# Advances and Lessons in Sports

\* Air Sports \* Aquatics \* Archery \* Arm Wrestling \* Athletics (Track and Field: Cross Country Running, Biathlon, Duathlon, Triathlon, Pentathlon, Decathlon, Racewalking) \* Badminton \* Bandy \* Baseball \* Basketball \* Basque Pelota \* Bobsleigh \* Bocce \* Boccia \* Bowling \* Boxing \* Canoeing \* Climbing \* Cricket \* Curling \* Cycling \* Dog Sledding \* Dragon Boating \* Fencing \* Football \* Gliding (Hang Gliding, Paragliding) \* Golf \* Gymnastics \* Handball \* Hockey (Field Hockey, Ice Hockey) \* Jai Alai \* Kayaking \* Lacrosse \* Luge \* Martial Arts (Aikido, Capoeira, Hapkido, Judo, Jujitsu, Karate, Kendo, Kickboxing, Kung Fu-Wushu, Mixed Martial Arts, Muav Thai, Pankration, Sambo, San Shou, Savate, Tae Kwon Do, Tai Chi Chuan) \* Netball \* Outrigger Canoeing \* Paddleball \* Racquetball \* Rounders \* Rowing \* Rugby \* Running \* Sailing \* Sepak Takraw \* Shinty \* Shuttlecock \* Skateboarding \* Skating (Figure, Ice, Roller, Speed) \* Skiing (Alpine, Freestyle, Nordic, Speed, Water) \* Sled Dog Sports Sledding (Bobsledding, Lugeing, Tobogganing) Snowboarding \* Soccer \* Softball \* Squash \* Surfing (Bodysurfing, Windsurfing) \* Swimming \* Tchoukball \* Tennis (Paddle, Table) \* Volleyball (Beach Volleyball) \* Water Polo \* Water Skiing \* Weightlifting (Powerlifting) \* Wheelchair Sports (Basketball, Curling, Dance, Fencing, Rugby, Tennis) \* Wrestling (Sumo) \* Adventure Racing (Expedition Racing) \* Automobile Racing \* Bodybuilding \* Boules \* Bowling \* Croquet \* Darts \* Fishing \* Flying Disk \* Horseshoe Pitching \* Hunting \* Hurling \* Kickball \* Motorcycle Racing (Motocross, Offroad, Speedway) Mountain Climbing (Alpinism) \* Mountaineering Orienteering \* Pelota \* Polo \* Quidditch \* Rafting \* Rodeo \* Roller Sports (Artistic, Inline Hockey, Roller Racing, Rink Hockey, Roller Derby, Roller Skating) \* Shooting (Skeet, Trap) \* Shuffleboard \* Skydiving \* Yoga \* Olympic Sports \* Adaptive Sports (Parasports, Paralympics) \* Summer Sports \* Winter Sports \*

# Advances and Lessons in Sports

Edited by

Raúl Fernández-Calienes and Hagai Gringarten

Cambridge Scholars Publishing



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This book first published 2023

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data A catalogue record for this book is available from the British Library

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ISBN (10): 1-5275-9415-7 ISBN (13): 978-1-5275-9415-9

### PRAISE FOR THE BOOK

Advances and Lessons in Sports presents significant research and analysis on a range of sports and sports-related subjects. From mental fitness in collegiate sports, and disability and the Paralympics to technical analysis of tackwondo tactics, the topics of this work cover areas that will inform not just academics and scholars of sports but also athletes, coaches, and trainers. A worthwhile investment of your time.

—Dr. Yekutiel Meridan Chief Executive Officer Cosell Center for Physical Education, Leisure, & Health Promotion Hebrew University of Jerusalem

As an elite-level coach, I am interested in research that can be applied, now! Advances and Lessons in Sports does that – it offers expertise, from both professors and athletes, that is very practical. I highly recommend this book.

—Ronnie Schneider Technical Director US Soccer Teams Maccabi World Games M21

# Dedicated with love to Geraldine and Raúl —Dr. Raúl Fernández-Calienes

Dedicated with love to Droma, Henia, Joelle, Ariel, and Nikki
—Dr. Hagai Gringarten

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### **ACKNOWLEDGEMENTS**

The editors would like to acknowledge the support of Cambridge Scholars Publishing in this effort; the many members of the editorial staff and the editorial review board at the *Journal of Multidisciplinary Research* for their hard work through the years; and the *Journal of Multidisciplinary Research* itself for permission to use the articles below.

- Arnold, T. A., Baltzell, A., & Hayden, L. (2016, Fall). Exploring accuracy and impact of concurrent and retrospective self-talk among golfers. *Journal of Multidisciplinary Research*, 8(3), 41–56.
- Avant, A. (2022, Spring). Leveling the playing field: Comparing the statutory definition of disability to disability in Special Olympics and the Paralympics. *Journal of Multidisciplinary Research*, 14(1), 87–111.
- Greco, A. J. (2022, Spring). What a difference a week makes: Comparing the economic impact of successive collegiate football games in a single city. *Journal of Multidisciplinary Research*, 14(1), 55–69.
- Hayden, L., Hess, C., Broadhead, S., & Gould, K. (2017, Fall). A school-based multidisciplinary response to student-athletes' mild traumatic brain injury. *Journal of Multidisciplinary Research*, 9(3), 17–31.
- Kwok, H. M. H., & Cheung, S.-Y. (2021, Spring). Notational analysis of fighting tactics in taekwondo athletes with three levels of expertise. *Journal of Multidisciplinary Research*, 13(1), 59–69.
- Nolt, K. L., Sachs, M. L., & Brenner, J. W. (2013, Fall). The effects of collegiate head coaches' knowledge and attitudes toward alcohol consumption by student-athletes. *Journal of Multidisciplinary Research*, *5*(3), 7–16.

### Introduction

## RAÚL FERNÁNDEZ-CALIENES & HAGAI GRINGARTEN St. Thomas University

Advances and Lessons in Sports brings together valuable and innovative research in several areas of sports including coaching, collegiate sports, sports careers, sport psychology, and sports media and professionalism. Written by a variety of distinguished researchers and scholars as well as accomplished coaches and athletes from around the world, this book informs sports theory and sports practice. The work provides readers with historical perspective and contemporary analysis of sports management and participation, and unique insights into several sports through national and

international case studies.

The book consists of three parts. Part 1 is "Health and Fitness," and these chapters focus on mental fitness, concussions, mild traumatic brain injury, alcohol consumption, and activity trackers. Part 2 is "Sports and Society," and these chapters center on historical perspectives on sports management, career transitions into sports, international participation in sports, sports monetization, and sport-brand architecture. Part 3 is "Case Studies," and these chapters bring us unique information on specific sports and sports-related activities including fencing, taekwondo, golf, football, pro wrestling, and physical puzzle games.

Together, the three parts of this book provide concepts and data that have applications in such disciplines as business and management, career development, communications, cultural studies, exercise science, kinesiology, law and governance, marketing and branding, media, medicine and physiology, mental health and psychology, sociology, and technology. The book informs readers as they draw insights to develop best practices in a variety of sports.

Advances and Lessons in Sports is multidisciplinary in approach. It includes chapters authored by 29 professors and scholars from more than two dozen universities and organizations around the world—from the

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U.S.A. to the Middle East, Asia, and Australia—a global team of scholars writing for a global audience.

### **How to Use this Book (Teaching Notes)**

Individuals can use *Advances and Lessons in Sports* in a variety of contexts for diverse purposes. For scholars, it provides important research on a range of sports-related fields. For professors, it offers a single solution that combines theoretical work, new data, case studies, and examples from around the world. For students, it brings together topics and information that enhance their understanding of the broad scope and potential of sports. For coaches and athletes, it covers topics that are important to discuss and understand as well as to incorporate into both training and competition.

Distinctive features and key benefits of this book include a range of accessibility and pedagogical features. Each chapter includes Abstracts, Keywords, Cite-Ready References, Digital Object Identifier (DOI) numbers, Open Researcher and Contributor ID (ORCID) numbers, and Links, and the work includes an Index—all of which together make the book very easy to use. In addition, each chapter concludes with Discussion Questions that contribute to reflection and evaluation, facilitate dialogue, enhance understanding, and contribute to the development of critical thinking skills.

Scholars, professors, and students in the field of sports—as well as coaches and athletes—all can benefit from this book.

### **Additional References**

- Horn, T. S., & Smith, A. L. (Eds.). (2019). *Advances in sport and exercise psychology* (4th ed.). Champaign, IL: Human Kinetics.
- Mugford, A., & Cremades, J. G. (Eds.). (2018). Sport, exercise, and performance psychology: Theories and applications. New York, NY: Routledge.
- Razon, S., & Sachs, M. L. (Eds.). (2018). *Applied exercise psychology: The challenging journey from motivation to adherence*. New York, NY: Routledge.

### LIST OF ABBREVIATIONS

AAP American Academy of Pediatrics

AASP Association for Applied Sport Psychology
ABRS Athlete Brand Relationship Spectrum

AD Athletic Director AEW All Elite Wrestling

AMA American Marketing Association

ANOVA Analysis of Variances

APA American Psychological Association

APE Absolute Percent Error

ASCA American School Counselor Association

ASP Applied Sport Psychology

AT Athletic Trainer

AYF American Youth Football BCT(s) Behavior Change Technique(s)

BCTT Behavior Change Technique Taxonomy
BOC Board of Certification for the Athletic Trainer

BRS Brand Relationship Spectrum

CA California

CAATE Commission on Accreditation of Athletic Training

Education

CALO-RE Coventry, Aberdeen, and London-Refined

CBT Cognitive Behavioral Therapy

CCARE Communication, Collaboration, Application, Reflection,

and Evaluation (Model of Clinical Supervision)

CCE Coordinator of Clinical Education

CE Common Era

CGE Computable General Equilibrium

COVID-19 Corona Virus 2019 CP Clinical Preceptor

CYO Catholic Youth Organization

DC District Capital

DOI Digital Object Identifier

DSM Diagnostic and Statistical Manual of Mental Disorders

EAMS Electronic Activity Monitor System

EE Energy Expenditure

ELM Elaboration Likelihood Model EMT Emergency Medical Technician

ETiSE Educational Technology in Science Education

FBS Football Bowl Subdivision
FCW Florida Championship Wrestling
FPPA Fair Pay to Play Act of 2019
HHS Health and Human Services

HR Heart Rate

IDF Israel Defense Forces (ZAHAL)

I–O Input–Output Models

IL Illinois IN Indiana

IPEDS Integrated Postsecondary Education Data System

ITA Israeli Tennis Association

JSM Journal of Sport Management

KSU Kansas State University

LSU Louisiana State University

MA Massachusetts

MAPM Meyer Athlete Performance Management

MD Maryland

MLB Major League Baseball

MN Minnesota

mTBI(s) Mild Traumatic Brain Injury(-ies)

NASC National Association of Sport Commissions
NASCAR National Association for Stock Car Auto Racing
NASP National Association of School Psychologists
NASSM North American Society for Sport Management

NATA National Athletic Trainers' Association

NBA National Basketball Association

NC North Carolina

NCAA National College Athletic Association NCPA National College Players Association

NFHS National Federation of State High School Associations

NFL National Football League

NFLPA National Football League Players Association
NIAAA National Institute on Alcohol Abuse and Alcoholism

NIL Name, Image, and Likeness NJPW New Japan Pro Wrestling

NSDUH National Survey on Drug Use and Health

NSSI Non-Suicidal Self-Injury

NY New York

OCD Obsessive-Compulsive Disorder ORCID Open Researcher and Contributor ID

OVW Ohio Valley Wrestling
PA Physical Activity
PAL Police Athletic League

PATS Pennsylvania Athletic Trainers' Association

PBL Problem-Based Learning
PCA Principal Component Analysis

PD Program Director

PInG Performance Interview Guide

PPG Photoplethysmography

PPI(s) Positive Psychology Intervention(s)
PSS Protector and Scoring System
PTSD Post-Traumatic Stress Disorder

REAP Remove-Reduce/Educate/Adjust-Accommodate/Pace

REBT Rational Emotive Behavior Therapy

RP Right to Publicity
RV Recreational Vehicle

SAMHSA Substance Abuse and Mental Health Services

Administration

SM Sport Management
SRC Sport-related Concussion
STU St. Thomas University
STUQ Self-Talk Use Questionnaire
TBI(s) Traumatic Brain Injury(-ies)
TBOC Text-Based Online Counseling
UFC Ultimate Fighting Championship

UK United Kingdom

ULL University of Louisiana-Lafayette

US United States

USA United States of America
USD United States Dollar(s)

VA Virginia

VR Virtual Reality

WAT Wearable Activity Tracker
WCU West Chester University
WHO World Health Organization
WWE World Wrestling Entertainment

WoS Web of Science YSU Young Service Users

# PART 1 HEALTH AND FITNESS

### CHAPTER 1

# FOSTERING MENTAL FITNESS IN THE EMOTIONALLY CHARGED CONTEXT OF COLLEGIATE SPORTS

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#### **Abstract**

Student athletes experience competitive pressures, heavy training loads, defeat, and injuries resulting in debilitating, and sometimes fatal, psychological outcomes. The high prevalence of psychological disorders among student athletes combined with a disregard for mental health services make the sport context a significant topic of study in psychology. This chapter presents research and discussions of current topics in sports psychology drawing on a plethora of relevant literature. The chapter starts with a discussion of common stressors impacting student athletes ensuing major psychological responses (e.g., anxiety, depression, suicide). The chapter continues with a brief historical perspective of Applied Sport Psychology (ASP) and the introduction of a comprehensive approach addressing the needs of all sport participants. An examination of modern therapeutic methods and the vital role of practitioners follows. The chapter concludes with future directions in ASP and the importance of psychological care to achieve the maximum potential of each individual student athlete and situation.

*Keywords*: mindfulness, online counseling, positive psychology, social media, sport psychology, virtual reality

4 Chapter 1

#### Introduction

Transitioning to a new school can be difficult for first-year students at colleges/universities with roughly one third of them screening positive for a psychological disorder (e.g., anxiety, mood, substance disorder) (Auerbach et al., 2018). Results from recent mental health surveys show an increase of young adults suffering from mental health conditions from 15% in the mid-1980s (Holterman, 2016). In 2014, more than 50% of students reported feeling overly anxious, 87% felt overwhelmed by responsibilities, 33% reported decreased functioning due to depression, and about 10% had considered suicide (Berger, 2018; Holterman, 2016).

### **Adversities and Challenges**

### College Stress

Stress or "the response to perceived threats or challenges resulting from stimuli or events that cause strain" (Licht, Hull, & Ballantyne, 2020, p. 524), is a significant and common issue among college students. Stressors include the following: getting good grades, failing a class, financial difficulties, commuting to and from campus, issues with roommates, being raped, and contracting sexually transmitted infections (Licht et al., 2020). International students face added challenges as they attempt to adapt to the new cultural and social environment in a process of acculturation or assimilation which can result in changes of values, behaviors, language, and even national identity (Oramas, Gringarten, & Mitchell, 2018). Besides those associated with being in college, student athletes face another range of stressors; performance, perfectionism, burnout, context, and injuries.

### **Performance**

Empirical research shows a negative relationship between sport performance and health, with some experts indicating that they are intrinsically in conflict with one another (Whitehead & Senecal, 2020). Researchers assert that athletic programs go against the higher educational aims of promoting students' well-being and balanced growth when these programs emphasize performance over physical and mental health. Whitehead and Senecal (2020) assert that athletic excellence, winning a game, and mastering the body are worthwhile and honorable achievements to be proud of. The authors criticize the media for praising those athletes who continue to play through times of sickness. Instead of waiting for the

body to heal and reach complete health, injured athletes return to their sport without heeding the long-term consequences of their actions (e.g., shortening recovery time, consuming drugs or supplements to enhance performance). Unfortunately, this downward spiral takes place in the physical as well as the psychosocial domain since athletes learn to find satisfaction and self-worth when they get to play and win.

Deshayes, Zory, Seitchik, Chalabaev, and Clement-Guillotin (2019) explain that additional pressures derive from stigma, negative perceptions, stereotypes, and issues of oppression (e.g., gender, race, sexual orientation). Salient studies within the sports domain show that inducing a negative perceptions and stereotypes can reduce athletes' performance and self-control while increasing aggressive behaviors.

### **Perfectionism**

Perfectionism, considered a multidimensional and important personality characteristic for athletes, involves irrational and extreme requirements for perfection as athletes strive for high standards amid harsh criticism and self-expectations (Gotwals, Stoeber, Dunn, & Stoll, 2012). Some athletes consider perfectionism as a source of motivation and inner drive leading to success (Curran, 2018). However, evidence suggests that these perfectionistic traits may add stress and strain (Stoeber, 2011). Analytical evidence shows that perfectionism predicts a range of both adaptive and maladaptive outcomes. Perfectionistic strivings positively impact athletes' performance, motivation, and emotional well-being; thus, considered adaptive (Curran, 2018). On the other hand, perfectionistic concerns involve athletes' worries about how defective or incompetent they may appear to others (Hewitt et al., 2017). In turn, these concerns negatively impact athletes' level of self-worth, result in harsh self-evaluations (Gotwals et al., 2012) as well as poor interpersonal relationships and antisocial behaviors (Stanger, Kavussanu, & Ring, 2017).

Therefore, perfectionism becomes a vulnerability (instead of an asset) to athletes' wellbeing as it induces serious problematic interpersonal behaviors with potentially negative consequences involving psychological harm and physical injury (Flett & Hewitt, 2016). Understandably, perfectionistic athletes react negatively to stress, exhibit poor coping skills in the face of failure, and suffer from fatigue and burnout (Hill & Curran, 2016).

6 Chapter 1

#### Burnout

According to Into, Perttula, Aunola, Sorkkila, and Ryba (2019), sport burnout results from an excess of situational demands relative to available resources. Athletes engage in a cognitive appraisal of events and experiences they perceive as threatening or challenging. These include excessive training, competition stress, and high-performance expectations. Lacking the skills or psychological resources to respond appropriately and effectively to, or cope with, such threatening experiences, athletes may experience burnout. Burnout reveals itself through extreme dissatisfaction, exhaustion (either physical or emotional), devaluation or negative attitude toward training and competitions, and feelings of inadequacy resulting from a lower sense of competence and accomplishment (Eklund & Defreese, 2017; Sorkkila, Aunola, & Ryba, 2017).

To athletes, burnout relates to perceptions of physical and emotional exhaustion as well as diminished sense of performance, accomplishment, and positive self-evaluation (Into et al., 2019). To observers or outsiders, burnout ranges from lack of motivation and commitment all the way to athlete's physical, emotional, and psychological withdrawal (Into et al., 2019). Athletes suffering from burnout may experience symptoms of generalized anxiety and depression (Cresswell & Eklund, 2004; Jowett, Hill, Hall, & Curran, 2013) and eventually withdraw from the sport context (Eklund & Defreese, 2017; Sorkkila, Aunola, & Ryba, 2017).

#### Context and Process

Sport participation must involve cooperation, loyalty, and trust among teammates while demonstrating compassion and fairness toward opponents (Bredemeier, Shields, Weiss, & Cooper, 1986). Positive relationships with all sports participants both within and outside of their teams promote personal growth among other positive psychological outcomes (Eime, Young, Harvey, Charity, & Payne, 2013). Positive social behaviors among teammates alone can lead to enhanced feelings of cohesion, commitment, effort, performance, and enjoyment (Bruner, Boardley, & Côté, 2014). Inversely, sport competition can promote negative social behaviors such as bullying, aggression, and cheating – all of which can threaten the intrinsic value of playing the sport (Kavussanu, 2008).

Coaches can engage in different types of interpersonal behaviors during their interaction with athletes. When engaged in positive, uplifting behaviors, coaches enhance athletes' experiences by encouraging improvement of skills, considering their opinions, providing timely positive