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University Athletes' and Coaches' Perceptions of the Higher Education Commission's Role in Promoting Sports Education and Talent Development in Pakistan

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Abstract

Background: University-level sports systems in developing countries depend heavily on governing bodies to provide policy direction, funding, and talent development infrastructure. In Pakistan, the Higher Education Commission (HEC) occupies this central role, yet stakeholder perceptions of its effectiveness remain empirically underexplored. **Objective:** This study investigated how university athletes and coaches perceive HEC's contribution to sports education and talent development, examining five key domains: policy and governance, financial and infrastructure support, talent identification, capacity building, and institutional environment. **Methods:** A quantitative descriptive-comparative design was employed. Using purposive sampling, 200 participants were recruited from public and private universities across six provinces of Pakistan 150 athletes (75%) and 50 coaches (25%). A 25-item structured questionnaire based on a 5-point Likert scale was administered. Data were analyzed through chi-square tests, independent-samples t-tests, and Pearson correlation analyses using SPSS ($\alpha = .05$). **Results:** Chi-square analysis revealed statistically significant variability in responses across all 25 items (all $p < .001$), indicating diverse stakeholder perceptions. An independent-samples t-test demonstrated that coaches ($M = 4.10$, $SD = 0.50$) held more positive perceptions than athletes ($M = 3.80$, $SD = 0.60$; $t[98] = 2.10$, $p = .038$). Pearson correlations confirmed strong positive interdependencies among all five domains ($r = .55–.67$, all $p < .01$). **Conclusion:** HEC is broadly recognized as a constructive force in university sports, but significant gaps persist in policy implementation, resource equity, and regional consistency. Athletes the primary beneficiaries report comparatively lower satisfaction than coaches, pointing to a critical disconnect between policy intent and ground-level experience.

Keywords: *higher education sports governance, talent development, athlete perception, sports policy, Pakistan university sports, HEC*

Introduction

Sport occupies an increasingly prominent position within higher education, functioning simultaneously as a vehicle for student well-being, talent identification, and national athletic development. In countries with limited grassroots infrastructure, universities often represent the most accessible pathway through which promising athletes receive structured training, competitive exposure, and institutional support. The quality of this environment is, to a considerable degree, shaped by the policies and resources of overseeing bodies at the national level.

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In Pakistan, the Higher Education Commission (HEC) serves as the principal regulatory authority for university-level sports, tasked with organizing inter-university competitions, disbursing funds for sports infrastructure, and implementing talent hunt programs intended to pipeline athletes toward national representation. Over the past decade, HEC has expanded its engagement with university sports, yet systemic challenges persist among them uneven resource distribution, insufficient coaching development, and the absence of scientifically grounded talent scouting protocols (Green & Houlihan, 2005; Coakley, 2015).

A critical, but under examined, dimension of sports governance effectiveness is stakeholder perception. Athletes and coaches are not passive recipients of institutional policy; they actively interpret, evaluate, and respond to the systems within which they operate. Research grounded in Organizational Perception Theory suggests that how institutional actors experience their environment shapes their motivation, engagement, and performance outcomes (Robbins & Judge, 2017). Similarly, Achievement Motivation Theory posits that perceived institutional support is a significant predictor of goal-setting and persistence in competitive settings (Weinberg & Gould, 2019). Together, these frameworks underscore why understanding ground-level perceptions is indispensable for evaluating policy impact.

Despite the theoretical and practical importance of stakeholder perspectives, the Pakistani sports literature has produced little comparative empirical work contrasting athlete and coach perceptions of HEC governance. Most domestic research remains descriptive and focuses on fitness profiling or competition outcomes rather than institutional evaluation (Bashir et al., 2023). This study addresses that gap by examining whether athletes and coaches perceive HEC's contributions to sports education and talent development differently, and by identifying which institutional domains generate the greatest variation in satisfaction. Findings are intended to inform evidence-based policy improvements at both HEC and university levels.

Methods

Research Design

A quantitative descriptive-comparative survey design was adopted. This approach is appropriate when the goal is to characterize and compare attitudes across distinct groups within a defined population, and when data are to be subjected to inferential statistical analysis (Creswell, 2014).

Participants and Sampling

The target population comprised all university athletes and coaches actively involved in sports programs at HEC-affiliated institutions across Pakistan. Through purposive sampling—chosen to ensure that respondents had direct, experiential knowledge of HEC-related sports activities—200 participants were recruited: 150 university athletes (75%) and 50 coaches (25%). Participants were drawn from both public (65%) and private (35%) universities spanning six administrative regions: Punjab (50%), Sindh (17.5%), Khyber Pakhtunkhwa (15%), Balochistan (7.5%), Gilgit Baltistan (5%), and Azad Jammu and Kashmir (5%). The athletes ranged in age from 19 to 25 years, while coaches were predominantly between 33 and 44 years of age. Participation was voluntary; all respondents provided informed consent, and confidentiality of responses was assured.

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Instrument

A structured questionnaire comprising 25 close-ended items was developed following a systematic review of relevant literature on sports governance and policy evaluation. Items were organized into five thematic domains: (1) Policy Support and Governance (Items 1–5), (2) Financial and Infrastructure Support (Items 6–10), (3) Talent Identification and Development (Items 11–16), (4) Capacity Building and Professional Development (Items 17–18), and (5) Institutional Environment and Support Climate (Items 19–25). Responses were recorded on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Content validity was established through expert review by faculty in sports sciences and research methodology. Pilot testing confirmed internal consistency, and the instrument demonstrated acceptable reliability.

Statistical Analysis

Data were analyzed using IBM SPSS Statistics. Chi-square goodness-of-fit tests were applied to each item to assess whether response distributions differed significantly from chance-equal expectations across the five Likert categories. Independent-samples t-test compared overall domain-composite perceptions between athletes and coaches. Pearson product-moment correlations examined inter-domain relationships. The significance threshold was set at $\alpha = .05$.

Results

Demographic Profile

The sample was predominantly male (70%; n = 140), reflecting the typical gender distribution in competitive university sports in Pakistan. Athletes constituted 75% of respondents (n = 150) and coaches 25% (n = 50). Most athletes fell in the 22–25-year age bracket, while coaches were concentrated in the 33–44-year range, indicating an experienced respondent pool. Team sport athletes outnumbered individual sport participants (60% vs. 40%), and the majority came from public universities. Full demographic frequencies are provided in Table 1.

Table 1

Demographic Profile of Study Participants (N = 200)

Variable	Category	n	Percentage (%)
Gender	Male	140	70.0
	Female	60	30.0
Role	Athletes	150	75.0
	Coaches	50	25.0
Athlete Age (yr)	19–21	60	30.0
	22–25	90	45.0
Coach Age (yr)	26–31	10	5.0

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	33–38	15	7.5
	39–44	15	7.5
	45+	10	5.0
Sport Experience	1–3 years	70	35.0
	4–6 years	60	30.0
	7–10 years	40	20.0
	11+ years	30	15.0
Sport Type	Individual	80	40.0
	Team	120	60.0
University Sector	Public	130	65.0
	Private	70	35.0
Province	Punjab	100	50.0
	Sindh	35	17.5
	KPK	30	15.0
	Balochistan	15	7.5
	GB / AJK	20	10.0

Note. KPK = Khyber Pakhtunkhwa; GB = Gilgit Baltistan; AJK = Azad Jammu and Kashmir.

Chi-Square Analysis: Perceptions across All Domains

Chi-square goodness-of-fit tests were conducted for all 25 items, comparing observed Likert response frequencies against equal-distribution expected values (n = 40 per category). All items yielded statistically significant results ($p < .001$), confirming that responses were not randomly distributed and that stakeholders held meaningfully differentiated views across every aspect of HEC's role in university sports. Table 2 summarizes the chi-square statistics organized by domain, alongside the dominant response patterns for each item.

Within the Policy and Governance domain, the highest chi-square values were associated with the transparency of HEC's governance structure ($\chi^2 = 104.60$) and the effectiveness of policy monitoring ($\chi^2 = 96.65$), with 'Agree' being the modal response for most items. However, the item addressing gender equity in opportunity provision attracted notable disagreement (n = 42 Disagree), suggesting that equal access for female athletes remains a concern. Financial and Infrastructure items revealed greater response spread; in particular, perceptions of financial sufficiency generated the lowest chi-square value in the questionnaire ($\chi^2 = 12.80$), with a near-even split across response categories indicating the most divided opinion across the entire

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instrument. Items related to Talent Identification and Development showed moderate-to-strong agreement overall, though responses to long-term development pathways and coaching development programs were more equivocal (higher neutral frequencies). The administrative procedures item yielded the study's highest chi-square value ($\chi^2 = 111.40$), with 'Agree' being the overwhelmingly dominant response, suggesting broad satisfaction with event organization processes. The overall summary item (Q25) revealed that 73 respondents strongly agreed that HEC plays a significant role in strengthening sports education the highest Strongly Agree count in the study.

Table 2

Chi-Square Goodness-of-Fit Results by Domain and Item (N = 200; Expected n = 40 per Category)

Domain	Statement	χ^2	p	Top Responses (n)
Policy & Governance	HEC has developed clear policies to promote sports education	63.40	< .001	Agree (80); SA (42)
	HEC effectively monitors the implementation of sports policies	96.65	< .001	Agree (91); N (48)
	Governance structure supports transparency in sports funding	104.60	< .001	Agree (79); N (67)
	HEC provides equal opportunities for male and female athletes	56.95	< .001	Agree (74); D (42)
Financial & Infrastructure	HEC provides sufficient financial resources for sports programs	12.80	< .001	N (56); Agree (48)
	Sports facilities have improved due to HEC initiatives	82.15	< .001	Agree (80); N (57)
	Funding is fairly distributed among sports disciplines	80.35	< .001	Agree (76); N (62)
	HEC grants support participation in national/international competitions	62.10	< .001	Agree (77); SA (47)
	Universities are accountable for proper utilization of HEC funds	78.85	< .001	Agree (80); N (59)
Talent Development	HEC has a structured system for identifying talented athletes	66.95	< .001	Agree (79); N (51)
	Talent scouting programs supported by HEC are effective	65.95	< .001	Agree (76); N (53)
	HEC initiatives contribute to long-term athlete development pathways	42.75	< .001	Agree (62); N (58)
	Coaching development programs enhance talent nurturing	56.45	< .001	Agree (69); N (60)

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	HEC competitions provide meaningful exposure to emerging athletes	59.95	< .001	Agree (63); SA (51)
Capacity Building	HEC provides regular training workshops for coaches	37.90	< .001	Agree (68); N (51)
	Professional development opportunities for sports staff are sufficient	24.50	< .001	Agree (55); N (53)
Institutional Support	HEC promotes research in sports education and athlete development	103.40	< .001	Agree (83); N (58)
	HEC–university collaboration strengthens sports science support	53.85	< .001	N (66); SA (52)
	HEC encourages academic–athletic balance for student-athletes	30.89	< .001	N (54); Agree (53)
	HEC policies create a supportive environment for university athletes	52.45	< .001	N (69); Agree (56)
	Administrative procedures facilitate smooth sports event organisation	111.40	< .001	Agree (91); N (53)
	Communication between HEC and university sports departments is effective	67.95	< .001	Agree (76); SA (54)
	HEC initiatives positively influence athlete/coach motivation	74.40	< .001	Agree (81); N (49)
	HEC policies adequately address talent identification and development	66.10	< .001	Agree (59); SA (55)
Overall	HEC plays a significant role in strengthening sports education	82.35	< .001	SA (73); Agree (65)

Note. SD = Strongly Disagree; D = Disagree; N = Neutral; A = Agree; SA = Strongly Agree. All p values < .001. Top Responses lists the two most frequently endorsed categories with corresponding counts.

Comparison of Athlete and Coach Perceptions

An independent-sample t-test compared overall mean perception scores between athletes and coaches. The analysis revealed a statistically significant group difference (t[98] = 2.10, p = .038). Coaches reported meaningfully higher perceptions of HEC's role (M = 4.10, SD = 0.50) than athletes (M = 3.80, SD = 0.60), a pattern consistent across all five domains. Table 3 presents the full t-test output.

Table 3

Independent-Samples t-Test: Perception Scores by Stakeholder Group

Variable	Group	n	M	SD	t	df	p
Perception toward HEC Role	Athletes	150	3.80	0.60	2.10	98	.038

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	Coaches	50	4.10	0.50			

Note. Degrees of freedom reflect equal-variance assumption; $p < .05$ denotes statistical significance.

Inter-Domain Correlations

Pearson correlation analysis examined the relationships among the five conceptual domains. All inter-domain correlations were positive, moderate to strong, and statistically significant at the $p < .01$ level (r range: .55–.67). The strongest association was observed between Talent Identification and Development and Capacity Building and Professional Development ($r = .67$), suggesting that perceptions of athlete development systems are closely tied to perceived investment in coaching and professional training. Financial and Infrastructure Support showed its strongest link with Talent Identification ($r = .65$), underscoring how resource availability is perceived as a foundational enabler of talent programs. Policy Support and Governance correlated significantly with all other domains ($r = .55–.62$), indicating that perceptions of overarching governance quality permeate all other aspects of the sports support system. Table 4 presents the full correlation matrix.

Table 4

Pearson Correlation Matrix: Inter-Domain Relationships (N = 200)

Domain	1	2	3	4	5
1. Policy Support & Governance	—	.62	.58	.55	.60
2. Financial & Infrastructure Support		—	.65	.59	.63
3. Talent Identification & Development			—	.67	.61
4. Capacity Building & Professional Dev.				—	.66
5. Institutional Environment & Support					—

Note. ** Correlation significant at the .01 level (two-tailed).

Discussion

The central finding of this study is that while HEC is broadly perceived as a meaningful contributor to university sports in Pakistan, significant heterogeneity exists in how that contribution is experienced both across institutional dimensions and between stakeholder groups. The significant chi-square results across all 25 items confirm that perceptions are far from uniform, a pattern consistent with Coakley's (2015) contention that the success of sports policy is not determined by formulation alone but by how it is lived and interpreted by its primary beneficiaries.

The pattern of responses within the Policy and Governance domain suggests that stakeholders generally acknowledge HEC's policy framework as a legitimate and relatively transparent structure. This aligns with Green and Houlihan's (2005) argument that government-led sports bodies can establish credible governance structures when institutional legitimacy is maintained. However, the noted concern regarding gender equity reflected in the comparatively high frequency of disagreement with the equal-opportunity item warrants particular attention.

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Persistent inequities in access to sports programs for female athletes have been documented in South Asian contexts (Delaney & Madigan, 2015), and the present findings suggest that HEC's equity commitments may not yet translate fully into practice at the institutional level.

Financial sufficiency generated the most divided responses in the entire instrument. The near-equal distribution across all five Likert categories on the funding adequacy item ($\chi^2 = 12.80$, the lowest in the study) reveals deep uncertainty among stakeholders regarding whether resource provision meets actual needs. This echoes Coalter's (2007) observation that insufficient funding is among the most persistent barriers to sports development in developing countries, and it resonates with athlete-reported frustrations regarding inconsistent access to training resources across institutions and regions.

The talent development domain findings are largely encouraging, particularly the strong agreement surrounding HEC's inter-university competitions as vehicles for athlete exposure. These competitions align with what Côté and Gilbert (2009) identify as essential conditions for talent development: deliberate practice in structured competitive environments. Nevertheless, the relatively higher neutral frequencies associated with long-term development pathways and coaching development programs suggest that athletes and coaches are less certain about whether HEC's vision extends beyond competition toward systematic, longitudinal athlete cultivation a dimension of the Long-Term Athlete Development model that many national sport organizations in emerging economies have yet to fully institutionalize (Balyi & Hamilton, 2004).

The significant difference in overall perception scores between coaches (M = 4.10) and athletes (M = 3.80) is arguably the most practically significant finding of this study. Coaches occupy a mediating position between institutional policy and athlete experience; they attend administrative meetings, manage logistical arrangements, and are more directly exposed to the formal outputs of HEC's governance apparatus. Athletes, by contrast, encounter HEC primarily through competition opportunities, facility quality, and scholarship outcomes. The resulting perception gap may reflect genuine differences in the benefits each group derives from current HEC structures, or it may indicate that HEC's communications and support mechanisms are more readily accessible to coaching staff than to athletes themselves. Either explanation has direct implications for how HEC designs its outreach and stakeholder engagement strategies.

The strong positive inter-domain correlations (r = .55–.67) carry an important theoretical message: sports development cannot be optimized by addressing isolated components. Improvements in governance, financial support, talent infrastructure, coaching quality, and institutional climate appear to be mutually reinforcing rather than independent. This finding is consistent with De Bosscher et al.'s (2009) multi-dimensional model of sports performance, which holds that elite sports success depends on the coherent alignment of resources, structures, and people across an entire institutional ecosystem. For HEC, it implies that targeted investments in any single domain are likely to generate spillover benefits but also that deficiencies in one area may constrain progress in others.

Conclusion

This study provides systematic, multi-site empirical evidence that HEC plays a recognized and broadly positive role in university sports development in Pakistan. Stakeholders across six provinces affirm the existence of HEC's policy frameworks, competition systems, and institutional

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support mechanisms. At the same time, the data reveal a consistent pattern: coaches—closer to institutional processes report greater satisfaction than athletes, who are more directly affected by resource gaps, implementation inconsistencies, and unequal access. All five dimensions of HEC's sports governance are significantly interrelated, meaning that achieving genuine improvement requires coordinated, systemic action rather than piecemeal interventions. The findings provide a substantive empirical baseline from which HEC and university administrators can identify priority reform areas and develop more athlete-centered strategies for sports education and talent development.

Practical Implications and Recommendations

Based on the study's findings, the following evidence-informed recommendations are directed at HEC policymakers, university administrators, and sports science practitioners:

1. Standardize and monitor policy implementation. HEC should establish region-specific implementation audits and hold universities accountable to measurable benchmarks, reducing the institutional variability that currently produces uneven athlete experiences.
2. Reform funding mechanisms to ensure equity. A transparent, needs-based allocation formula publicly accessible to all stakeholders would address the deep uncertainty surrounding financial sufficiency and reduce perceptions of favoritism across sports disciplines and institutions.
3. Advance gender equity in practice, not only in policy. Dedicated funding streams, quota-based participation targets, and gender-disaggregated reporting would help close the gap between HEC's equal-opportunity commitments and athletes' lived experience.
4. Develop a scientifically grounded talent identification system. HEC should adopt standardized, multi-dimensional screening protocols integrating physical, psychological, and performance data to replace the informal scouting practices that currently characterize talent identification in most universities.
5. Invest in continuous coaching education. Mandatory, accredited professional development programs for coaches, with content updated to reflect contemporary sports science, would strengthen the capacity building domain and, given the strong inter-domain correlations, cascade positively into talent development outcomes.
6. Improve HEC–athlete communication. Creating formal feedback channels such as athlete advisory panels and structured post-competition surveys would narrow the perception gap between coaches and athletes and generate real-time intelligence for policy refinement.
7. Future research should extend this work using larger, longitudinal designs, include psychological well-being and performance outcome measures, and explore the mediating role of institutional culture in translating HEC policy into athlete satisfaction.

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