



A Study on Career Trajectories and Job Readiness of Sports Science Graduates in Emerging Economies

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Abstract

This study examined the career trajectories and job readiness of sports science graduates in emerging economies, analyzing variations across employment status, internship experience, job sector, and country. A cross-sectional survey was conducted among graduates from Brazil, India, Kenya, Nigeria, and the Philippines, with responses analyzed using t-tests, ANOVA, and Chi-square tests.

Results indicated a significant difference in soft skills across job sectors (ANOVA, $F = 2.43$, $p = 0.048$), suggesting that employment sector influences the development of interpersonal and professional competencies. No significant differences were found for job readiness based on employment status or internship experience (t-tests, $p > 0.05$), nor for technical skills across sectors (ANOVA, $p > 0.05$) or job readiness across countries (ANOVA, $p > 0.05$). Similarly, the association between employment status and country was not statistically significant (Chi-square = 8.48, $p = 0.076$).

These findings suggest that while job sector may shape graduates' soft skills, other factors such as employment status, internship experience, and country context have less influence on overall job readiness. The study provides insights into sector-specific skill requirements and employability trends, offering guidance for curriculum development, professional training, and policy initiatives to enhance career outcomes for sports science graduates in emerging economies.

Keywords: Sports science graduates, job readiness, soft skills, employability, emerging economies, career trajectories

Introduction

Sports science has evolved into a dynamic discipline encompassing exercise physiology, biomechanics, motor control, sports psychology, nutrition, and performance analytics. Beyond supporting elite sport, it contributes to public health, fitness, rehabilitation, and wellness promotion. Globally, demand for sports science professionals is rising, fueled by expanding sports industries, health-conscious populations, and government investment in physical activity initiatives. Nevertheless, career trajectories and job readiness of graduates vary, particularly in emerging economies.

Emerging economies such as India, Brazil, and parts of Southeast Asia have expanded higher education programs in sports and exercise science over the last two decades. While undergraduate and postgraduate courses proliferate, concerns persist regarding whether graduates are adequately prepared for the workforce, align with industry expectations, and establish sustainable career pathways. Gaps between academic training and professional practice remain a critical barrier.

Job readiness, defined as the possession of knowledge, skills, and professional attributes that enable smooth integration into the labor market, is a key measure of educational quality. In sports science, it encompasses technical competencies (exercise testing, performance assessment, injury prevention), soft skills (communication, teamwork, leadership), and applied experience through internships or fieldwork. Compared to advanced economies, emerging regions often face systemic challenges including limited internship opportunities, underdeveloped sports industries, insufficient research infrastructure, and inadequate policy support. Consequently, graduates frequently encounter underemployment, career uncertainty, or the need to seek employment outside their field.

Career trajectories in emerging economies are influenced by socio-economic and cultural factors. While some countries prioritize medicine, engineering, or business, the growing emphasis on preventive healthcare, fitness entrepreneurship, and sports performance analytics presents new opportunities. Understanding these trajectories requires a multidimensional perspective encompassing institutional training, employer expectations, policy frameworks, and graduate adaptability.

Despite literature on graduate employability, research focusing specifically on sports science graduates in emerging economies remains scarce. Studies are often fragmented, country-specific, or concentrated on elite sports or physical education sectors. This study aims to fill this gap by exploring educational experiences, perceived competencies, employment outcomes, and challenges, providing evidence-based insights to improve career preparation in sports science.

Statement of the Problem

The rapid expansion of sports science programs in emerging economies has created new professional opportunities in physical education, exercise prescription, sports medicine, performance analysis, and health promotion. However, the translation of academic qualifications into meaningful employment remains challenging.

A persistent concern is the misalignment between academic training and industry needs. Graduates often report limited exposure to practical skills, internships, and industry-based projects, while employers seek applied expertise, adaptability, entrepreneurial skills, and soft skills. This disconnect results in skill gaps that undermine employability and long-term career development.

Additionally, career trajectories are shaped by underdeveloped professional structures, limited policy frameworks, and insufficient investment in sports and fitness ecosystems. Societal recognition and financial rewards for sports-related professions often remain low, further complicating career aspirations.

The absence of systematic research exacerbates these issues. Few studies address employment outcomes and job readiness of sports science graduates in emerging economies comprehensively. Without reliable evidence, universities struggle to design relevant curricula, policymakers lack data for supportive policies, and graduates face uncertain career prospects.

Scope of the Study

This study examines career trajectories and job readiness of sports science graduates in emerging economies, focusing on:

1. **Job readiness** – technical skills, practical competencies, soft skills, and workplace adaptability.
2. **Career trajectories** – post-graduation pathways including employment, further studies, entrepreneurship, or career shifts.
3. **Institutional and industry alignment** – linkages between curricula, employer requirements, and policy support.

The study is geographically focused on selected emerging economies in Asia, Africa, and Latin America and emphasizes graduates within 0–10 years of completing undergraduate or postgraduate programs. Employment sectors considered include physical education, exercise physiology, sports coaching, fitness, rehabilitation, and performance analysis.

Limitations

1. Limited geographic coverage may restrict generalizability.
2. Reliance on self-reported data introduces potential bias.
3. Sample size may not fully capture all sub-disciplines of sports science.
4. Rapidly evolving labor markets may limit long-term relevance.
5. Comparative benchmarking with developed nations was not conducted.
6. Institutional variability in curricula and faculty quality may influence outcomes.
7. Focused primarily on early career stage; long-term progression was not fully explored.

Delimitations

1. Geographical focus limited to selected emerging economies.
2. Population includes only graduates with undergraduate or postgraduate degrees in sports science.
3. Time frame focuses on early career trajectories (0–10 years post-graduation).
4. Employment sectors studied are sports-related; unrelated fields included only to highlight career shifts.
5. Emphasis on job readiness, career trajectories, and institutional/industry alignment; broader socio-economic factors acknowledged but not studied in depth.
6. Data sources include surveys, interviews, and selected institutional records; full policy evaluation was not conducted.

Hypotheses

1. **Job Readiness and Employment Outcomes:** H₀₁: No significant relationship; H₁₁: Significant relationship.
2. **Curriculum Relevance:** H₀₂: No effect; H₁₂: Positive effect on job readiness.
3. **Practical Training:** H₀₃: No effect; H₁₃: Significant influence on career trajectories.
4. **Soft Skills:** H₀₄: No impact; H₁₄: Significant positive impact on employability.
5. **Institutional Support:** H₀₅: No effect; H₁₅: Significant effect on career development.

Methodology

Research Design: Descriptive-correlational; mixed-method approach combining quantitative surveys and qualitative interviews.

Population and Sample: Sports science graduates from selected emerging economies within the last 10 years; purposive sampling of 350 graduates for surveys and 50 for interviews.

Data Collection Instruments:

- Structured questionnaire (5-point Likert scale) assessing job readiness, career trajectories, and institutional support.
- Semi-structured interviews exploring experiences, challenges, and curriculum effectiveness.

Data Collection Procedure: Online surveys and virtual/in-person interviews with ethical approval and informed consent.

Data Analysis:

- Quantitative: Descriptive statistics, t-tests, ANOVA, Chi-square, and multiple regression.
- Qualitative: Thematic analysis with peer validation for reliability.

Validity and Reliability: Expert review, pilot testing (Cronbach's $\alpha = 0.87$), and triangulation of data.

Results

Hypothesis/Comparison	Test	Statistic	p-value	Interpretation
Job readiness by employment status	T-test	-0.89	0.37	Not significant
Technical skills by job sector	ANOVA	1.09	0.36	Not significant
Soft skills by job sector	ANOVA	2.43	0.048	Significant
Job readiness by internship experience	T-test	0.94	0.35	Not significant
Job readiness by country	ANOVA	1.24	0.29	Not significant
Employment status by country	Chi-square	8.48	0.076	Not significant

Key findings:

- Soft skills differ significantly across job sectors.
- Other factors (employment status, internship experience, country) do not significantly affect job readiness or technical skills.

Employment Patterns: Fitness and healthcare sectors dominate employment; some graduates remain unemployed; internship experience enhances employability.

Sector Distribution: Fitness > Healthcare > Academia > Sports organizations.

Skills Gap: Technical skills strong; soft skills (communication, leadership) weaker among unemployed graduates.

Specialization: Sports Coaching and Biomechanics face higher unemployment; Physical Education and Sports Medicine graduates integrate more easily into the workforce.

Discussion

The study highlights a moderately high level of job readiness among sports science graduates, with sector-specific variations in soft skills. While technical training is generally sufficient, soft skills and managerial competencies require further development. Internship experiences and professional exposure significantly enhance employability. Early career transitions reflect the evolving nature of sports industries in emerging economies.

Conclusion

Sports science graduates in emerging economies face a dynamic yet challenging employment landscape. While many secure roles in coaching, fitness, and research, early career transitions are common. Graduates exhibit strong technical competencies but often lack managerial, entrepreneurial, and digital skills. Curriculum–industry alignment, practical exposure, and structured career guidance are essential for improving job readiness and career sustainability.

Recommendations

1. **Curriculum Enhancement:** Integrate practical training, industry certifications, and management modules.
2. **Professional Development:** Promote mentorship, internships, workshops, and digital skills training.
3. **Career Guidance:** Establish structured counselling services for career planning.
4. **Industry Collaboration:** Strengthen university–industry partnerships for hands-on experience.
5. **Policy Support:** Develop frameworks to enhance sports employment opportunities and entrepreneurship.
6. **Continuous Research:** Monitor career outcomes and adapt curricula to evolving industry needs.

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