EXPLORING THE INDIVIDUAL AND SOCIAL FACTORS RELATED TO ADOLESCENT FEMALES' SPORTS PARTICIPATION IN CAMBODIA

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ABSTRACT

The literature on gender roles and sports participation highlights the persistent global issue of gender disparity, with women historically underrepresented and facing limited opportunities, despite recent shifts towards inclusion. In Cambodia, cultural attitudes, lack of female role models, limited access to facilities, and inadequate support from family and community hinder female sports participation. However, there is a research gap concerning the specific challenges adolescent girls in Cambodia face. This qualitative study explores the individual, relational, and social factors influencing adolescent females' sports participation in Phnom Penh, Cambodia, noting the numerous benefits of sports for adolescent girls and the decline in participation due to societal norms and limited opportunities. Using the socio-ecological model, we conducted semi-structured focus-group interviews with 22 teenage females aged 15 to 25 who had engaged in male-dominated sports, with some having dropped out of school. Thematic analysis revealed key themes: lack of knowledge, skills, and motivation; time constraints; relational and social factors; and environmental or organizational barriers by using the ALAS.ti software program. Participants noted the absence of tailored sports programs and expressed inadequacy regarding their skills. Academic and familial responsibilities and excessive screen time further hindered participation. Social support from family, friends, and teachers was crucial, as those lacking such support were less likely to engage in sports. Other barriers included inadequate school facilities and safety concerns. Despite these challenges, participants acknowledged sports' health and psychological benefits and emphasized the need for better infrastructure and supportive programs. This study suggests important approaches to enhance female sports participation, including boosting intrinsic motivation, providing social relationship opportunities, educating parents and teachers, challenging gender stereotypes, and offering accessible sports facilities and programs. Creating inclusive and supportive environments can significantly increase sports participation among adolescent females in Cambodia.

Keywords: Factor, Psychology, Participation, Socioecological, Sport Management

INTRODUCTION

Gender disparity in sports participation is a well-documented global issue, with women historically facing underrepresentation and limited opportunities (Kane, 1998). While recent years have shown a shift towards greater inclusion, cultural and social barriers hinder female sports involvement (LaVoi & Dutove, 2012). The participation of women in sports has been limited due to societal norms, gender roles, and lack of access to sports facilities and training opportunities (Sallis et al., 2001). However, a shift has been made towards greater inclusion and recognition of women's sports at all levels, from grassroots to professional arenas (Lenskyj, 2013).

Cambodia has a comprehensive legal framework promoting gender equality in education and sports. The Royal Government Policy aligns with the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). It includes specific initiatives by the Ministry of Women's Affairs (MoWA) to address gender disparities (e.g., scholarships and teacher training). The Ministry of Education, Youth and Sports (MoEYS) has established the Education Strategic Plan (ESP) 2019-2023 and the Gender Mainstreaming Strategic Plan in Education (GMSP) 2021-2025 to promote equitable access and eliminate disparities in education. The National Policy on Physical Education and Sports Development outlines strategies to encourage girls' participation. The upcoming ESP 2024-2028 will build on these efforts for lasting progress.

Despite these efforts, challenges persist. According to the 2021 analysis of outcome indicators, the percentage of physical education programs implemented in primary and secondary schools increased slightly, but female sports participation remains low. Cultural attitudes towards gender roles, lack of female role models, limited access to facilities, and inadequate support from family and community are significant barriers (Jenkin et al., 2016). Understanding these barriers is crucial for developing effective interventions and policies that promote gender equity in sports and the Cambodian context.

Despite progress toward gender equality, cultural norms, and limited opportunities restrict women's sports involvement (LaVoi & Dutove, 2012). Adolescent girls' participation in sports offers numerous benefits, including improved physical and mental health, social development, and life skills (Pendergast & Roberts, 2003; Robinson, 2003). However, research suggests a decline in adolescent participation compared to boys (Brooks & Whipp, 2013; Carron et al., 2002).

Utilizing a qualitative research approach and the socioecological model (Sallis et al., 2008), this study explores the interplay of individual, social, and environmental factors contributing to this decline. By understanding these barriers, targeted interventions can be developed to promote gender equity in Cambodian sports and create a more supportive environment for sustained female participation. The socioecological model provides a holistic approach to understanding the barriers and facilitators to women's sports participation, emphasizing the need for interventions at multiple levels. This framework is particularly relevant for understanding the multifaceted barriers faced by Cambodian women in sports.

The literature on gender roles and sports participation highlights several key themes relevant to this study. Globally, gender disparity in sports participation has been a persistent issue, with historical underrepresentation and limited opportunities for women. Recent shifts toward greater inclusion have been documented, but cultural and social barriers impede progress (Kane, 1998; Lenskyj, 2013; LaVoi & Dutove, 2012).

In Cambodia, specific studies have examined the barriers to female sports participation. These barriers include cultural attitudes towards gender roles, lack of female role models, limited access to sports facilities, and inadequate support from family and community (Jenkin et al., 2016). While these studies provide valuable insights, there is a lack of research focusing on the unique challenges adolescent girls face

in Cambodia. This study aims to fill this gap by exploring the individual, social, and environmental factors influencing sports participation among teenage girls in Phnom Penh.

Previous research suggests that adolescent girls' participation in sports offers numerous benefits, including improved physical and mental health, social development, and life skills (Pendergast & Roberts, 2003; Robinson, 2003). However, participation tends to decline during adolescence, particularly among girls compared to boys (Brooks & Whipp, 2013; Carron et al., 2002). This decline is attributed to various factors, including societal norms, gender roles, and limited opportunities.

The socioecological model (Sallis et al., 2008) provides a useful framework for understanding the complex interplay of individual, social, and environmental factors that influence sports participation. This model emphasizes the need for interventions at multiple levels, including personal, social, and environmental influences. By applying this model, this study aims to provide a comprehensive understanding of the barriers to female sports participation in Cambodia and identify targeted interventions to promote gender equity in sports.

This study contributes to the limited research on women's sports participation in Cambodia by exploring the specific factors that influence adolescent girls' involvement in sports. The findings can inform the development of targeted programs and policies to enhance opportunities for women in sports, ultimately leading to broader social benefits such as improved health, empowerment, and social cohesion (Sallis et al., 2008; Skille & Osteras, 2011). By addressing the unique challenges faced by Cambodian women, this study aims to promote a more inclusive and supportive environment for female sports participation. Overall, this study investigates the factors influencing the decline in adolescent girls' participation in sports in Phnom Penh, Cambodia.

METHODOLOGY

This qualitative study utilized a phenomenological approach to explore adolescent females' lived experiences and perspectives regarding their participation in sports. The phenomenological approach prioritizes understanding the participants' experiences through in-depth exploration and open-ended questioning (Flynn & Korcuska, 2018; Creswell & Poth, 2018). This approach is well-suited for gaining deep insights into the individual, relational, and environmental factors influencing sports participation among adolescent females in Cambodia.

Participants and Procedure

The study focused on a purposive sample of 22 adolescent females residing in Phnom Penh, aged 15-25. This specific age range captures the period when participation in sports drops significantly and may coincide with life changes impacting young women's choices (Australian Bureau of Statistics [ABS], 2003). A combination of convenience and snowball sampling methods was used for recruitment (Patton, 2002; Atkinson & Flick, 2016). Convenience sampling identified initial participants based on their accessibility and interest in sports participation. Snowball sampling involved existing participants referring others who met the inclusion criteria: female, currently residing in Phnom Penh, having past involvement in sports or interest in participation, and being available for an interview.

Participants were informed about the study's objectives, significance, and ethical considerations, including confidentiality and the voluntary nature of their participation. They were then asked to answer a series of questions to explore how individual, relational, and organizational factors influence their involvement in sports. Example questions included: "How do you describe how individuals, relationships, or organizations influence your participation in sports? What has influenced your attitude towards sports and physical activity? What motivates you to participate in sports, and do you feel you have adequate skills to participate in sports? Who or what would you credit with getting you started in sports, and how influential have these

people remained in your life? Do you face any barriers in participating in sports, and how do your family or peers influence your decision to participate in sports?".

Data Collection

Data were collected from 22 adolescent females who had engaged in various sports activities. The sample size was deemed adequate based on the principle of data saturation, where additional interviews no longer yield new information (Fowlie et al., 2021). Participants were initially contacted via email, where they were provided with detailed information about the study and asked to confirm their willingness to participate. Interviews were conducted via Zoom, accommodating the participants' preferences and ensuring comfort. These methods also provided flexibility, enabling participants to join the study despite potential logistical constraints. The interviews were recorded with the participant's consent and transcribed for thematic analysis. Data collection involved conducting semi-structured interviews with each participant. The interview guide was developed based on the literature review, focusing on themes using socioecological theory (Sallis et al., 2016), societal norms and gender roles impacting female sports participation (Young & Scanlon, 2010), and family pressures and peer support (Fredricks & Eccles, 2002). The interviews used open-ended questions to encourage participants to freely share their experiences and perspectives. Interviews were conducted in Khmer using Zoom and audio-recorded with informed consent from participants, later translated into English for analysis.

Data Analysis

Semi-structured interviews were conducted to gather qualitative data. The interview guide included open-ended questions to explore participants' personal experiences, challenges, and perceptions of sports participation. Each interview lasted approximately 45-60 minutes and was audio-recorded with the participants' consent. Focus group discussions were held with young girls who dropped out of sports to gather additional qualitative insights. Each focus group comprised 3-4 participants and was facilitated by a trained moderator.

Thematic analysis was employed to analyze the interview data, following Braun and Clarke's (2006) six-phase approach, such as reading and re-reading the transcripts to become familiar with the data, then coding by generating initial codes to identify important data features. Next, the researcher created grouping codes into broader themes that captured the essence of the data, refining and reviewing themes to ensure they accurately represented the data. The last researcher defined and named each theme to capture its core meaning. This qualitative research methodology provides a robust framework for exploring the socioecological factors affecting young women's participation in sports in Cambodia. By employing in-depth interviews and thematic analysis, the study offers valuable insights into the individual, relational, and environmental influences on sports participation, contributing to the development of targeted interventions to promote gender equity in sports. Thematic analysis was employed to identify recurring themes within the interview data using ATLAS.ti software (Braun & Clarke, 2006). To ensure the trustworthiness of the findings, the following strategies were employed (Soratto et al., 2020). One of the main reasons for using this software is that it can be utilised with different theoretical approaches and multiple data analysis processes. Member checking that sharing interpretations with participants for feedback and potential revisions (Lincoln & Guba, 1985). Triangulation verifies information through different data sources (e.g., future studies) (Patton, 1999).

Ethical Considerations

Ethical considerations were paramount in this study to ensure the protection and respect of participants. Participants were assured of confidentiality and informed that their participation was voluntary. Informed consent was obtained from all participants, and they were made aware that they could withdraw from the study at any time without any negative consequences. Confidentiality was maintained by anonymizing the data and securely storing all research materials.

RESULTS AND DISCUSSION

The research focused on the factors affecting adolescent females' participation in sports in Cambodia, particularly during transitional life phases. Thematic analysis was used to identify each, shedding light on different dimensions of the issue. The analysis was structured around research purposes. Key themes identified are illustrated in Table 1: Table of themes categorised based on the research questions.

Table 1. Table of Themes

Research Questions	Themes	Initial codes
Individual factors influence	Lack of appropriate participating	Lack of knowledge
		Lack of skills
		Lack of motivation
	Changing motivation from fun to weight loss	Being for fun to being for weight loss
	Time constraints	Juggling Roles
		Screen time
Social and other contexts influence	The Power of Encouragement	Lack of family members' support
		Lack of peers/Friends' support
		The Role of Schools and Educators
	Environmental/Organizational	Distance and Inaccessible Facilities, Safety Concerns and Evening Activities, The Need for Improved Infrastructure

Individual Factors Influencing Participation

The analysis revealed several individual-level factors that hinder adolescent females' participation in sports. These include:

Theme 1: Lack of appropriate participating

Lack of Knowledge: Participants demonstrated a lack of knowledge of the benefits of participating in sports and physical activity, despite being relatively engaged in housework and transportation-related activities. Adolescent individuals were more likely to lack knowledge compared to other participants. One female participant stated, "*People are not aware of its [sport] importance, and they do not realize the consequences of missing it*." Another participant echoed this sentiment, saying, "*We did not realize that exercising had additional advantages for us*." There was also a lack of awareness about the types of activities that could be done indoors in limited spaces. A university group participant explained, "The main reason for not engaging in sports is mostly because of the lack of awareness about its value, types of sports that can be done in a restricted space, and lack of skill" (P4). Another added, "*Maybe trainers/coaches might offer some advice and pointers; you know, it would probably be useful. Since there is much other workout equipment available where I go, I might obtain advice from a trainer/coach and be told, 'Okay, this would be nice to work on or have,' or something similar*" (P5,6).

Lack of Skills: Participants indicated that playing sports required a certain level of knowledge and that it was a highly technical activity. One participant commented that young female's fencing abilities "*are not progressed*" in general, and another stated, "*They lack the skills and don't know the basic skills*" (focus group). A participant mentioned, "*Like in football, we don't need to worry too much, we only have to get to the field and start playing. We are lacking the required resources, such as training, knowledge, and space*." Female participants also noted that their ability to play football or other sports requiring little room restricted them from participating. One participant added, "*We don't have the abilities for football, and*

nobody is willing to advise us." Another shared, "*I mean, I dunno... I have consistently participated in all sports. I was a great football player. The year after, I played basketball and... [a top league club] asked for me. I mean, I feel... [able]*" (P4). In contrast, another participant reflected, "*I wasn't good at football or anything else. For instance, I used to throw tennis balls off the court because I wasn't very good at the sport. I've never been particularly good at sports*" (P5). One participant mentioned, "*There are a lot of shy ladies, and because they aren't skilled, they avoid doing athletics to stop people from making fun of them and causing shame*" (P8). Another participant shared, "*I wasn't very good at this [fencing]... well, and [...]. However, if they had just told me something, they [team] wouldn't have picked on me. It was enough to damage me, [she smiles], [serious tone in voice]*" (P7).

Lack of Motivation: The belief that there were "*good teams*" and "*bad teams*" based on talent level impacted the motivation to play team sports. One participant explained, "*I feel that being in a team of only bad people would give you more confidence because you would know that they are not better than you. On the other hand, being in a team of people who are better than you makes you feel like 'Oh my God, I will stop it if you do this or that,' and you want to run away. If they determine that this is the good team and you are on the bad team, you won't feel as confident because you are put on the bad team, which makes you feel horrible*" (P11).

Theme 2: Changing Motivation from Fun to Weight Loss

Being for fun to being for weight loss: Participants highlighted changes in their motivation for participating in sports, shifting from doing it for fun to doing it for weight loss or maintenance. This shift was accompanied by changes in the nature and experience of sports, including a narrowing of the range of activities, moving away from competitive sports to informal fitness or socially focused activities, and a shift towards planned rather than spontaneous activities. One participant noted, "*Physical activity as a means of reducing weight gain, controlling aggression, and trying to relax from academic stress*" (P4). Another added, "*Well, I'm not gaining too much weight, as well as stress reliever*" (P5). The group mentioned engaging in a wider range of sports, including increased participation in casual lunchtime activities and spontaneous play. One participant said, "*I enjoy playing basketball during lunchtimes and other times, although I used to play football*" (P20). Participants frequently mentioned engaging in sports for enjoyment and overall health benefits. One shared, "*You feel healthier after engaging in physical activity*" (P7). Another noted, "*It offers you something to do, and I enjoy jogging in my free time and I'm merely moving*" (P5). These remarks illustrated how sports and exercise had evolved from being scheduled activities that were mostly extrinsically motivated to being somewhat spontaneous and internally motivated.

Theme 3: Time Constraints

Juggling Roles: Participants mentioned that their interests had changed since elementary school, and although they had previously participated in many sports, they now had to choose just one due to time constraints and a desire for "chill-out time" on the weekends. Many participants had part-time jobs, making it challenging to "fit in" physical activity and sport. One participant shared, "*By the time I get home [from my part-time job] at about quarter to midnight I can't be bothered doing anything*" (P6). Physical education students reported "buying and selling" their physical education time when working on other school assignments. Participation in sports or physical activity outside of school competed with after-school classes. Participants noted a lack of time for general entertainment and downtime, saying, "*Weekends are supposed to be a time for relaxation*" (P7,11,12,14). Activities included shopping, going to the movies, watching TV, and hanging out with friends. One participant said, "*I prefer hanging out with mates just chilling, partying*" (P16). Urban youth have various recreational options, giving them discretion over their free time. Participants noted that as they grew older, they were permitted to engage in more activities alone, unsupervised by parents. One shared, "*I feel like my mother... She gives me more freedom to act than I used to prefer... I was not permitted to frequently go out and do that, but now I am permitted to outside by myself*" (P14,17,20,21). Consequently, as young individuals age, they have access to a wider variety of leisure activities, leading to less time for sport and physical activity. This situation is more complex than

individual decision-making, as the larger social, environmental, and policy context also impacts priorities. Opportunities for participation decreased, and some parents advised their children to stop participating in some sports. One participant said, "*I was pretty much forced to give up like I had to choose one thing that I was going to stick to and drop the other one*" (P18). Another noted, "*Parents are going to force you to stop something to go to study*" (P15). Participants experienced reduced opportunities through school, citing timetable conflicts as a problem. Some students choose to undertake sports and physical activity during physical education classes or use this time to catch up on other schoolwork.

Screen Time: Female participants' access to smartphones and the internet displaced active forms of leisure. Younger and more educated participants engaged on their phones during their free time, with YouTube and Facebook being the most popular platforms. One participant said, "*If I have any free time, I normally spend it watching TV, using my phone, or speaking with friends in the neighborhood businesses.*" Greater access to smartphones and the internet led to females becoming more sedentary, with one participant noting, "*I used to be active all day long. Anytime she has free time these days, I catch her on Facebook.*"

Relational and Social Contexts Influencing Participation

Theme 4: The Power of Encouragement.

Lack of family and Peer: Participants cited the influence of friends, family, the media, and role models in focus groups. Family members had a direct and indirect impact on participation in sports and physical activity. One participant shared, "*The family was a significant influence. When it came to the kinds of activities they chose to engage in, they did so in the footsteps of their siblings*" (P7). Another noted, "*I played football for a year or two after my brother played for around three years since he had so much fun*" (P9). Siblings acted as "models" for females, while parents' impact was more pronounced in terms of encouragement or discouragement. Many students claimed they were obligated to reduce the variety of sports they engaged in as they grew older. Parents also supported their children in taking advantage of opportunities: "*They can motivate you. I sort of continued the little routes that my mother started for me. And when I was in high school, my father taught me football and used to take my siblings and me out to play basketball*" (P19). Family support was crucial, with participants noting, "*You won't get the kids if you don't get the parents*" (P1,2). Some parents discouraged young women from being active as they advanced through their education, focusing on academic performance instead: "*I think it's more towards the later years during their studying that they find it hard because their parents are like [..., I want you to study, I want you to work hard]*" (P9,10,14). Participants mentioned giving up other sports in response to pressure to choose one, with some being forced to drop an activity because their parents wanted them to focus on school. The most mentioned recreational sport for adolescent females was socializing and "hanging out", which is shown in the impact that friends had on the students. Friends' involvement in activity was frequently the motivation for getting involved in the same activity and the opposite. Friends' involvement in an activity was also frequently the reason for someone stopping that activity. Participants said, "*My friend , she kind of got me into long-distance running.*" (P7) and others showed "*I play sport because I like it and the sports allowed me to meet new friends, and I started to get better at sport and make new friends.*" (P8). Findings highlight the need for a multi-pronged approach. Encouraging open communication within families, fostering a supportive social environment among peers, and creating inclusive sports programs within schools are all crucial steps towards increasing adolescent female participation in sports. By working together, families, educators, and sports communities can create a network of encouragement that empowers girls to embrace the joys and benefits of sports participation.

The Role of Schools and Educators: The availability of adequate sports facilities and well-structured programs in schools significantly impacts female participation. Schools with better resources and inclusive policies were seen as more encouraging environments. However, some participants felt a lack of support from educators.

Besides individual and social factors, participants expressed other factors which included the barriers when they used to play sports and physical activities. There are several barriers such as :

Theme 5: Environmental and Organizational Factors

Distance and Inaccessible Facilities
A significant barrier identified by participants was the lack of sports facilities near their homes: *"The facilities are just not close by, [....], It makes it difficult to participate regularly, especially after school times."* shared Participant 15.

Safety Concerns and Evening Activities. Traveling to distant locations, particularly in the evenings, presented safety concerns for many participants. *"I don't feel safe going to a facility far away by myself, especially in the evenings,"* explained Participant 15. These safety concerns limited their ability to participate in after-school sports programs. Similarly, Participant 14 shared, *"Safety is a big issue for me. [...] It's better to stay home than risk going out at night."*

The Need for Improved Infrastructure
Participants highlighted the need for better infrastructure within their communities to encourage participation, participant 16 stated: *"If there were more sports facilities closer to home, I'm sure more girls would be involved,".* This suggests that increasing accessibility could significantly impact participation rates. While some participants mentioned limitations due to school facilities and programs, the focus of this section is on the broader environmental factors. One interviewee suggested: *"Having more indoor facilities would help us engage in sports even when the weather is bad."*

Cambodia's landscape for female participation in sports has some interesting features. Existing studies indicate some positive sides and areas for improvement (Okada & Young, 2011). As the current study found, some positives include growth and success, government recognition, and breaking stereotypes. For example, excelling in sports traditionally is viewed as masculine; however, female athletes challenge gender norms, inspiring young girls. Besides, the Cambodian government recognizes the significance of female sports participation and aims to increase the number of female athletes. Over the past few years, women's participation in sports has increased dramatically, with Cambodian women emerging as medal winners in regional competitions. However, some areas for improvement include limited opportunities, social stigma, and media coverage.

The study findings outlined multiple factors influencing female sports participation, including motivation, self-efficacy, and perceived barriers, which play a crucial role in shaping their decisions and experiences like the following.

Motivational Shifts and the Importance of Enjoyment: The research identified a complex interplay between intrinsic and extrinsic motivation among participants. While many expressed a willingness to be physically active, a notable lack of intrinsic motivation was often attributed to fatigue and other commitments. This aligns with Eyler et al. (2002), who emphasized the significance of external motivators, particularly in environments where traditional forms of physical activity are less prominent. The study also found a strong emphasis on weight loss and achieving a slim physique, reflecting societal norms around femininity and body image (Grogan, 2016). Although these extrinsic motivators can be powerful, they often limit a holistic appreciation of physical activity's broader benefits. Furthermore, the enjoyment derived from sports and physical activities significantly impacted participation, supporting findings by Slater and Tiggemann (2010) that highlight the importance of fun and social engagement for long-term adherence. Promoting enjoyable and socially engaging physical activities could thus be crucial for fostering sustained participation among young women. This aligns with the self-determination theory, which posits that intrinsic motivation is enhanced when activities are inherently enjoyable and fulfilling (Deci & Ryan, 1985). Therefore, creating a positive and enjoyable sports environment is essential for encouraging continuous engagement among adolescent females.

Knowledge Gaps and the Need for Targeted Information: The study revealed that many participants lacked knowledge about appropriate exercises, particularly those suitable for limited spaces, such as indoor

workouts. This highlights a critical need for targeted educational initiatives, as suggested by Chelladurai (2005) and Patton (1999). Providing information on age- and context-appropriate exercises can empower women to make informed choices and overcome perceived barriers. Addressing these knowledge gaps is essential for enhancing the accessibility and inclusivity of sports programs for adolescent females. Moreover, effective communication strategies are crucial in disseminating this knowledge. According to Chelladurai (2005), tailored information that considers the unique needs and contexts of the target audience can significantly improve engagement and participation. Educational programs should include practical tips and demonstrations of exercises that can be performed in various settings, emphasizing convenience and feasibility. By doing so, these programs can mitigate the constraints posed by limited space and resources, making physical activity more accessible to a broader audience.

The Power of Group Dynamics and Peer Support: Group-based activities and peer support emerged as significant facilitators of sports participation. These settings not only provide opportunities for skill development but also foster motivation through social interactions. This finding aligns with Beets et al. (2010), who argued that group activities encourage long-term engagement through role modeling and social support. Incorporating group dynamics into physical activity programs could be particularly effective in overcoming feelings of fatigue and sustaining participation among adolescent females. Additionally, the social aspect of group activities can enhance enjoyment and commitment. According to Beets et al. (2010), group exercises provide a sense of belonging and community, which can be powerful motivators for continued participation. Programs that leverage peer support and group cohesion can create a supportive environment that encourages regular physical activity. Furthermore, these group settings can help mitigate the intimidation and self-consciousness that some adolescents may feel when participating in sports, making the experience more enjoyable and less daunting.

The research underscores the crucial role of social support networks, family dynamics, and peer influences in shaping sports participation. Encouragement from family and friends emerged as a key factor, with participants who received support being more likely to engage in sports. Conversely, a lack of support often served as a significant deterrent. This highlights the importance of fostering open communication and shifting traditional perspectives on girls' and young females' participation in sports. Creating a supportive social environment within sports programs is essential for encouraging participation and enjoyment. Additionally, the role of schools and educators is critical. Schools with better resources and inclusive policies were seen as more encouraging environments, although some participants felt a lack of support from educators. The availability of sports facilities and the proactive involvement of teachers in promoting sports can significantly impact participation rates. As suggested by Slater and Tiggemann (2010), schools that prioritize physical activity and provide diverse opportunities for participation can foster a culture of inclusivity and enthusiasm for sports among students.

The study findings also identified individual factors that influence young females' sports participation, such as personal interest, motivation, and physical ability are critical. Young women's self-perception and confidence in their sports skills can significantly impact their continued participation. These include a lack of time, self-efficacy, attitude, perceived behavioral control, enjoyment, concerns about body shape and weight management, individual autonomy, and pressure to conform to public beauty norms (Allison et al., 1999; Cockburn & Clarke, 2002; Dwyer et al., 2006; Finch & White, 1998; Sas-Nowosielski & Krzysztof, 2006; Shen et al., 2008). Relational factors including support from family, coaches, and peers are essential. Encouragement and positive reinforcement from these groups can sustain sports involvement, and social factors such as societal norms, cultural values, and available infrastructure play a role. Societal attitudes towards girls' and women's sports and the availability of sports facilities can either promote or hinder participation. Social factors are influenced on a micro level by important people such as parents, family, friends, and peers, and on a macro level through the prevalent discourses of gendering in society sports activities. Parents, especially members of the family, play a significant role in the development of children's health behaviors (Baumrind, 1993; Bugental & Goodnow, 1998), but the processes by which parents have an impact on their children's behavior are still poorly researched and understood (Prochaska et al., 2002). Girls' and women's participation in sports activities is significantly influenced by their peers (Allison & Adlaf, 1997; Culp, 1998; Frankish et al., 1998; O'Dea, 2003). Additionally, the environmental contexts

influence sports participation. More and more people are realizing that large populations' levels of sport may be influenced by their physical environment (King et al., 1995).

Otherwise, those factors and barriers, the implementing Change at Multiple Levels such as Decision-makers at both the federal and club levels have the power to significantly impact these recommendations. For instance, these changes could include ensuring coaches possess the qualifications to deliver effective skill development programs that retain players (Côté & Fraser-Thomas, 2007). Additionally, establishing female-only teams and competitions with appropriate rules can foster a sense of achievement and encourage continued participation (Gilbert et al., 2016). Furthermore, developing clear player pathways that outline potential progression opportunities can motivate young women to stay engaged (Weissbrod et al., 2013). Finally, cultivating a welcoming and inclusive environment within sports clubs, characterized by respect and support for all players, is crucial for promoting long-term participation (Fredricks & Prentice, 2004).

Furthermore, there are other barriers such as Environmental/Organizational Factors: Participants identified several environmental and organizational barriers to sports participation. These included the distance to sports facilities, safety concerns, particularly during evening activities, and the need for improved infrastructure. The lack of nearby sports facilities was a significant barrier, as it made regular participation difficult, especially after school hours. Safety concerns, particularly when traveling to distant locations in the evenings, also limited the ability to participate in after-school sports programs. Participants highlighted the need for better infrastructure within their communities, suggesting that increasing accessibility could significantly impact participation rates. Enhancing sports facilities and ensuring safety are crucial steps towards promoting greater inclusion and support for female athletes. According to Ruseski et al. (2011), improving infrastructure and addressing safety concerns can remove significant barriers to participation, playing sports more accessible and appealing. Community planning should prioritize the development of local sports facilities and safe, well-lit environments to encourage regular physical activity. By addressing these environmental and organizational challenges, communities can create a more supportive and enabling environment for adolescent females to engage in sports.

The present study findings and existing research can be used to form basis for future research. For instance, future directions for research can provide more details regarding what motivates females to participate in sports, such as society's role. Besides, such studies should compare the Cambodian context with other countries in the region, including comparing participation in different sports.

CONCLUSION

This study explores socioecological factors related to adolescent female's participation in sports in Cambodia. The researcher focused on the individual, relational, and social factors that affect girls' and women's sports participation during key life phases. The findings linked decreases in adolescent females' sports participation with a shift from intrinsic to extrinsic sources of motivation, competing priorities from university, school, work, and other opportunities, a lack of focus support from parents, family members, gender stereotyping that limited the range of sport participation that girls and females feel comfortable participating in, and a lack of easily available sport and physical activities. To promote sustained engagement in sports and physical activities, it is essential to provide education on suitable exercises, foster supportive social networks, and improve access to facilities. Schools and community programs should prioritize creating enjoyable and inclusive environments for physical activities. By addressing these multifaceted barriers, we can work towards increasing sports participation among adolescent females in Phnom Penh, thereby promoting their overall health and well-being.

Limitations

This study is limited, and its results cannot be applied to the larger girls and women population because they are restricted to the sample population and their environments. The selection of research participants was the second limitation. Participants were recruited through voluntary participation. As a result, young females who volunteered are more likely to be interested in sports and physical activity. In the focus groups, we discovered that many women engaged in at least moderate physical activities. Furthermore, due to time

limitations, each participant could only last an hour and included only 22 people. Last but not least, considering that every participant is involved in some form of sports and physical activity every week, their opinions on exercise and sports may differ from those of non-participants. The participants were urged to consider their fewer active friends and how they might feel about participating in physical activities and sports. Due to these restrictions, it is essential to use caution when interpreting results.

Practical applications of this research could encourage local, regional, and/or sports groups to help create an all-women sports program, increasing chances for girls and females to participate in the sport. Additionally, by examining current girls and women involved in sports, this research could help determine whether they incorporate some of the important elements that affect their engagement in the sport. Finally, decision-makers in sports at all levels can consider the findings of this study. For instance, this might involve establishing clear player pathways at the national and international levels, ensuring PE teachers and coaches have the right skills to help players develop their skills, and developing club-level policies to foster an inclusive and encouraging environment.

Suggestions

Future studies could develop knowledge in this area, as this research is the first to focus specifically on girls and women's participation in sports. Future research could have more in-depth discussions with female athletes and female coaches to understand what would motivate them to engage in sport more generally; parental attitudes about children, particularly daughters, participating in sports; adolescent males and their views and attitudes towards girls and females participating in traditionally male-dominated sports; and evaluating strategies that sporting organizations currently use. To translate these findings into actionable steps, stakeholders such as schools, policymakers, and community leaders should consider the following recommendations:

For Schools

Develop Inclusive Sports Programs: Schools should offer inclusive sports programs that cater to the interests and skill levels of adolescent females. Providing beginner-friendly training and promoting non-competitive activities can foster a supportive environment. *Enhance Facilities*: Investing in better sports infrastructure within school premises, such as safe and accessible sports facilities, can encourage regular participation. Indoor facilities can be particularly beneficial during adverse weather conditions. *Educator Training:* Training educators to be supportive and proactive in encouraging girls to participate in sports can help change traditional perspectives and foster a more inclusive environment.

For Policymakers

Implement Public Awareness Campaigns: Launch campaigns to raise awareness about the benefits of sports participation for young women, focusing on health, social engagement, and personal development. *Support Community Sports Programs:* Provide funding and resources to develop community-based sports programs that are easily accessible and cater to the specific needs of adolescent females. *Safety Measures:* Implement safety measures to ensure that girls can travel to and from sports facilities without fear. This may include better lighting in public areas and safe transportation options.

For Community Leaders

Promote Social Support Networks: Encourage families and communities to support girls' participation in sports through social support networks. Highlighting the positive impact of sports on personal development can help shift traditional perspectives. *Facilitate Group Activities:* Organize group-based physical activities that foster social interactions and peer support. This can help build motivation and long-term engagement among adolescent females. *Educational Workshops:* Conduct workshops to educate girls and their families about suitable exercises and the importance of regular physical activity, addressing any knowledge gaps and misconceptions.

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CONFLICT OF INTREST

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AUTHORS CONTRIBUTIONS

All authors participated in the final approval of the manuscript.

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