the supply side has factors on the infrastructure level, which can also be referred to as the micro- and macro-levels, respectively. In addition to a study by Hallmann et al.,⁸ The infrastructure in sport is the basic facilities, amenities, services serving the organization in charge of the sport. Sports participants communicate with those who provide sporting activities for members to participate in for leisure, competitive purposes, and training. Similarly, Humphreys and Ruseski,⁹ Participation also includes sports programs organized by sports clubs and cities, etc. Different researchers included parks and leisure areas in their studies. Downward and Rasciute,¹⁰ it has been shown that this discourages participation in the sports activity.

In addition, a major obstacle in sports activity is the lack of sufficient infrastructure. Stahl et al.,¹¹ stated that the physical environment setting, such as sports participation with amenities, is important in terms of guaranteeing that people undertake physical activity. Hague et al., discovered the connection between the

readiness of sports amenities in secondary schools and student sports involvement during break time.¹² The study stated that the social movement of an individual influences the decision to participate in sport, positively affecting sports activity and participation in a significant way. Ruseski & Maresova¹³ stated that country-level policies are directly and indirectly related to sport and have an effect on sport activity and participation.¹⁴ A strong relationship was formed between policy efficiency and spending on public health, and sport activity. Wheeler¹⁵ Parent support for their sons' sport participation entails the setting of goals, and strategies that ensure encouragement and support in the background, either with sports experience or not, have a lot of impact on sons' participation.⁶ Most indicators to enhance LPTA are traditional variables such as the cultural way of life and socio-demographics, and the quality of sports amenities, motivations, and support from the government. In sum, this study has drawn the most factors that can influence leisure-time physical activities to promote public health among (KSA) University Male Students. Based on the SLR study done (Table 2), the researcher selected seven well-utilized factors that influence LTPA.

Table 2 Summary of suggested factors based on the SLR of the previous literature

N	Factor name	Frequency of factor use in LR	Benefits
1	Facilities	35	Very crucial in terms of mental growth and alertness . Important to ensure participation.
2	Tools	27	Aid high performance, enable the equipment to be user-friendly and help to avoid injury.
3	Finance	22	This factor helps to provide desired goods and services to attract high participation. It boosts country economy through global participation and attracts large audiences with a conducive environment.
4	Human resources	20	Who coordinate sports activities at various levels.They bring about social and health change in the system through the use of sport.
5	Sports activities programs	24	Seek attention of participants positively. Reveal positive reactions and behaviour among participants.
6	Policies	21	Provide potential for lifestyle and informal sports through public policy.
7	Culture of society	20	This factor offers countless health benefits. As Saudi has its own culture, exploring the society's culture will provide insights into understanding sport activity participation among students.

The following are the study's factors and their explanations:

Human resources

Numerous studies in the literature point to the critical role that human resources play as a factor that could affect students' ability to engage in sports activities. For instance, students' participation in sports activities is positively impacted by the university's availability of supervisors ALwahhabi,¹⁷ Additionally, having sufficient human resources to support the university's sports programs will foster greater collaboration among the teaching staff and enable each sport supervisor to concentrate on a manageable number of students. Human resources have a favorable impact on students' degree of participation in sports, according to earlier studies in education and sport science.¹⁷⁻¹⁹

Culture of society

Since practically every area of Saudi society is governed by Sharia law, taking Saudi culture into account in this study is important. Also Saudi Arabia has its own culture; exploring the society's culture will provide insights into understanding sport activity participation

among students. Additionally, culture is a social aspect that motivates students to interact with one another and discover new cultures and customs. Previous research in the Saudi context has confirmed that social culture is a crucial aspect and has a beneficial impact on students and sports involvement.²⁰⁻²²

Facilities

The university's sports facilities can be very important in motivating students to engage in physical activity. Previous research confirmed that one of the factors contributing to students' poor participation in sports activities is the absence of sports facilities such as sports centers in the university setting.^{23,24} The vast majority of earlier studies in the Saudi university context have confirmed that students of various genders have reported that the first and most crucial factors that would motivate them to participate more actively in sports events held inside the universities are the accessibility of sports facilities that suit their needs, gender, and age group. Because of this, these studies have demonstrated that university sports facilities, regardless of gender, have a good effect on students' involvement.^{21,25,26}

Financial support

Financial support refers to the financial assistance that may be provided to students through prizes, claims for incentives, or funding that promote participation at the local, national, and worldwide levels. This kind of assistance is thought to be a crucial element in improving students' involvement in sporting events. Due to their economic issues or lack of government assistance, some countries find it difficult to provide financial aid to students Steenhuis et al.,²⁷ Saudi Arabia has a robust economy, though, and the government provides funding and other forms of assistance for colleges to establish sports programs. Previous studies have shown that providing students with a well-planned budget for support can encourage them to engage in university-sponsored athletic events Alerwi,²² For instance, recognizing the winners of each sporting event among their peers will create a favorable impression and inspire more kids to participate in future sporting events. Previous research revealed that financial assistance had a positive influence on students' involvement behaviors Steenhuis et al.,²⁷ ALwahabi,¹⁷ Alerwi.²²

Tools

The term "tools support" describes the availability of sporting goods inside the university. One of the most significant issues is easy access to exercise equipment on campus, such as running machines with fixed training cycles, outdoor fitness equipment, and indoor fitness equipment. The majority of new and modern institutions take student access to convenient, cutting-edge equipment into account when planning their campus infrastructure. Previous research has shown that having sports equipment available and easily accessible on university grounds will give students access to a healthy sporting environment and motivate them to exercise regularly. As a result, their participation will improve.^{17,22,28}

Programs

The university's sports programs are yet another significant element that may have an impact on how students behave when participating. It will be easier for students to manage their time and academic schedules to participate in these programs if there are well-organized and structured sports activities available. For instance, Al-Sobayel et al.,²⁹ emphasized the need to promote sports programs among students before the start of the academic year in order to raise awareness of these initiatives and boost sports participation among students. Additionally, according to empirical research by Sayyd,³⁰ sports lessons positively influence students' participation behaviors. Consequently, it is essential to offer sports programs that meet students' needs and enhance their athletic abilities Alizadeh,³¹ Most importantly, there are differences between male and female students' levels of interest in sports programs.²⁹ Sports programs positively influence kids' participation behavior in sports, according to earlier studies.^{21,32}

Policies

The rules and guidelines that the university provides to control and promote sporting events on the university campus are referred to as "policy support." It is crucial to adhere to the policies set forth by Saudi government ministries, such as the education and sports ministries, as universities are considered to be public-sector organizations in Saudi Arabia. On the other hand, research has stressed the urgent need for policies governing sports activities that are appropriate for Saudi culture and encourage students to participate in the implementation of these laws and regulations.^{21,33} As a result, the researchers in this study predict that encouraging sports activity policies at the university will have a positive effect on students' involvement behaviors.

Conclusion and future work

This study implies that the education ministry should consider gender differences when it comes to introducing sports programs for universities. The type of sports, tools, and sport environment directly impact creating a better healthy sports culture in male universities. Moreover, the study suggests that providing students with a solid semester-long sports program may not be sufficient if there are few options or less-accessible facilities on the university campus. As a result, having access to suitable sports facilities inside the institution increases the degree of LTPA in various sports. Additionally, university administration may play a significant part in boosting students' enthusiasm to participate in LTPA by building additional structures and facilities that offer integrated sports facilities for students.

Accordingly, this finding suggests that one of the key tactics for encouraging students to participate in LTPA on the university campus should be financial support, according to the university administration. An external motive that leads to LTPA is financial assistance in the form of incentives or prizes. Additionally, the institution may take into account offering financial assistance to athletic students with better LTPA performances and encouraging them to take part in international events. Students will feel more competitive as a result, and a sports-focused atmosphere will be built for them to demonstrate their abilities and raise the level of LTPA.

Consequently, university management must consider making the university campus a place where students can find their favorite LTPA and suitable equipment; this will increase LTPA levels in sports activities as they spend their days on the campus. Moreover, Male students' requirements differ from those of female students, thus special consideration should be given to the kind and character of the programs they get. The findings also imply that other factors, such as psychological and built-environmental resources, university programs, and cultural and health, should be taken into account when formulating regulations. Together, this would help us determine the best practices for encouraging male students to participate more on campus.

Acknowledgements

We are grateful to all participants in the study for their active cooperation.

Conflict of interest

The authors declare that there are no conflicts of interest.

References

1. Cerar K, Kondrić M, Ochiana N, et al. Exercise Participation Motives and Engaging In Sports Activity among University of Ljubljana Students. *Open Access Maced J Med Sci.* 2017;5(6):794–799.
2. Al-Hazzaa HM. Physical inactivity in Saudi Arabia revisited: A systematic review of inactivity prevalence and perceived barriers to active living. *Int J Health Sci.* 2018;12(6):50–64.
3. Black N, Johnston DW, Propper C, et al. The effect of school sports facilities on physical activity, health and socioeconomic status in adulthood. *Soc Sci Med.* 2019;220:120–128.
4. Green BC. Building sport programs to optimize athlete recruitment, retention, and transition: Toward a normative theory of sport development. *J sports manage.* 2005;19(3):233–253.
5. Grima S, Grima A, Thalassinos E, et al. Theoretical Models for Sport Participation: Literature Review. *Int J Eco Business Adm.* 2017;5(3):94–116.

6. Breuer C. Sportpartizipation in Deutschland: ein demo-ökonomisches Modell. *DIW Discussion Papers*. 2006.
7. Wicker P, Hallmann K, Breuer C. Micro and macro level determinants of sport participation. *Sport, business manag int j*. 2012;2(1):51–68.
8. Hallmann K, Wicker P, Breuer C, et al. Understanding the importance of sport infrastructure for participation in different sports – findings from multi-level modeling. *Euro Sport Manag Quart*. 2012;12(5):525–544.
9. Humphreys BR, Ruseski JE. Participation in physical activity and government spending on parks and recreation. *Contemporary economic policy*. 2007;25(4):538–552.
10. Downward P, Rasciute S. Does sport make you happy? An analysis of the well-being derived from sports participation. *Int rev applied eco*. 2011;25(3):331–348.
11. Ståhl T, Rütten A, Nutbeam D, et al. The importance of the social environment for physically active lifestyle results from an international study. *Soc sci med*. 2001;52(1):1–10.
12. Hallmann K, Breuer C. The influence of socio-demographic indicators economic determinants and social recognition on sport participation in Germany. *Euro J Sport Sci*. 2014;14(1):S324–S331.
13. Ruseski JE, Maresova K. Economic freedom, sport policy, and individual participation in physical activity: An international comparison. *Contemporary Economic Policy*. 2014;32(1):42–55.
14. Van Tuyckom C. Macro-environmental factors associated with leisure-time physical activity: a cross-national analysis of EU countries. *Scan pub health*. 2011;39(4):419–426.
15. Wheeler S. The significance of family culture for sports participation. *Int rev soc sport*. 2012;47(2):235–252.
16. Downward P, Lera-Lopez F, Rasciute S. The correlates of sports participation in Europe. *Eur j sport sci*. 2014;14(6):592–602.
17. AL Wahhabi WA, Al Wahhabi A. Evaluation of sports activities programs at king Khalid University in Abha from the perspective of students. 2015.
18. Alsahl M. Benefits and barriers to physical activity among Saudi female university students in the kingdom of Saudi Arabia and the United States. 2016.
19. Alahmed Z, Lobelo F. Correlates of physical activity counseling provided by physicians: A cross-sectional study in Eastern Province, Saudi Arabia. *PLoS ONE*. 2019;14(7):1–16.
20. Antony VC. Investigating Participation Motives of Saudi University Students towards Physical Activity at Different Educational Levels. *Ind J Sci Tech*. 2015;8(1):1–8.
21. Alahmad ME. Constraints and motivations on the participation of Saudi Arabian high school students in physical activity and sport. *College of Sport and Exercise Science*. 2016.
22. Alerwi ABS. Study of sports activity calendar among secondary school students in Saudi Arabia from the point of view of teachers and students a. 2017.
23. Sayyd SM, Zainuddin ZAB, Ghabban FM, et al. Influence of sports facilities and programs on sports participation at Saudi Universities. *J Phys Edu Sport*. 2021;21(4):2302–2307.
24. El Gilany AH, Badawi K, El-Khawaga G, et al. Physical activity profile of students in Mansoura University, Egypt. *East Med Health J*. 2011;17(08):694–702.
25. Alsubaie ASR, Omer EOM. Saudi Arabia : Evidence for Obesogenic Environment. *Int J Health Sci*. 2015;9(4).
26. Sayyd SM. Sports activities for undergraduate students in Saudi Arabia universities: A systematic literature review. *Int J Hum Move Sports Sci*. 2020;8(1):1–16.
27. Steenhuis IHM. Financial barriers and pricing strategies related to participation in sports activities: The perceptions of people of low income. *J Phys Act Health*. 2009;6(6):716–721.
28. Sayyd SM, Arie A, Abidin Z, et al. Management of Sports Facilities and Equipment in Physical Activities According to Saudi Vision 2030. *J MensSana*. 2022;7(2):118–125.
29. Al-Sobayel H, Al-Hazzaa HM, Abahussain NA, et al. Gender differences in leisure-time versus non-leisure-time physical activity among Saudi adolescents. *Ann Agric Environ Med*. 2015;22(2):344–348.
30. Sayyd SM. The Role of Universities in Promoting Physical Activities Participation among Undergraduate Male Students. *J Menssana*. 2022;7(1):39–46.
31. Alizadeh A. Ecoforum. 2019;8(1):18.
32. Abedalhafiz A Mubarak. Obstacles Face Physical Education At Schools in Al Madenah Al Munawarah Ksa. *Eur Sci J*. 2013;9(13):284–300.
33. Alsahl MS. Benefits and barriers to physical activity among Saudi Female University Students in the Kingdom of Saudi Arabia and the United States; 2016.