

Barriers to Female Participation in Physical Activity in Pakistan: A Feminist Sport Theory Perspective

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Introduction: Religious scholars in Pakistan have imposed unwritten rules in the religion of Islam in Pakistani society and declared that women should not participate in physical activities (PA). However, women empowerment in Pakistan promotes women rights, including participating in outdoor activities, but barriers persist. The main objective of the current study is to highlight these factors and contribute to the betterment of women's participation in PA in Pakistan.

Methods: A self-administered and self-designed questionnaire in the context of feminist theory in sports was employed as the analytical framework. Six hundred and eighty-seven female students (age range 16–22 years) were surveyed and interviewed using a stratified sampling approach (Strata).

Results: The findings of the present research explore that the “Ethos of College physical education” problem is at the top of list of hindrances with highest percentage in Peshawar city (99.4%), “Gender problem” “Religion and culture” and “Religion-Feminism Conflict” are the next obstacles for female sport participation with means of 3.26, 3.17, and 3.16, respectively.

Discussion: The results provide preliminary evidence alerting religious scholars to the facts that according to the participants of this study Islam encourages people to keep fit, the unwritten and misleading rules regarding the Islamic religion should be vigorously challenged, that it is not an anti-sports religion. Empowering women through education, equal opportunities, and access to PA leads to healthier families and improved societal well-being in Pakistan.

Keywords: barriers, female participation in PA, women health and psychology, gender equality, religion, health education, feminism in sports

Review of the Literature

In most developed/developing societies, a lifestyle with daily sports activities has become very important. Physical activities (PA) are related to each step of life. For instance, it has a significant positive impact on psychological development and general well-being; it can help in enhance social connections and skills, balance the communities' social structure, impact the economy, form cultural and ethnic identities, and increase mental health and physical fitness.^{1–3} However, despite the benefits of PA, most people do not participate frequently, especially women. Women face numerous barriers, which hinder or prevent them from engaging in PA. These barriers can be categorized into different dimensions, including social, cultural, economic, institutional, religious, and personal factors.^{4–6}

Religion scholars in Pakistan imposed the unwritten rules in religion (Islam). They declared that women could not participate in PA for many reasons, for example, it is not allowed to expose a woman's body by wearing sports clothes, women will get muscular by participating in PA and more importantly intermingling of sexes will bring the risk of losing virginity, which is the priority of Pakistani men for women.⁶ Women empowerment tries to provide women their rights, including eradicating the limitation on outdoor activities such as PA and so on. The trend for Pakistani women will

impact the future direction of women in many Islamic countries. Therefore, it is important to study the participation of Pakistani women in sports and the hindrances in the context of religion.⁷ By addressing barriers to women's PA participation, we can contribute to the betterment of women's health and well-being in Pakistan by providing constructive suggestions according to Pakistan's current situation and the present study results.⁴ To build an affluent society in an inclusive way, it is necessary to promote a profound change in people's lifestyle with the development of productive forces and the shift in production mode, while improving people's living standards, we should enhance their quality of life. Strengthening women's sports in Pakistan is an organic part of this historical process, inevitably affecting social life changes. The knowledge gap in the related field also pushed researchers to investigate because much work has been published related to low female sport participation or hindrances faced by female students in Pakistan, especially in a religious context.^{4,5,8} According to Laar et al (2019) and Coakley and Pike (2014) the literature on participation of adolescent female students, especially from Muslim countries, like Pakistan, is strikingly low.^{4,9} This is one of the main reasons we selected a respondent group of female students aged 16–22 as participants of this study.

Girls' Enrollment in School

In Pakistan, gender discrimination in education occurs in poor households but is not commonly found in affluent families, only 18% of females have received schooling of 10 years or more.¹⁰ The education system of Pakistan has gender disparity in the enrollment of students. The rate of enrollment has remained almost the same since 2021–22, it was 64.55% for female students and 75.66% for boys.¹⁰ As of 2022–23, from the preprimary to degree stage, approximately 21 million female students are enrolled in educational institutes compared to 25 million male students. Female students are 7% less likely to enroll, with 41.5% out of school vs 34.9% of males from primary to higher secondary level.¹⁰

International Evidence on Women's Health and Their Sport Participation

If we glimpse our society, human beings' progress has raised women's participation in sports. Women are participating in sports, in Pakistan, Turkey, and other Islamic countries. Because of women's empowerment, their status is improving, including in sports.¹¹ Yet, in some countries, customs or religion restrict women's sports participation. In recent years, it has been influenced by some extreme religions or fundamentalism, those Islamic countries or regions are highly affected by it.¹² Women's status is lower, and women are not allowed to go to school or outdoor activities.^{4–7} We can find polygamy, which results in a masculine society and dramatically affects women's outdoor activities, including sports participation. Apart from PA being beneficial for women, this study also emphasizes equal rights for women while promoting gender equality. Women's participation in sports is greatly affected. Iranian female football team was banned from the 2012 Olympics or following Islamic dress code. Furthermore, Saudi Arabia, Qatar, and Brunei did not introduce their women teams until the 2012 Olympic Games. The women's basketball team of Qatar withdrew from the Asian Games 2014 in South Korea because of the hijab.⁵ Women's participation in the movement is a game between traditional religions and feminist forces. The extent of women's sports participation depends on whether traditional religion or feminist forces dominate.

National (Pakistan) Scenario of Women's Health and Their Sports Participation

In Pakistan, due to its particular position, many aspects like the educational, judicial, and bureaucratic systems, democracy, elections, and parliament, are all inspired by the Western world (England).⁸ Western influences promote modernism in politics and feminism, while religious influences remain deeply rooted, including extremist factions like the Taliban (now primarily found in Afghanistan). These two forces are pulling against each other. However, unlike other countries, Pakistan is relatively flexible in the sense that there are some factors of social instability, marked by factors like Taliban infiltration and extremist terrorism.¹³ One of the Muslim countries has the most prominent Muslim female leader, ie, former Prime Minister Benazir Bhutto (served from 1988–1990 and 1993–1996). In contrast, it is impossible to imagine that there will be women presidents in Iran or Afghanistan, it is also unlikely in Syria and Iraq, where extremist religion prevails and leaders occupy an absolute position. For example, female athletes are not allowed to participate in competition. Women in some places are not even allowed to watch sports or be watched while participating in sports.⁵ While Pakistan represents Islamic countries progressing toward modernization, it also resists certain liberal practices in

some respects. In other words, it is liberal in some aspects while conservative in others.¹⁴ So which direction women in Pakistan are supposed to head? Literature tells us the area consists of contradictions and conflicts which hinders women's sport participation in different ways, and is worthy of study in detail.

Religious and Social Aspect of Women Sport Participation

In different religious contexts,^{15,16} many previous studies focused on religion imposing sports restrictions. In the Pakistani context, Muslim women's participation in PA depends on religious and cultural constraints.¹² The restriction of Islamic fundamentalism on women's participation in the movement and the emancipation of women's rights are advocated and contradictory. The trend of Pakistani women will impact the future direction of women in the whole Islamic country.¹⁷ Pakistani women, like their feminist counterparts all over the world, are supposed to seek gender equality from the second year of Pakistan's independence (1948): the right to work for equal wages, the right to equal access to health and education, outdoor activities including sports.¹¹ Therefore, it is important to study the participation of Pakistani women in sports and conclude with constructive suggestions to improve female sports participation to enhance the women's health and well-being while getting the help of literature and examples of some countries with better female participation rates, such as China or Turkey.¹³

Based on a systematic review of the current physical participation status of Pakistani females' sports participation, this study analyzes the hindrances faced by Pakistani women in sports participation in the context of religion and to enhance women's sports participation, combined with the relevant theories of foreign physical health promotion, and based on national conditions. This study put forward the appropriate implementation path to minimize obstacles for women's sport participation and provide a new research idea and perspective for this research in Pakistan in the context of feminism in sports theory as an analytical framework of the current study. Feminist sports theory critically examines how gender norms, power structures, and sociocultural constraints shape women's experiences in PA. By anchoring the study in feminist sports theory, the research design not only identifies barriers but also critiques the power structures sustaining them, aligning with feminism's transformative goals in Pakistan.

Hypothesis : It is hypothesized that participants should be aware that religion itself will never contradict the healthy body and mind concept gained by PA. It is the religions unwritten rules mixed with society and culture that contradict feminism, which suppress development of women while hindering outdoor activities including PA.

Impact of Low Female Participation in Sports or PA in Pakistan

There are plenty of impacts of low female participation in PA.

- Health impacts: Only 14.3% of Pakistani women aged 15–49 meet the WHO physical activity guidelines, compared to 33.9% and 38.3% of adult women who are overweight/obese vs 27.5% of men.¹⁸ Adolescent girls not participating in sports show 2.3 times higher depression scores ($P < 0.01$).¹⁹
- Career opportunities: Just 12% of registered professional athletes are female, 78% of female athletes drop out before age 21.²⁰
- Social and cultural impacts: Only 11% of public schools have sports facilities for girls. 67% of parents believe sports are “inappropriate” for daughters. Maria Toorpakai received death threats for playing squash.²¹
- International performance: Pakistan ranks 160th in FIFA women's rankings. Zero medals in women's events across Olympic history.²

Therefore the main objective of the current study is to highlight the barriers preventing female participation in PA and put forward the practical implications to enhance it and overcome the aforementioned impacts of no/low female participation in Pakistan.

Materials and Methods

The primary methodology of this study was a survey, interviews.^{22,23} We highlight the constraints female students face in sports participation mainly focusing on how religion impacts women's sports participation, as surveyed and discussed by the participants, revealed their effective operation and the challenges faced therein, and observed the data through statistical analysis. During the survey some participants have interesting stories regarding the participation of PA, that the authors felt warranted further discussion. After completing survey, during analysis, the results of the interviews and discussions somehow matched the survey (questionnaire) data, so keeping in mind the nature of research, we merged the interviews and discussion in numerical data (quantitative data). Feminism in sports is used as the theoretical lens of the current study.^{4,5,24} Feminism can be taken up in many contexts such as sport and exercise, feminist politics, feminist education, feminist class, race, or gender, and so on.²⁵ Hence, in the current study, we took some of the significant contexts of the feminism lens from literature and represented them as main influencing factors in female sports participation. This study followed all ethical considerations. All participants gave their written informed consent before they participated in the study.

Sampling by Strata Approach

Researchers have designed the method of current research based on prior studies.^{22,23,26,27} In the first round, the total population was divided into four groups (Strata) by stratified random sampling and similar to an earlier study,²⁸ this research was also carried out in the most populated and capital cities of four provinces of Pakistan, ie, Karachi (Sindh), Lahore (Punjab), Quetta (Balochistan) and Peshawar (Khyber-Pakhtunkhwa). There are four provinces in Pakistan Punjab, Sindh, Balochistan and Khyber-Pakhtunkhwa. From each province, the capital city was selected (see Table 1).

Table 1 Demographic Characteristics of Female College Students (N=687)

Variable	Category	N (%)
Geographic Distribution		
Cities	4	4 (100)
Colleges per city	2	8 (100)
Participants per city	200	800 (n.a.)
Participants per college	100	800 (n.a.)
Response Rate		
Valid responses	687	687 (85.8)
Age (Years)		
	16–18	224 (32.6)
	19–21	283 (41.2)
	≥22	180 (26.2)
Enrollment Status		
	Intermediate Part I	321 (46.7)
	Intermediate Part II	366 (53.3)
Gender		
	Female	687 (100)
Marital Status		
	Unmarried	665 (97)
	Married	22 (3)

Notes: Percentages may not sum to 100 due to rounding. N=total valid responses; n.a., data not applicable.

All types of people are available from all of the provinces, especially from colleges that represent the total population.^{23,28} Geographic distribution ensured equal representation from two colleges per city across four major urban centers (colleges=8). For the better quality and authenticity of the study, the data were collected from 800 participants (ie, 200 from each city, 100 from each college) aged 16–22, with balanced representation across Intermediate Parts I (46.7%) and II (53.3%). Most participants were unmarried (97%), and the 85.8% response rate suggests minimal non-response bias. A total of 800 questionnaires were issued, out of which, 687 valid questionnaires (incomplete and unclear questionnaires were excluded; assessed physically and with the help of Amos 24) were received back (85.8%), making it clear that participation was voluntary.

Study Design

The survey completed into two phases, the first phase in January, 2016 and after minimizing flaws second phase in January 2017. Training, inspecting the quality of data collection and pilot studies were conducted for measuring the validity measures of the current survey. We attended each selected college with the permission of the related District Education Officer and Head Teacher. Getting access to the appropriate individuals for data collection greatly helps research projects be successful.²⁹ Because of restricted access in girls colleges, especially in Muslim regions, we received several refusals and moved on to the next college many times. With the permission of the teacher after or before the class, the author went to classrooms to distribute the student and parent's questionnaire and explained it to the female students for approximately 15–20 min. It took almost 20–30 min to complete the student questionnaire. The answering rate was 90% in Phase I and 95% in Phase II, respectively. We replaced the students who do not want to participate or in case any problem occurred during returning the questionnaire.

Instruments

To achieve the desired objectives and purpose, the author designed a self-administered student questionnaire to collect data for this study, which passed reliability and validity tests.^{30,31} The researcher divided the questionnaire into two significant parts: questions regarding the student's demographic and sport-related information almost 15 questionnaire items and the nature of constraints and reasons for not participating in PA almost 33 questionnaire items and sub-items. Based on previously investigated physical activity studies³² and suggestions of 10 professional experts in PE, Sociology and Islamic studies,^{4,30,31} the factors influencing sporting participation were designed in the questionnaire with multiple and single choice answer options followed by open-ended question. These influencing factors are introduced with the help of feminism in the sports concept. The questionnaire was developed in the English language, the second most speaking and official language of Pakistan. The validity measures of the current survey included training the interviewers, pilot studies, and inspecting the quality of the data collection. We measured the Cronbach's alpha value to evaluate the reliability of the questionnaire. The value was 0.735, which indicates that the internal consistency was acceptable (Table 2).

Data in Table 2 support the questionnaire's psychometric soundness for measuring sports participation constructs in the studied population. The marginally significant Bartlett's test ($P=0.030$) particularly suggests the data have meaningful underlying factors while avoiding multicollinearity concerns. The internal consistency reliability of the instrument,

Table 2 Reliability and Validity Assessment of the Instrument

Reliability and Validity Measures	Value	Interpretation
Internal Consistency Cronbach's α	0.735	Acceptable reliability
Factor Analysis Suitability Kaiser–Meyer–Olkin (KMO) measure	0.818	Meritorious sampling adequacy
Bartlett's test of sphericity		
Approximate chi-squared	4321.665	
Degrees of freedom (df)	584	
Significance (P)	0.030	

assessed using Cronbach’s alpha ($\alpha=0.735$ for both the overall scale and all parts), exceeded the recommended threshold of 0.70, indicating acceptable reliability.^{4,33} All psychometric indices meet recommended thresholds for survey research.³⁴ The validity procedures for this survey consists of data collection quality control, training of surveyors and pilot studies. More than 40 students were surveyed as a pilot study in order to validate the questionnaire with the help of purposive sampling method. After analysis we modified the questions according to the findings, ie, remove typing/logical errors, omit some parts which were found not very related and/or difficult to analyze statistically.⁴

Statistical Analysis

The data were analyzed using IBM SPSS Statistics 20. Data analysis includes making sense of the subjects’ choices in the questionnaire and then assigning patterns and connections to the transcript. These patterns are then analyzed using feminist sport theory.³⁵ To ensure the high quality of our study, Amos 24 was also used to eliminate the questions that had less/no influence on constraints to women’s participation in Pakistan. Descriptive statistics was carried out to indicate the demographical information of the students and cross-tabulation between the city and related factors to find out the most disturbing element in the female participation in PA, followed by internal consistency reliability by using Cronbach’s alpha. Confirmatory factor analysis was conducted to filter the data by eliminating all defective samples. Last, chi-squared test assessed the statistically significant differences across cities during Ramadan participating in PA. Moreover, in order to maintain the authenticity of the research, an iterative process of integration, a revision and reinterpretation was carried out to prove that the designed theme appropriately reflects the main object of this study. In order to improve the efficiency of the current research and verify the consistency of the results of this study, a triangulation method was used to cross validate the collected data and the notes of researcher from different perspectives.

Technical Frame of the Study

This topic follows the primary line of problem diagnosis, reality to theory, theory to empirical suggestions. First, through literature research and theoretical elaboration, the paper interprets the current situation and restrictive factors of Pakistan’s sports participation and women’s sports participation. Second, through investigation and analysis, we determine the fundamental reasons for Pakistan’s sports participation and the low rate of women’s sports participation. Third, the literature and results of how the current study religion impacts the participation of Pakistani women in PA and then put forward constructive countermeasures for improving the rate of women’s sports participation and status in Muslim regions (Figure 1).

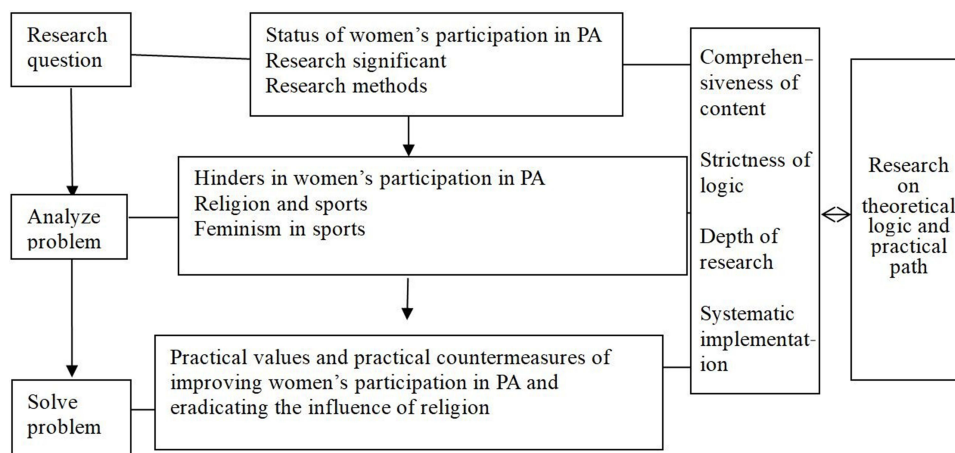


Figure 1 The Technical Frame of the Study.

Results

The reason for using confirmatory factor analysis is that there is previous knowledge about the number of factors during the development of the questionnaire.³⁶ The authors hypothesized a one-factor model. The authors tested the models by using the confirmatory maximum likelihood (ML) factor analysis parameter estimation in Amos 24 and filtered the data by eliminating all defective samples. The one-factor model demonstrated excellent fit to the data (GFI=0.974, CFI=0.921, RMSEA=0.022), with all indices surpassing Hu and Bentler's thresholds, see Table 3.^{36,37} The nonsignificant chi-squared/df ratio (1.3, $P>0.05$) further supports model adequacy.

To find the value of sports in the life of female students, descriptive statistics were used. Cross-tabulation between the city and the element, "do you think sport is important to you" was held. Almost 2.6% ($N=18$) of female students think that sports have no value in their life. Whereas 92.1% ($N=633$) students answer that sport is essential or most important to them (Table 4). Peshawar (59.2%) and Karachi (59.3%) showed the highest proportions rating sports as "Most Important".

To find the ratio of female students participating in PA, we ran the cross-tabulation between the city and the related factor. According to the instrument designed for this study, the students were asked if they participate in sports; more than 73.5% ($N=505$) of female students do not participate in any PA, these participants were directly asked about the reasons for non-participation while skipping other questions regarding participation in PA. Significant regional disparities exist, with Karachi (32.2%) and Lahore (32.0%) showing substantially higher participation than Peshawar (18.9%) and Quetta (22.3%), indicating Peshawar demonstrates the most concerning profile with lowest participation rate (Table 5). The city-wise differences are statistically significant (chi-squared=5.42, $P<0.01$) and effect size is small-moderate ($\phi=0.15$).

According to Table 6 the female students who participate in sports activities, almost 20% play cricket, the second and third number is badminton and cycling with 10.3% and 6.1%, respectively. In contrast, hockey (0.3%), running, and aerobics/dance (0.7% each) reported the lowest participation rates. Notably, 73.5% (505) of the total sample ($N=687$) did not engage in any sports (Table 6). Due to lack of facilities and not common trend to participate in, the rate of participation in other games is much less, eg: volleyball 1.3%, aerobics/dnce 7%, hockey 3% only. Responses in Tables 6 and 7 are from 182 female students only because the rest of the students do not participate in any sport at all (see Table 5).

Table 3 Goodness-of-fit Indices for the Confirmatory Factor Analysis Model

Model	GFI	IFI	CFI	RMSEA	χ^2/df
One- factor	0.974	0.927	0.921	0.022	1.3

Notes: All indices meet acceptable thresholds.³⁷ GFI/IFI/CFI ≥ 0.90 , RMSEA ≤ 0.06 , $\chi^2/df \leq 3$, $P=0.05$.

Abbreviations: GFI, Goodness-of-Fit Index; IFI, Incremental Fit Index; CFI, Comparative Fit Index; RMSEA, root mean square error of approximation; χ^2/df , chi-square to/degrees of freedom ratio.

Table 4 Perceived Importance of Sports Participation Among Female College Students: City-wise Comparison

Perceived Importance	Peshawar	Quetta	Karachi	Lahore	Total
	N (%)	N (%)	N (%)	N (%)	N (%)
Most Unimportant	12 (7.1)	4 (2.4)	1 (0.6)	1 (0.6)	18 (2.6)
Unimportant	3 (1.8)	3 (1.8)	1 (0.6)	10 (5.7)	17 (2.5)
Indifferent	2 (1.2)	8 (4.8)	6 (3.4)	3 (1.7)	19 (2.8)
Important	52 (30.8)	91 (54.8)	64 (36.2)	67 (38.3)	274 (39.9)
Most Important	100 (59.2)	60 (36.1)	105 (59.3)	94 (53.7)	359 (52.3)
Total	169 (100)	166 (100)	177 (100)	175 (100)	687 (100)

Table 5 Sports Participation Rates Among Female College Students: A Comparative Analysis

Participation	Peshawar	Quetta	Karachi	Lahore	Total
	N (%)	N (%)	N (%)	N (%)	N (%)
Yes	32 (18.9)	37 (22.3)	57 (32.2)	56 (32.0)	182 (26.5)
No	137 (81.1)	129 (77.7)	120 (67.8)	119 (68.0)	505 (73.5)
Total	169 (100)	166 (100)	177 (100)	175 (100)	687 (100)

Notes: Participants who selected "No" skipped subsequent unrelated questions and proceeded directly to the scale assessing reasons for non-participation.

Table 6 Sports Participation Among Pakistani Female Students (N=182)

Sport	Yes	No
	N (%)	N (%)
Badminton	71 (10.3)	111 (16.2)
Cricket	137 (19.9)	45 (6.6)
Yoga	14 (2.0)	168 (24.5)
Table tennis	24 (3.5)	158 (23.0)
Gymnastics	15 (2.2)	167 (24.3)
Swimming	11 (1.6)	171 (24.9)
Shooting	13 (1.9)	169 (24.6)
Running	5 (0.7)	177 (25.8)
Aerobics/dance	5 (0.7)	177 (25.8)
Basketball	15 (2.2)	167 (24.3)
Football (soccer)	22 (3.2)	160 (23.3)
Volleyball	9 (1.3)	173 (25.2)
Tennis	29 (4.2)	153 (22.3)
Cycling	42 (6.1)	140 (20.4)
Hockey	2 (0.3)	180 (26.2)

Notes: Data reflect responses from 182 female students who participated in sports. The remaining 505 respondents reported no sports participation and were excluded from this analysis.

Table 7 City-wise Comparison of Sports Participation During Ramadan Among Female Student Athletes: Chi-squared Test Results

PA During Ramadan	Peshawar N (%)	Quetta N (%)	Karachi N (%)	Lahore N (%)	Total N (%)	χ^2 (df)	P
Yes	3 (9.4)	10 (27.0)	15 (26.3)	15 (26.8)	43 (23.6)	4.3 (3)	0.20
No	29 (90.6)	27 (73.0)	42 (73.7)	41 (73.2)	139 (76.4)		
Total	32 (100)	37 (100)	57 (100)	56 (100)	182 (100)		

Notes: Data represent responses from 182 sports-participating female students. The remaining 505 respondents reported no sports participation and were excluded from this analysis. Chi-squared test results indicate no statistically significant differences across cities ($\chi^2(3) = 4.3, P=0.20$).

The chi-squared test was used to compare the ratio of female students' participation in PA during Ramadan in all four cities. Results show that there is no significant difference ($P>0.05$) found in the female students of four cities in participating of PA during Ramadan with Pearson chi-squared value ($\chi^2(3) = 4.3, P=0.20$), suggesting regional variations in Ramadan sports participation may not be substantial among female students. The students of Lahore (26.8%) have

Table 8 City-Specific Ranking of Perceived Barriers to Sports Participation Among Pakistani Female University Students

Constraint	Peshawar Rank	Quetta Rank	Karachi Rank	Lahore Rank	Overall Rank
College physical education ethos	1	1	1	–	1
Religion and culture	2	2	–	2	2
Religion-feminism conflict	3	3	3	1	3
Sports facilities and equipment	–	–	–	4	4

Notes: Rankings are based on reported frequency (1= most frequent constraint). Dashes (–) indicate the constraint was not reported among top issues in that city. “Religion and culture” emerged as the most prevalent barrier overall.

Table 9 Constraint Sub-dimensions Affecting Female Physical Activity Participation in Pakistan (Ranked by Perceived Influence)

Constraint Category	Sub-Dimension	Mean	±SD	Rank
Gender Problem	Sports coaches give male more opportunities over female	3.26	1.373	1
	Parents prefer male over female	3.21	1.490	2
Religion and Culture	Discomfort exercising in hijab/long sleeves in extreme heat	3.17	1.376	3
Religion-Feminism Conflict	Perceived impact on women’s status in Pakistan	3.16	1.517	4
	Conflict distrusted women’s outdoor activities	3.15	1.509	5

Notes: 5-point Likert scale (1= Strongly Disagree, 5= Strongly Agree). Sub-dimensions ranked by mean scores (higher = greater perceived influence). All items show high variability (SD >1.3), indicating diverse respondent views.

more participation in PA during Ramadan than rest of the cities. In contrast, female students of Peshawar (9.4%) have the lowest participation in PA during Ramadan than Karachi and Quetta (Table 7).

To discover the most effective constraints experienced by female students in four individual capital cities and total population, each constraint’s percentages and frequencies were compared. In Table 8, the top four constraints of each city and total population are presented. The numbers in front of constraints (ie, 1–4) represent the intensity of each problem to an individual city (1=maximum intensity). It was found that “The ethos of college physical education” was found in most of the cities with significantly great intensity, representing this problem is one of the main problems with the percentage of Peshawar=99.4%, Quetta=92.8%, Karachi=78.5% and possess 78.7% of the intensity in overall total population, respectively (Table 8).

The arithmetic means and standard deviations were calculated to find the top five influential sub-dimensions of the constraints that prevent female students from participating in sport. This set of results gives some detail on the data, and the actual questions asked to the sample. The maximum intensity bearing sub-dimensions are related to the constraint “Gender problem” labeled as “Sports coaches give male more opportunities over female” and “Parents prefer male over female” with highest mean of “with means of 3.26 3.21, respectively (Table 9). After the “Gender problem” sub-dimensions of constraints” Religion and culture’ and “Religion-Feminism Conflict” (ie, “Discomfort exercising in hijab/ long sleeves in extreme heat”, “Perceived impact on women’s status in Pakistan” and “Conflict distrusted women’s outdoor activities”) are on the top of the list, mean=3.17, 3.16, and 3.15, respectively. Overall, the means are very close between all sub-dimensions, so generally all these sub-dimensions are more or less equally affecting female sport participation. In addition, high standard deviations (±1.37–1.52) suggest these issues polarize female students (Table 9).

Discussion of the Findings

This study provides a complete understanding of constraints and the current condition of female participation in sport in Pakistan and women’s participation in PA in Pakistan in light of feminism in sports. In this study, we collected the data from (N=687) female students from eight different female colleges from four cities of Pakistan.

According to the current study results, most of the students think that sports participation is most important to them. The percentages who consider that sport participation is important or most important in their life are even higher from the bigger cities like Karachi and Lahore. These findings are strongly supported by previous studies.^{38–40} These scholars

think that self-interest and motivation are the best tools to improve sports participation. More than 73.5% of female students responded that they do not participate in any PA despite this fact. Regarding PA participation during Ramadan, the study found that most female students, regardless of city size, avoid physical activities due to fasting-related challenges. These include biological factors (such as weakness and drowsiness) and environmental conditions (like dehydration in Pakistan's hot weather), which similarly affect participants across small and large cities. Whereas the participation rate of female students in PA from Karachi and Quetta cities is moderate or slightly low during the fasting month of Ramadan. These findings are strongly supported by prior research.^{41–43} Results show that there is no significant difference found in the female students of four cities participating in PA during Ramadan. The results regarding the effects of these constraints at the level that students completely stopped participating in such activities show that most female students do not participate in PA (see Table 5). These results support previous research.^{44–46}

However, the rest of the female students, despite experiencing such barriers, strived to participate in PA while trying to not disobey the religious teachings. Many scholars have demonstrated that the religious and cultural factor greatly hinders sports participation.^{15,47–49} Similarly, the current study also states that religion and culture and religion-feminism conflict are among the most disturbing factors in female sport participation. The present study contrasts to a study that represents these two factors cannot be labeled as the top constraint for participation in PA,⁵⁰ as they stand at second and third in the current study. Moreover, sports facilities and equipment problems only appear in Lahore city's top four constraints. Notably, Lahore uniquely reported "religion-feminism conflict" as its most frequent barrier. Similar to other scholars' findings,^{17,32,51,52} it was found that sub-dimensions of the constraints "Gender problem" (ie, sports coaches give males more opportunities over females and parents prefer male over female), "religion and culture" (ie, discomfort exercising in hijab/long sleeves in extreme heat) and "religion-feminism conflict" (ie, perceived impact on women's status in Pakistan and the conflict between religion and feminist activists who distrust the participation of women in outdoor activities, including involvement in PA and the decline in the social status of Pakistani women) are the five most disturbing sub-dimensions.

The finding of this study which can be criticized is an economic problem, and the mass-media issue is raised less than other problems by female students. These findings are controversial to some studies.^{53–56} According to these studies, related factors significantly influence sporting participation, particularly in female sport participation, especially in an underdeveloping society like Pakistan. The reason that female students claim to have fewer financial problems according to the current study, is that most of the female students do not participate in sports due to many problems (ie, lack of facilities, religious and cultural limitations, no parental permission, ethos of college PE, etc) so they do not know how much sports can cost and are unaware of the economy-related issue.⁵⁷

Conclusion and Recommendation

Most of the participants of the current study believe that PA is essential or most important to them, yet the majority of female students do not participate in any PA due to one or more constraints. The lowest ratio of female students who participate in PA is from the smallest city and vice versa. "The ethos of college physical education" was found in most of the cities with significant intensity, "religion and culture" and "religion-feminism conflict" also stand at the top of the list. After the "gender problem" sub-dimensions of constraints "religion and culture" and "religion-feminism conflict" (ie, "discomfort exercising in hijab/long sleeves in extreme heat" "perceived impact on women's status in Pakistan" and "conflict distrusted women's outdoor activities") are the maximum intensity bearing sub-dimensions.^{6,7}

The results of the current study suggest religion and college physical education ethos as a problematic for female participation in PA. The current study has many useful implications for religious leaders, educational institutions, government and policymakers, families and communities and various stakeholders interested in promoting women's rights in Pakistan. First, religious leaders or scholars and society members should be alerted that there is not a clear sentence in the Quran that says women cannot participate in PA and by resolving the religion-feminism conflict (so that they can work together to enhance not only women's participation in PA, but also to provide excellent social status in Pakistani society) they can increase the participation of women in sports in Pakistan.^{2,6} The unwritten and misleading rules regarding the Islamic religion should be vigorously challenged.^{58, 59} Islamic feminists support this assumption,

emphasizing that “Islam is a supportive religion that supports women’s participation in sports activities”. In this sense, a woman can completely participate in PA while obeying the teaching of religion if other factors such as safety, facilities, etc. do not hinder. Second, educational institutions should include gender-sensitive sports education in Islamic studies classes, highlighting Prophetic traditions on physical health such as: “teach your children swimming, archery, and horseback riding” – authenticated Hadith). Train PE teachers to address religious concerns (eg, adjusting schedules during Ramadan). Build shaded, walled playgrounds in girls’ schools/colleges to ensure privacy. Partner with NGOs to provide free transportation for female athletes. They should host workshops showcasing successful Muslim female athletes to shift parental attitudes. Offer “family sports says” to normalize mixed-gender spectating in controlled environments. Third, government and policymakers should launch TV/radio spots featuring male religious leaders advocating for girls’ sports especially by countering patriarchal norms). In addition, subsidize media content showcasing female athletes in hijabs and provide gender-segregated sports facilities in public spaces. Above all, tax breaks for private clubs that reserve 30% of resources for women’s programs and provide scholarships or sponsorships for female athletes from conservative regions to attend sports academies. Fourth, families and communities should provide awareness to family members about the benefits of sport and providing facilities for women can enhance their participation greatly, and enlighten them that not being allowed to practice PA is a violation of their basic rights. Raise awareness that Islam is not an anti-sports religion and make changes in Pakistani society to enhance female participation in PA, which is the main motive and practical outcome of the current study.⁶ These findings strongly support the extant literature.^{38,51,60–62}

Limitations and Future Directions

The current study has several limitations. Some factors related to religion could not be used in the questionnaire because the endogeneity issue is very sensitive in Pakistan. Only female students’ views about the related topic are analyzed and the sample size is small. Despite these limitations, the current study renders the conclusions especially valuable about which factors hindered female students from participating in sports in different cities of Pakistan in the context of religion and feminism in sport theory. One fascinating question for future study is to explore the point of view of PE teachers and the participants’ parents regarding women’s sports participation in the Pakistani context with the help of longitudinal or mixed-methods sampling strategies.

Data Sharing Statement

Data will be provided on request to corresponding author, due to confidential issues.

Ethics Approval and Informed Consent

This study adhered to ethical guidelines outlined in the Declaration of Helsinki, and the protocol of this study was approved by the Institutional Review Board of the Hubei Normal University China and Cholistan University of Veterinary & Animal Sciences Pakistan. Ethical approval number is CPE20230306. Written informed consent for publication and participation was obtained from all participants before participating in any study procedure. Participants were assured that their personal identities would not be disclosed in the subsequent research reports.

Acknowledgments

We thank the participants for taking part in this research and making this study possible. This paper is related to the first author’s (R.A.L) PhD thesis project. The authors conducted this study to better understand Pakistani women’s participation in sports through the context of the religion-feminism conflict. Readers may wish to see published papers related to this project.^{2,4–7,24}

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

Funding

This research received no external funding.

Disclosure

The authors report no conflict of interest in this work.

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