Navigating Ethical Challenges in Sports and Exercise Science Research

Debajit Karmakar
http://orcid.org/0000-0001-9272-0627
Lakshmibai National Institute of Physical Education, India

Anindita Das
http://orcid.org/0000-0002-6502-9619
Lakshmibai National Institute of Physical Education, India

Karuppasamy Govindasamy
http://orcid.org/0000-0002-3019-5545
Symbiosis International University, India

Tashi Ongmu Bhutia
http://orcid.org/0009-0000-0127-5709
Government B.Ed. College, Soreng, India

Atisha Mandal
http://orcid.org/0009-0003-2731-5985
Lakshmibai National Institute of Physical Education, India

EXECUTIVE SUMMARY

Sports and exercise science research presents unique ethical challenges extending beyond traditional biomedical frameworks. This chapter examines moral considerations in studying human performance within competitive athletic contexts. Fundamental principles of respect for persons, beneficence, justice, and integrity require careful adaptation for athletic populations facing distinctive pressures and

vulnerabilities. Critical issues include informed consent procedures for diverse populations, risk assessment in high intensity protocols, confidentiality protection in elite populations, and data privacy with emerging technologies. Research design challenges encompass participant selection, randomization ethics, and emergency preparedness. Intervention studies raise concerns regarding ergogenic aids, fatigue boundaries, and placebo controls. The chapter emphasizes research integrity through proper data handling, conflict management, and transparent reporting.

INTRODUCTION

Sports and exercise science research occupies a distinctive position within the broader scientific landscape, combining rigorous empirical investigation with the practical demands of athletic performance enhancement and health promotion. This field presents unique ethical challenges that stem from its focus on human performance, its intersection with competitive athletics, and its potential for both significant benefits and substantial risks to participants. The ethical landscape of sports science research has evolved considerably over recent decades, driven by increasing recognition of the complex moral considerations inherent in studying human movement, performance, and adaptation (Harriss et al., 2022).

The ethical imperative in sports science research extends beyond traditional biomedical research ethics to encompass considerations specific to athletic populations, performance optimization, and the competitive environment. Researchers in this field must navigate competing interests between advancing scientific knowledge, optimizing athletic performance, protecting participant welfare, and maintaining research integrity. The stakes are particularly high given that research findings often directly influence training practices, policy decisions, and the health and careers of athletes ranging from recreational participants to elite professionals (Harriss & Atkinson, 2009).

Contemporary sports science research encompasses diverse methodological approaches, from controlled laboratory investigations of physiological responses to field-based studies of training interventions and observational research on athletic populations. Each approach presents distinct ethical challenges related to participant selection, risk assessment, informed consent, data privacy, and result interpretation (Rhodes, 2005). The increasing sophistication of technology in sports science, including wearable devices, motion capture systems, genetic testing, and advanced imaging techniques, has introduced new dimensions of ethical complexity regarding data ownership, privacy protection, and the appropriate use of personal information. The globalization of sports and the commercial interests surrounding athletic performance have further complicated the ethical landscape. Researchers