

## **Designing a sports development model for female staff members in Iranian universities**

### **Abstract**

**Purpose:** This study aims to develop a model for university sports among women employees in Iranian universities.

**Method:** The current study utilizes qualitative research methodology. Following the systematic approach outlined by Strauss and Corbin, the research was carried out in three phases: open coding, axial coding, and selective coding. For conducting university interviews, the statistical population of the research consisted of elite and expert faculty members, managers, and officials of sports at Iranian Universities, who were purposefully selected for qualitative interviews on the subject of research. The sampling continued up to twenty-nine interviews when theoretical saturation was achieved. The validity of the research was ensured through various strategies. The researchers employed member checks by providing the participants with summaries of their responses to ensure accuracy and interpretation. Furthermore, triangulation was used by incorporating multiple sources of data, including interviews, observations, and document analysis.

**Results:** Among 176 identified codes, 35 were attributed to causal factors, 39 related to contextual factors, 26 linked to interventions, 42 categorized as strategies, and 34 associated with the outcomes of increased participation of female employees in university sports. The comprehensive model for enhancing female employees' involvement in university sports was developed. This model had five factors, which are five causal conditions, Five context conditions, one intervening conditions, eight strategic factors, and Two consequences (Organizational, and individual). Therefore, it can be stated that the model presented in this study included all of the factors involved in the development of Female employees' participation in university sport.

**Conclusion:** Based on the results of this study, it is clear that promoting sports among female staff in Iranian universities has numerous benefits for both the organization and individuals. By addressing internal and external challenges, such as promoting a culture of sports, providing support and motivation programs, and developing sports facilities, a positive impact is expected on reducing treatment costs, improving work efficiency, enhancing individual performance, and fostering physical and mental well-being. These outcomes highlight the importance of integrating sports activities into the organizational culture to improve health and quality of life, as well as enhance productivity, teamwork, and overall organizational performance.

**Keywords:**

Sports participation, women's sports, University sport

## **Introduction**

Physical inactivity is a significant global health issue, leading to various chronic diseases such as coronary heart disease, type 2 diabetes, and certain types of cancer (Lee et al., 2012). Studies have shown that the participation of women in sports and physical activities at the university level in Iran remains relatively low compared to their male counterparts. According to a report by different studies, in the academic year 2020-2021, the percentage of female students participating in university sports programs was only 38%, while the participation rate for male students was 62% (Emami et al., 2021; Saboohi et al., 2022). Engaging in sports and physical activity can provide numerous advantages for university staff members, including women. These benefits may encompass enhanced physical health and fitness, which can lower the risk of developing chronic conditions. Additionally, it can lead to improved mental well-being (Saboohi et al., 2022), such as reduced stress levels and elevated mood. Furthermore, participating in physical activities can result in increased energy and heightened productivity in the workplace. Lastly, these activities can create opportunities for social interaction and foster a stronger sense of community among the staff (Mohammadian et al., 2021). Many employees face sedentary work environments, making them

vulnerable to the negative effects of inactive lifestyles (Butler et al., 2015). In recent years, there has been a growing awareness of the importance of promoting physical activity and sports participation among women in Iran (Rahbari & Mahmudabadi, 2022). While traditionally seen as a male-dominated domain, the landscape of sports in Iran is slowly shifting, with more women becoming involved in various athletic activities and competitions (Steel & Richter-Devroe, 2003). This trend is particularly evident in universities, where a growing number of female employees are engaging in sports and fitness activities as a means of improving their physical health and overall well-being (Hajkowicz et al., 2013; Jahromi et al., 2011). Despite the increasing interest in sports among women employees in Iranian universities, there is still a lack of structured programs and initiatives specifically tailored to their needs and interests (Rahbari & Mahmudabadi, 2022). While men's sports teams are well-established and supported, women's sports often receive less attention and resources (Knifsend & Graham, 2012). This disparity highlights the need for a focused and comprehensive model that can effectively promote and support sports participation among women employees in Iranian universities.

Factors influencing sports participation at work include personal motivations, individual needs, and support from the organization (Bardus, 2012). Engaging in sports at work can result in increased productivity, efficiency, and decreased absenteeism (Batt, 2009). On a personal level, participating in sports is crucial for preventing both physical and mental health problems (Malm et al., 2019). Sport plays a crucial role in promoting public health within a community, and having a regular exercise routine is essential for maintaining a healthy work-life balance (Shahbazi et al., 2013). It is recommended that individuals engage in at least 30 minutes of physical activity daily to support both physical and mental well-being (Mohammadian et al., 2021). Access to economic resources, sports facilities, affordable equipment, and inclusive planning are necessary for promoting sport participation and growth among all segments of society (Adelkhani et al., 2012). To encourage greater employee involvement in sports, organizations should provide free programs and expand sports facilities, training, and educational opportunities (George et al., 2014).

Effective strategies for promoting sports participation include educating individuals, enhancing self-efficacy, increasing knowledge about physical activity, setting achievable goals, and fostering social support from peers and family members (Mathews et al., 2016). Rowe et al. (2016) highlighted various factors influencing women's participation in sports. These factors include individual characteristics, social environments, administrative neglect of women's sports, lack of tailored media content, fear of injury, cultural considerations such as wearing hijab, inadequate facilities, and a general lack of interest in sports among women (Rowe et al., 2016). Also, it has been reported that environmental setups and media portrayal play crucial roles in shaping women's attitudes towards sports, with media particularly noted for its potential to encourage community engagement and mobility (Abioye et al., 2013). On the other hand, Motameni et al highlighted key obstacles to women's sports participation, including authorities' neglect, a male-centric culture, time constraints, economic factors, and insufficient investment in women's sports facilities (Motameni et al., 2014). Also, researchers such as Naderian Jahromi and Hashemi (2009) have pinpointed various factors hindering women's engagement in sports and proposed strategies to mitigate these barriers (Naderian & Hashemi, 2009). Common impediments to women's participation in sports activities, as revealed in these studies, include constraints related to time and facility access, inadequate sports infrastructure, cultural and economic limitations, feelings of insecurity, past negative encounters, inertia, as well as physical and psychological challenges (Naderian & Hashemi, 2009). These findings underscore the multifaceted nature of obstacles that deter women from sports involvement and emphasize the importance of implementing targeted measures to address these issues effectively (Hekmati et al., 2020). Also, it has been reported that the fluid nature of gender, influenced by cultural perceptions and workplace dynamics, underscores the importance of recognizing and utilizing women's abilities for societal development (Ratten & Tajeddini, 2018). Given that women constitute a significant portion of human resources crucial for societal progress, programs aimed at socioeconomic and cultural development should facilitate the effective utilization of women's talents (Naderian & Hashemi, 2009). Encouraging women's

active involvement in various social spheres, including sports, is essential for sustainable development and cultural enrichment (Ramadani et al., 2015). Recognizing the evolving role of women, particularly in developing countries like Iran, promoting women's participation in sports activities can enhance their overall well-being, introducing a sports culture that fosters physical and mental health, vitality, and mobility in their lives (Monazami et al., 2011). But there are various factors involved in creating problems for women, especially in the field of sports. Such a factor has become a major problem for women to develop and advance a career in the sports field (Witkoś et al., 2022). They are faced with various problems like- menstruation cycle, body size and composition, insecurity, social status and ethnicity society view, family, marriage, pregnancy and children, sustainability, financial and sports facilities, and high expectancy and scared failure (Constantini et al., 2005; Kuh et al., 2006). Thus, the shift towards promoting physical activity and sports participation among women in Iran is becoming more noticeable, particularly in university settings where more female employees are getting involved in athletic endeavors to enhance their well-being (Bureau, 2021). Although there is a growing interest in sports among women staff in Iranian universities, there is a deficiency in tailored programs and support compared to men's sports (Mirsafian et al., 2014). This indicates the necessity for a targeted and inclusive framework to encourage and facilitate sports engagement among women employees in Iranian universities. This study aims to develop a model for university sports among women employees in Iranian universities. By examining the current landscape of women's sports in universities and identifying the barriers and challenges that female employees face in participating in sports, this study seeks to develop a tailored and practical model that can effectively promote and support women's sports participation.

### **Materials and methods**

This study is primarily exploratory and fundamental in nature, employing a qualitative approach utilizing the foundation's data strategy. The research utilized the systematic strategy outlined by Strauss and Corbin (1999). Initially, a thorough review of relevant literature was conducted, leading to the development of semi-open and semi-closed interview questions for

29 experts in the field, including university managers, physical education officials, Iranian university professors, and sports association managers. Purposive sampling, in line with the principles of theoretical research, was employed. Theoretical sampling was carried out until theoretical saturation was achieved in the identified categories. The qualitative data collected will undergo analysis through three key coding steps: open, axial, and selective coding. The validity of the research was ensured through various strategies. First, the researchers employed member checks by providing the participants with summaries of their responses to ensure accuracy and interpretation. This allowed the participants to confirm the data, enhancing the credibility of the findings. Furthermore, triangulation was used by incorporating multiple sources of data, including interviews, observations, and document analysis. This helped to verify the consistency and convergence of the data, further enhancing the validity of the study. Additionally, intercoder reliability was established through discussions among the research team members to reach a consensus on the coding and interpretation of the data.

All participants possessed a specialized doctoral degree, with the majority having over 15 years of experience in the field of university sports. Additionally, 13 participants (44.8%) had held executive positions in university sports offices or university sport federation. This indicates a high level of expertise and extensive practical involvement in the domain of university sports among the participants, underscoring the depth of knowledge and hands-on experience they brought to the research study (Field of activity and characteristics of the research sample are stated in Table 1).

**Table 1.** Field of activity and characteristics of the research sample

| row | Interwive code | Gender | Educatin                 | Interview method | job position               | Duration of interview |
|-----|----------------|--------|--------------------------|------------------|----------------------------|-----------------------|
| 1   | P1             | Man    | Ph.D in Sport management | Document         | University faculty members | -                     |

|           |     |        |                          |                   |                                                                                   |          |
|-----------|-----|--------|--------------------------|-------------------|-----------------------------------------------------------------------------------|----------|
| <b>2</b>  | P2  | Man    | Ph.D in Sport management | Document          | University faculty members                                                        | -        |
| <b>3</b>  | P3  | Man    | Ph.D in Sport management | Document          | senior experts of the Department of Physical Education of the Ministry of Science | -        |
| <b>4</b>  | P4  | Man    | Ph.D in Sport management | Document          | University faculty members                                                        | -        |
| <b>5</b>  | P5  | Man    | Ph.D in Sport management | Document          | University faculty members, Manager of physical education in university           | -        |
| <b>6</b>  | P6  | Man    | Ph.D in Sport management | Document          | University faculty members, Manager of physical education in university           | -        |
| <b>6</b>  | P7  | Female | Ph.D in Sport management | oral presentation | University faculty members                                                        | 01:05:12 |
| <b>8</b>  | P8  | Man    | Ph.D in Sport management | oral presentation | University faculty members                                                        | 00:35:25 |
| <b>9</b>  | P9  | Man    | Ph.D in Sport management | oral presentation | University faculty members                                                        | 00:42:16 |
| <b>10</b> | P10 | Man    | Ph.D in Sport management | oral presentation | senior experts of                                                                 | 02:03:37 |

|           |     |        |                               |                      |                                                                                                 |          |
|-----------|-----|--------|-------------------------------|----------------------|-------------------------------------------------------------------------------------------------|----------|
|           |     |        |                               |                      | the<br>Department<br>of Physical<br>Education<br>of the<br>Ministry of<br>Science               |          |
| <b>11</b> | P11 | Man    | Ph.D in Sport<br>management   | Document             | Headman<br>of the<br>Department<br>of Physical<br>Education<br>of the<br>Ministry of<br>Science | -        |
| <b>12</b> | P12 | Man    | Ph.D in Sport<br>biomechanics | oral<br>presentation | University<br>faculty<br>members,<br>Manager of<br>physical<br>education<br>in<br>universitiy   | 00:45:19 |
| <b>13</b> | P13 | Female | Ph.D in Sport<br>management   | Document             | University<br>faculty<br>members                                                                | -        |
| <b>14</b> | P14 | Man    | Ph.D in Sport<br>management   | oral<br>presentation | Manager of<br>physical<br>education<br>in<br>universitiy                                        | 00:48:09 |
| <b>15</b> | P15 | Man    | Ph.D in Sport<br>management   | oral<br>presentation | Manager of<br>physical<br>education<br>in<br>universitiy                                        | 01:02:12 |
| <b>16</b> | P16 | Female | Ph.D in Sport<br>management   | oral<br>presentation | senior<br>experts of<br>the<br>Department<br>of Physical<br>Education                           | 00:37:25 |

|           |     |        |                             |                      |                                                                                                           |          |
|-----------|-----|--------|-----------------------------|----------------------|-----------------------------------------------------------------------------------------------------------|----------|
|           |     |        |                             |                      | of the<br>Ministry of<br>Science                                                                          |          |
| <b>17</b> | P17 | Man    | Ph.D in Sport<br>management | oral<br>presentation | senior<br>experts of<br>the<br>Department<br>of Physical<br>Education<br>of the<br>Ministry of<br>Science | 02:15:06 |
| <b>18</b> | P18 | Man    | Ph.D in motor<br>learning   | oral<br>presentation | Manager of<br>physical<br>education<br>in<br>universitiy                                                  | 01:23:18 |
| <b>19</b> | P19 | Man    | Ph.D in Sport<br>management | oral<br>presentation | Manager of<br>physical<br>education<br>in<br>universitiy                                                  | 00:49:16 |
| <b>20</b> | P20 | Female | Ph.D in Sport<br>management | Document             | senior<br>experts of<br>the<br>Department<br>of Physical<br>Education<br>of<br>university                 | -        |
| <b>21</b> | P21 | Man    | Ph.D in Sport<br>management | Document             | University<br>faculty<br>members                                                                          | -        |
| <b>22</b> | P22 | Female | Ph.D in Sport<br>management | oral<br>presentation | Manager of<br>physical<br>education<br>in<br>universitiy                                                  | 01:12:12 |
| <b>23</b> | P23 | Man    | Ph.D in Sport<br>management | oral<br>presentation | University<br>faculty<br>members                                                                          | 01:45:18 |

|           |     |     |                          |                   |                                                                                   |          |
|-----------|-----|-----|--------------------------|-------------------|-----------------------------------------------------------------------------------|----------|
| <b>24</b> | P24 | Man | Ph.D in Sport management | oral presentation | Manager of physical education in university                                       | 01:13:48 |
| <b>25</b> | P25 | Man | Ph.D in Sport management | oral presentation | senior experts of the Department of Physical Education of the Ministry of Science | 00:41:19 |
| <b>26</b> | P26 | Man | Ph.D in Sport management | oral presentation | Manager of physical education in university                                       | 00:38:58 |
| <b>27</b> | P27 | Man | Ph.D in Sport management | oral presentation | University faculty members                                                        | 01:04:12 |
| <b>28</b> | P28 | Man | Ph.D in Sport management | oral presentation | University faculty members                                                        | 00:55:19 |
| <b>29</b> | P29 | Man | Ph.D in Sport management | oral presentation | University faculty members                                                        | 00:39:21 |

Given that concepts form the fundamental basis for theory development, it is crucial to establish a process for identifying and elaborating on concepts based on their attributes and dimensions. This process is carried out in the open data coding phase, where initial categories related to the phenomenon under investigation are derived from the raw data. This involves probing the data, comparing various cases, events, and phenomena to uncover similarities and differences, leading to the emergence of a set of categories from the raw data during the open coding phase. This phase encompasses the processes of analysis and coding, involving the identification of categories, description of categories based on their attributes, and the

creation of an open coding table. The subsequent step involves the exploration of the main category, focusing on the development of sports for female employees in Iranian universities through axial coding. This leads to the establishment of theoretically linked categories, including causal conditions (factors contributing to the emergence of the primary phenomenon), interaction strategies (actions taken to address and manage the underlying phenomenon), intervention conditions (key general conditions within strategies), and consequences (outcomes resulting from strategy implementation). In the selective coding stage, the researcher strategically prioritizes emerging components in coding to form the basis of the proposed theory or process. The researcher's role then shifts to categorizing and comparing the extracted concepts from the depth of the data, consolidating ideas and concepts into coherent categories. Ultimately, the determinants for enhancing participation in sports for all female employees in Iranian universities are identified through this comprehensive analysis.

## **Results**

According to the study findings, out of a total of 176 codes identified, 35 codes were associated with causal factors, 39 codes pertained to contextual factors, 26 codes were linked to interventions, 42 codes were categorized as strategies, and 34 codes were related to the outcomes resulting from the enhancement of women employees' participation in university sports.

### **Causal Condition**

In this section, the rationale for the significance of the effective factors contributing to the development of women employees' participation in University Sports was explored. Seven key factors, identified through axial coding, shed light on the importance of understanding the elements that enhance participation in University Sports. These factors include increasing awareness by educating employees about the benefits of sports and involving family and friends, improving liveliness and quality of life through enhancing vitality and social interactions, motivating employees by encouraging sports and addressing their interests, focusing on health and physical fitness to prevent ailments and maintain well-being, and

fulfilling legal duties by implementing comprehensive approaches and creating health information systems for female university employees through appropriate planning and policies (Table 1).

**Table 1.** Codes, concepts and general category (Causal Condition) related to the development of women employees' participation in University Sports

| <b>Causal Condition</b> | <b>General categories</b> | <b>concepts</b>                          | <b>Codes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|---------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         |                           | Awareness raising                        | Enhancing employees' understanding of the advantages of physical activity / Influence of family and peers / Educating about the benefits of sports / Enhancing cognitive abilities                                                                                                                                                                                                                                                                  |
|                         |                           | Liveliness and enhancing quality of life | Boosting vitality / Enhancing social interactions / Enhancing life quality and satisfaction / Attaining international health standards                                                                                                                                                                                                                                                                                                              |
|                         |                           | Motivation                               | Promoting physical activity / Guidance from healthcare professionals, friends, or family/ Boosting morale / Self-appreciation / Considering employees' sporting interests / Shifting employees' mindset / The beneficial impact of sports on discipline and order / Convenient access to sports amenities / Personal initiative / Autonomy in work                                                                                                  |
|                         |                           | Legal duties                             | The need to adopt a coherent and integrated approach to university sports/ the need to create a health information system for female university employees/ planning and policies/ upstream documents                                                                                                                                                                                                                                                |
|                         |                           | Increase health and physical fitness     | Addressing motor deficiencies / Preventing illnesses / Preventing muscle soreness / Attaining an optimal physique /Mitigating premature fatigue / Alleviating mental health issues / Enhancing body metabolism / Promoting employee well-being / Meeting the university's need for healthy staff / Enhancing physical resilience in various scenarios / Improving physical fitness in job roles / Mitigating gerascophobia / Reducing stress levels |

## Contextual Conditions

Internal factors that influence the main phenomenon and strategies have been examined as contextual conditions in this study. These factors include organizational and management aspects such as the positive attitude of management towards sports, providing a conducive platform for employees, and support from senior managers and sports federations. Additionally, official documents, structural elements like well-equipped gyms and specialized trainers, and socio-cultural factors such as promoting a culture of sports for all and leveraging online media for sports promotion have been taken into consideration. Employee interests, including their age, education level, and fitness, as well as the availability of free classes and training in university sports facilities, also play a role in shaping participation in university sports (Table 2).

**Table 2.** Codes, concepts and general category (Contextual Conditions) related to the development of women employees' participation in University Sports

| Contextual Conditions | General categories                    | concepts | Codes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|---------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | Organizational and management factors |          | Positive managerial outlook / Emphasis on sports development for university employees by senior Ministry of Science managers / Creating a conducive environment for employees by managers / Shifting authorities' focus from treatment to prevention / Recognition of the significance of sports by managers / Managerial presence in sports facilities / Managerial belief in the value of sports / Incorporating exercise into employees' daily routines / Backing from the University Sports Federation / Support from other sports federations |
|                       | Structural factors                    |          | Establishment of a well-equipped gym / Enhancing the appeal of university gyms / Gym aesthetics enhancement / Provision of gym facilities in university centers / Utilization of suitable sports equipment / Offering on-site facilities for staff / Reinforcement of the physical infrastructure / Emphasis on safety and security / Presence of expert trainers / Specialized human resources / Setting up centers for assessing posture abnormalities                                                                                           |

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | among employees / existence of home and office Sports applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Official documents     | Policies and guidelines / Departmental regulations / Instructional specifications / Procedures and directives/ Rules and regulations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Socio-cultural factors | Addressing women's constraints / Cultivating a culture of inclusive sports participation / Combatting sedentary lifestyles / Incorporating sports into family activities / Encouraging sports engagement among employees' families / Promoting the positive impacts of sports through online platforms like Instagram, Facebook, and others / Receiving support from friends and family members / Having athlete friends in one's social circle / Influence of employees' daily routines / Overcoming self-interest and lack of awareness regarding the societal benefits of sports / Advocating the fundamental elements of sports development |
| Employee interest      | Employees' interest in sports / Age distribution of employees / Educational attainment of employees / Fitness levels / Provision of complimentary classes / Offering free training sessions at university sports facilities for staff                                                                                                                                                                                                                                                                                                                                                                                                           |

## Intervention conditions

This section focuses on the external factors that influence strategies and the central phenomenon, identified as inhibitory factors. These factors include the lack of significance of sports among employees, sedentary lifestyles, managers' reluctance to support sports participation, inadequate gym management, absence of comprehensive planning for sports for all, limited university facilities, budget constraints, and societal factors like marriage, pregnancy, and social status affecting female university employees' involvement in sports. Other obstacles include the low income of some employees, outdated sports programs, and the presence of electronic games in university settings, all contributing to hindrances in promoting sports participation and overall well-being (Table 3).

**Table 3.** Codes, concepts and general category (Intervention conditions) related to the development of women employees' participation in University Sports

|                                | <b>General categories</b> | <b>concepts</b>    | <b>Codes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------|---------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                |                           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Intervention conditions</b> |                           | Inhibitory factors | Lack of significance of sports among employees / Consideration of the menstrual cycle / Social and organizational status constraints / Sedentary lifestyle / Officials' lack of commitment to inclusive sports participation / Resistance from managers to allow employee participation in sports / Financial constraints for some employees / Managerial indifference towards sports / Inadequate management in gym facilities / Absence of inclusive sports planning / Lack of sports prioritization / Clinical department managers' disinterest in sports / Limited university sports facilities / Absence of proper planning / Lack of a comprehensive and strategic sports plan / Budget constraints / Focus on sports for university students rather than employees / Absence of a dedicated budget for employee sports / Allocation of prime time slots for university students / Lack of employee sports surveys / Outdated sports programs / Neglect of the influence of electronic games in the university setting / Substandard equipment quality / Health issues / Modesty and cultural barriers regarding women's sports / Balancing household responsibilities and marriage for female university employees / Family responsibilities such as marriage, pregnancy, and childcare |
|                                |                           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Strategies

Strategies for addressing the internal and external challenges in enhancing women employees' participation in Iranian universities have been outlined in this section. These strategies include increasing sports participation per capita, obtaining managers' permission and departmental mechanisms, aligning staff sports with sustainable development goals, and creating

strategic plans tailored to each university's needs. Educational initiatives focus on promoting university sports programs, conducting workshops on women's sports and health, and establishing a female athlete information system. Support and motivation programs involve providing sportswear, internal and external incentives, and recognition for exemplary sports staff. Sports advice and feedback strategies include health assessment centers, online counseling, and inter-sectoral evaluations. Developing sports facilities, promoting an active lifestyle through competitions, implementing financial management practices, and advertising sports through virtual platforms are also key components of the proposed strategies to enhance women employees' sports engagement in Iranian universities (Table 4).

**Table 4.** Codes, concepts and general category (Strategies) related to the development of women employees' participation in University Sports

| Strategies | General categories | concepts                              | Codes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------|--------------------|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            |                    | Axial program                         | Strategies for enhancing women's participation in university sports among Iranian employees / Tailoring sports activities to individual preferences and requirements / Staff approval for sports activities / Development of strategic plans in university sports programs / Departmental management approaches / Family-oriented programs for staff / Collaboration agreements between the university and external organizations for staff sports development / Integration of staff sports with university sustainability goals |
|            |                    | Support and encouragement initiatives | Provision of sports attire donations / Backing for sports administrators / Enhancement of internal and external incentives / Boosting motivational elements such as increased work hours / Understanding employee motivations / Providing time off and overtime for women / Incentive schemes for department heads / Subsidies for athlete staff / Recognition and celebration of outstanding sports personnel / Provision of discounted tickets for university sports events for staff families                                  |

|                                                |                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Development of education                       | Focus on and engagement with university sports programs / Training sessions on women's sports and well-being / Creation and enhancement of the female athlete database / Development of training programs for employees                                                                                                                                                                 |
| Sports guidance and feedback systems           | Establishment of health evaluation centers / Implementation of feedback systems for monitoring employee health assessments / Online sports and nutrition counseling for staff / Oversight of employee sports development / Monitoring university president's involvement in sports / Team assessments / Cross-departmental evaluations within the university                            |
| Enhancement of sports facilities and equipment | Provision and outfitting of appropriate sports venues for women / Standardization of sports gear / Construction of sports facilities tailored to female athletes' requirements / Attraction of donors for sports facility construction and equipment purchase                                                                                                                           |
| Encouragement of active living and competition | Incorporation of exercise into a healthy lifestyle / Promotion of wellness practices / Family involvement in fostering healthy living habits / Encouragement of healthy eating within families / Organization of family hiking and mountaineering activities / Hosting a University Retirement Olympics / Employees' Families Olympics / Employee competitions / Staff Sports Olympiads |
| Financial management                           | Allocating a specific budget for employee sports / estimating the financial needs of employee sports / attracting sponsors to hold events / giving some places to private companies / leasing some university sports places / using sports volunteers / hosting competitions / attracting donors                                                                                        |
| Advertisement and promotion of sports          | Creating one day a week as a sports day in the sports calendar of the university/providing a platform for broadcasting matches on television/telecasting in the virtual space/creating a network or channel in the virtual space to promote the employees' sports                                                                                                                       |

## Consequences

Consequences resulting from the implementation of the applying strategies to enhance women employees' participation in Iranian universities were examined in this section, considering both organizational and individual impacts. Organizationally, the outcomes include reduced treatment costs, heightened motivation and organizational affiliation, improved work focus and efficiency, enhanced social capital, and fostering a culture of health in the workforce. Hosting sports competitions, improving sports budgets, and reducing sick leave rates are also anticipated benefits. At an individual level, the consequences encompass improved individual performance, increased enthusiasm and motivation, better physical and mental health, stronger communication among employees, disease prevention, reduced obesity, enhanced cognitive abilities, and improved quality of life. Additionally, the strategies are expected to promote positive family relationships, physical fitness, social interactions, and overall well-being, further emphasizing the benefits of sports engagement for women employees in university settings (Table 5).

**Table 5.** Codes, concepts and general category (Consequences) related to the development of women employees' participation in University Sports

| General categories | concepts       | Codes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Consequences       | Organizational | Reduced healthcare expenses / enhanced workplace motivation / heightened organizational commitment / improved work concentration / increased work productivity / enhanced adaptability through employee sports / improved operational effectiveness / elevated organizational performance quality / enhanced performance quality / boosted social capital through employee sports / fostering a healthy workforce / organizing sports tournaments / enhancing sports funding by hosting sports events / creating competitive programs and activities / organizing an employee sports Olympiad / integrating sports into |
|                    |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | organizations and decreasing employee sick leave rates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Individual | Performance quality of individuals / Fostering employee enthusiasm / Physical and mental well-being / Boosting motivation / Establishing positive and effective employee communication / Disease prevention / Obesity reduction / Enhanced cognitive abilities / Alleviating motor deficiencies / Enhancing quality of life / Strengthening employee family relationships / Aesthetic and fitness improvements / Enhancing societal interactions and communication quality / Reducing bodily abnormalities / Cardiovascular and respiratory health / Acquiring new skills / Alleviating daily life fatigue / Diminishing negative energy / Reducing healthcare costs |

It seems that causal conditions encompass elements that lead to the establishment and advancement of female employee participation in university sports. Essentially, these factors articulate the need and drive to focus on the central concept. As for the strategies, they entail the approaches and actions taken in response to female employee participation in university sports, influenced by intervening conditions and contextual factors, in order to attain the intended outcomes. Intervening conditions are overarching circumstances that, in conjunction with contextual factors, impact the development strategies for female employee participation in university sports and can indirectly influence the execution of these strategies. Therefore, we suggest the model of Figure 1.

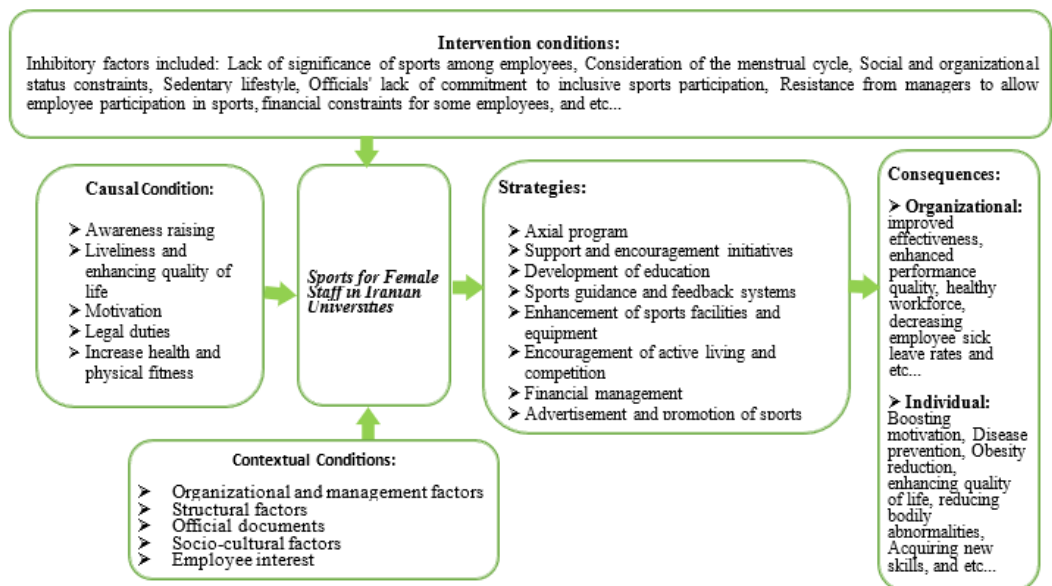


**Fig 1.** Conceptual model of the development of female employees' participation in university sport

## Discussion

The purpose of this research was to create a sports development model for female staff members in Iranian universities. As per the study results, among 176 identified codes, 35 were attributed to causal factors, 39 related to contextual factors, 26 linked to interventions, 42 categorized as strategies, and 34 associated with the outcomes of increased participation of female employees in university sports. The comprehensive model for enhancing female employees' involvement in university sports was developed based on the Strauss and Corbin paradigm. This model illustrates how causal factors such as raising awareness, promoting vitality and improving quality of life, motivation, legal obligations, and enhancing health and physical fitness impact the core concept of increasing female employee participation in university sports and development strategies. Female employee participation in university sports is influenced by

contextual conditions including organizational and management factors, structural factors, official documents, socio-cultural factors, and employee interest. Intervening factors encompass inhibitory elements. Strategies involve pivotal programs, support and motivation initiatives, educational development, sports guidance and feedback systems, improvement of sports facilities and equipment, promotion of active living and competition, financial management, and sports advertising and promotion, resulting in positive outcomes at both the organizational and individual levels for the advancement of female employee participation in university sports. It has been reported that education and awareness can foster positive attitudes towards sports and physical activity. Raising awareness through family support and providing tailored training programs about the benefits of exercise can effectively enhance employees' work capacity index (Gavin et al., 2016). Elevate employees' awareness and attitudes regarding the significance and advantages of sports activities, as well as the drawbacks of a sedentary lifestyle, achieved through methods such as motivational text messages, discussion sessions, theoretical instruction, and health- and sports-based educational content, along with telephone follow-ups (Mendelson et al., 2016). These efforts aim to motivate and inspire regular exercise among individuals. Furthermore, prioritizing the physical and mental well-being of employees is a crucial aspect of promoting sports participation. Health-conscious organizations value their employees' engagement in sports activities, recognizing the vitality it brings. Simultaneously, individuals are more inclined to participate in activities that are enjoyable, straightforward, and diverse (Mendelson et al., 2016). Given that office personnel represent a significant portion of society and considering the importance of employees' physical fitness, universities should prioritize fostering a healthy workforce, enhancing physical endurance, and promoting physical fitness. To this end, it is recommended to introduce morning exercise programs and designate one day per week as a sports day in the university's sports calendar, aiming to steer a large segment of the society towards sports activities (Mohammadian et al., 2021).

Encouraging employees to engage in sports activities includes garnering support from managers and their active presence in sports facilities and

events, particularly during conferences, competitions, and sports festivals. This can be achieved through the formulation of rules and regulations. Additionally, university senior management and the Ministry of Science should work on making planning, policies, and official documents more actionable, recognizing their pivotal role in upholding and enhancing public health. Establishing green spaces within the university to promote walking, constructing safe and well-equipped gyms, and developing outdoor playgrounds are crucial factors in boosting the sports participation of university staff. The construction of these facilities should prioritize aesthetic features and innovative designs to make sports venues more appealing. Furthermore, the design and aesthetics of the environment can also enhance the attractiveness of walkways, promoting healthy behaviors that improve individuals' mental well-being, reduce stress, anxiety, and depression, and increase staff walking rates (Koohsari et al., 2020). Constructing bike stations and implementing designated cycling routes are among the methods to encourage the use of active transportation. The presence of active transportation has been identified as a significant factor in increasing people's engagement in physical activities (Fletcher et al., 2018). Despite the numerous benefits of sports, many university administrators hold negative views towards it and may even consider sports development as a misuse of time. In their planning, sports are often assigned low priority or are not prioritized at all in certain sectors, such as the clinical sector. Challenges such as the scarcity of trainers and mentors, inadequate standardized training, limited financial resources, low monthly staff income, and the expenses associated with sports programs, as well as the lack of facilities and equipment, absence of sports facilities for staff, existence of non-standard sports facilities, physical disabilities, or apprehension of sports-related injuries contribute to negative perceptions of physical activity (Hunter et al., 2018; Péloquin et al., 2017). A diminished perception of health and its importance are among the primary factors hindering the participation of university staff in sports activities. Nevertheless, fostering widespread participation in sports activities among university staff necessitates a comprehensive program in this domain (Hunter et al., 2018). These initiatives can be complemented by the promotion of a healthy lifestyle, fostering family support for healthy

living, increasing individual involvement in sports, and organizing family hiking and mountaineering programs. Furthermore, implementing a fair incentive and reward system within the human resources sector can motivate employees to excel in their roles and work towards predefined objectives. A thorough understanding and awareness among managers regarding the physical well-being of employees enables them to implement regulations and supportive measures that encourage employee participation in sports, such as providing leave and overtime for female employees, as well as closely monitoring and evaluating performance support regulations and programs that contribute to employees' health and well-being through physical activity (Boutevillain et al., 2017).

Based on the analysis of interviews, the development of sports for female employees yields significant organizational outcomes, including reduced healthcare costs, heightened workplace motivation, increased organizational commitment, improved work focus, enhanced work efficiency, greater adaptability through employee sports, improved operational effectiveness, elevated organizational performance quality, enhanced individual performance quality, increased social capital through employee sports, promotion of a healthy workforce, organization of sports tournaments, improved sports funding through hosting events, establishment of competitive programs and activities, hosting employee sports Olympiads, integration of sports into organizational culture, and reduction of employee sick leave rates. Research indicates that organizational policies create a supportive environment for physical activity in the workplace, offering economic benefits such as reduced healthcare expenses and contributing to increased productivity and efficiency within a healthier social and physical environment (Bale et al., 2015; Finkelstein et al., 2005). Furthermore, there are individual-level implications. Physical activity and exercise in the workplace not only promote the personal physical and mental well-being of employees but also bring benefits such as reducing employee absenteeism (Rose, 2001). Evidence suggests that workplace physical activity can lead to increased engagement in other activities such as walking (Jafarnezhadgero et al., 2021; Søvold et al., 2021), which is effective in alleviating employee

discomfort and improving mood, reducing stress resulting from overwork, stress, and fatigue (Puetz, 2006).

### **Limitations**

One potential limitation of this study could be the generalizability of the developed model, as it is specifically tailored for female staff members in Iranian universities. The applicability of the model to different cultural or institutional settings may need to be further explored. Additionally, the effectiveness of the strategies proposed in the model would benefit from empirical testing and validation in real-world university sports environments to assess their practical implementation and impact.

### **Conclusion**

The innovation of this research lies in the development of a comprehensive model for enhancing female employees' involvement in university sports. Compared to similar research, this study goes beyond simply identifying barriers or factors related to female employees' participation in sports. It not only identifies these factors but also proposes a model that outlines specific conditions, strategies, and consequences to effectively increase participation. This comprehensive approach sets this research apart from others in the field. The practical proposal for relevant organizations based on this research would be to integrate sports activities into the organizational culture to promote female employees' participation in university sports. By investing in sports programs, organizations can improve the health and quality of life of their employees, enhance productivity, foster teamwork, and ultimately improve overall organizational performance. Implementing the strategies and recommendations outlined in the developed model can help organizations create a supportive environment for female employees to engage in sports activities.

Based on the results of this study examining the factors influencing women employees' participation in university sports and the proposed strategies to enhance their engagement, it is clear that promoting sports among female staff in Iranian universities has numerous benefits for both the organization

and the individuals. By addressing internal and external challenges, such as promoting a culture of sports, providing support and motivation programs, and developing sports facilities, a positive impact is expected on reducing treatment costs, improving work efficiency, enhancing individual performance, and fostering physical and mental well-being. These outcomes highlight the importance of integrating sports activities into the organizational culture to not only improve health and quality of life but also enhance productivity, teamwork, and overall organizational performance. It is evident that investing in women employees' participation in university sports can bring about significant positive consequences for both the individuals and the organization as a whole. Through the implementation of this model, it is hoped that more women employees in Iranian universities will be motivated and enabled to engage in sports and fitness activities, leading to improved physical health, personal well-being, and overall quality of life.

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