



# Routledge Companion to Sport and Exercise Psychology

Global perspectives and fundamental concepts

Edited by **ATHANASIOS G. PAPAIOANNOU**  
and **DIETER HACKFORT**

INTERNATIONAL PERSPECTIVES ON KEY  
ISSUES IN SPORT AND EXERCISE PSYCHOLOGY

# Routledge Companion to Sport and Exercise Psychology

Written by an international team of expert contributors, this unique global and authoritative survey explores in full but accessible detail the basic constructs and concepts of modern sport and exercise psychology and their practical application.

The book consists of 62 chapters, written by 155 contributors, deriving from 24 countries across the world. The chapters are arranged in nine cohesive parts:

- sport and exercise participants
- the influence of environments on sport and exercise
- motor skills
- performance enhancement
- building and leading teams
- career, life skills and character development
- health and well-being enhancement
- clinical issues in sport psychology
- professional development and practice.

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Its comprehensive scale and global reach make this volume an essential companion for students, instructors and researchers in sport science, sport and exercise psychology, psychology, and physical education. It will also prove invaluable for coaches and health education practitioners.

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*Edited by Athanasios G. Papaioannou and Dieter Hackfort*

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Global perspectives  
and fundamental  
concepts

EDITED BY

**ATHANASIOS G. PAPAIOANNOU  
AND DIETER HACKFORT**

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# Contents

List of contributors	ix	10 Perfectionism: the role of personality in shaping an athlete's sporting experience	152
Introduction	xiii	HOWARD K. HALL, GARETH E. JOWETT AND ANDREW P. HILL	
<b>Part One</b>		<b>Part Two</b>	
<b>Understanding participants in sport and exercise contexts</b>		<b>Understanding the influence of environments on sport and exercise</b>	
ATHANASIOS G. PAPAIOANNOU AND CLIFFORD J. MALLET		SOPHIA JOWETT AND ATHANASIOS G. PAPAIOANNOU	
1	Developmental perspectives on sport and physical activity participation	II	Coaches
	THELMA S. HORN AND JOANNE BUTT		ROSS LORIMER AND SOPHIA JOWETT
2	Nurturing talent in youth sport	12	Families
	JEAN CÔTÉ, DAVID J. HANCOCK AND BRUCE ABERNETHY		SAM CARR AND DANIEL A. WEIGAND
3	Self-esteem and self-perceptions in sport and exercise	13	Peer relationships and the youth sport experience
	KENNETH R. FOX AND MAGNUS LINDWALL		ALAN L. SMITH AND FABIENNE D'ARRIPE-LONGUEVILLE
4	Achievement motivation in sport settings	14	Audience influences on athlete performances
	GLYN C. ROBERTS AND ATHANASIOS G. PAPAIOANNOU		BERND STRAUSS AND CLARE MacMAHON
5	Motivation in sport: a self-determination theory perspective	15	The psychology of decision making in sports officials
	NIKOS NTOUMANIS AND CLIFFORD J. MALLET		CLARE MacMAHON AND BERND STRAUSS
6	Emotions in sport and exercise settings	16	Media
	JURI HANIN AND PANTELEIMON EKKEKAKIS		ELSA KRISTIANSEN AND GILL LINES
7	Individuals with disabilities	<b>Part Three</b>	
	JEFFREY J. MARTIN, FRANCESCA VITALI AND LAUREL WHALEN	<b>Promoting motor skills</b>	
8	Gender and sexual orientation	THOMAS SCHACK AND HIROSHI SEKIYA	
	VIKKI KRANE AND CAROLINE SYMONS	17	Attention and neurocognition
9	Cultural diversity		KAI ESSIG, CHRISTOPHER JANELLE, FRANCESCA BORGIO AND DIRK KOESTER
	DIANE L. GILL AND TATIANA V. RYBA	18	Modeling and feedback
			DAVID I. ANDERSON, AMANDA M. RYMAL AND DIANE M. STE-MARIE

## CONTENTS

---

19	Organization of practice DAVID L. WRIGHT, HIROSHI SEKIYA AND JOOHYUN RHEE	289	30	Individual and team decision-making GERSHON TENENBAUM AND LAEL GERSHGOREN	460
20	Elements and construction of motor control THOMAS SCHACK, BETTINA BLÄSING, CHARMAYNE HUGHES, TAMAR FLASH AND MALTE SCHILLING	308	31	Performance routines in sport – meaning and practice RONNIE LIDOR, DIETER HACKFORT AND THOMAS SCHACK	480
<b>Part Four</b>			32	Preparing athletes for major competitions GANGYAN SI, TRACI STATLER AND DIETMAR SAMULSKI†	495
<b>Enhancing performance</b> DIETER HACKFORT, GERSHON TENENBAUM AND TONY MORRIS			<b>325</b>		
21	Psychological skills training and programs JOAQUÍN DOSIL, J. GUALBERTO CREMADES AND SANTIAGO RIVERA	327	<b>Part Five</b>		
22	Goal-setting and sport performance: research findings and practical applications ROBERT WEINBERG AND JOANNE BUTT	343	<b>Understanding how to build and lead teams</b> MARK A. EYS AND PACKIANATHAN CHELLADURAI		
23	Imagery TIRATA BHASAVANIJA AND TONY MORRIS	356	33	Building cohesive groups M. BLAIR EVANS, MARK A. EYS, MARK W. BRUNER AND JENS KLEINERT	513
24	Self-talk ANTONIS HATZIGEORGIADIS, NIKOS ZOURBANOS, ALEXANDER T. LATINJAK AND YANNIS THEODORAKIS	372	34	Norms, rules, and discipline in sport MICHAEL VAN BUSSEL AND MELANIE GREGG	529
25	Psyching up and psyching down JAYASHREE ACHARYA AND TONY MORRIS	386	35	Creating adaptive motivational climates in sport and physical education JOAN L. DUDA, ATHANASIOS G. PAPAIOANNOU, PAUL R. APPLETON, ELEANOR QUESTED AND CHARALAMPOS KROMMIDAS	544
26	Self-regulation and biofeedback BORIS BLUMENSTEIN, TSUNG-MIN HUNG AND IRIS ORBACH	402	36	Communication in sport teams PHILIP SULLIVAN, SOPHIA JOWETT AND DANIEL RHIND	559
27	Self-confidence and self-efficacy DEBORAH L. FELTZ AND ERMAN ÖNCÜ	417	37	Transformational leadership KATIE L. MORTON, BENJAMIN D. SYLVESTER, A. JUSTINE WILSON, CHRIS LONSDALE AND MARK R. BEAUCHAMP	571
28	Coping with stress and anxiety SHELDON HANTON AND STEPHEN D. MELLALIEU	430	38	Athlete leadership: theory, research, and practice TODD M. LOUGHEAD, LAUREN MAWN, JAMES HARDY AND KRISTA J. MUNROE-CHANDLER	588
29	Perspectives on choking in sport DARYL MARCHANT, ROUHOLLAH MAHER AND JIN WANG	446			

<b>Part Six</b>			
<b>Career, life skills and character development through sport</b>		<b>603</b>	
BRENDA LIGHT BREDEMEIER AND ATHANASIOS G. PAPAIOANNOU			
39	Athletes' career development and transitions	605	
NATALIA STAMBULOVA AND PAUL WYLLEMAN			
40	Developing social and emotional skills	621	
TARU LINTUNEN AND DANIEL GOULD			
41	Promoting morality and character development	636	
DAVID LIGHT SHIELDS AND BRENDA LIGHT BREDEMEIER			
42	Controlling anger and aggression	650	
CHRIS J. GEE AND LUKE R. POTWARKA			
43	Passion for sport and exercise	668	
ROBERT J. VALLERAND, JÉRÉMIE VERNER-FILION AND YVAN PAQUET			
<b>Part Seven</b>			
<b>Enhancing health and well-being</b>		<b>685</b>	
NIKOS L.D. CHATZISARANTIS AND ATHANASIOS G. PAPAIOANNOU			
44	Physical activity and feeling good	687	
PANTELEIMON EKKEKAKIS AND SUSAN H. BACKHOUSE			
45	Physical activity and cognitive functioning	705	
YU-KAI CHANG AND JENNIFER L. ETNIER			
46	Sitting psychology: towards a psychology of sedentary behaviour	720	
STUART J.H. BIDDLE AND TRISH GORELY			
47	Exercise prescription	741	
SWARUP MUKHERJEE			
48	Adherence to physical activity	771	
NIKOS L.D. CHATZISARANTIS, MARTIN S. HAGGER, MASATO KAWABATA AND SVIATLANA KAMAROVA			
49	Counselling to promote physical activity	785	
SARAH J. HARDCASTLE AND ADRIAN H. TAYLOR			
50	Organizational and community physical activity programs	801	
KOJI TAKENAKA AND LEONARD D. ZAICHKOWSKY			
51	Physical exercise and major depressive disorder in adult patients	822	
IOANNIS MORRES, AFRODITI STATHI, EGLI W. MARTINSEN AND MARIT SØRENSEN			
<b>Part Eight</b>			
<b>Clinical issues in sport psychology</b>		<b>835</b>	
TRISHA LEAHY			
52	Eating disorders	837	
TRENT A. PETRIE AND CHRISTY GREENLEAF			
53	Sexual abuse in elite sport	852	
TRISHA LEAHY			
54	Substance abuse	862	
MATTHEW P. MARTENS AND JESSICA L. MARTIN			
55	Sport injuries	877	
URBAN JOHNSON AND LESLIE PODLOG			
<b>Part Nine</b>			
<b>Professional development and practice</b>		<b>893</b>	
JUDY L. VAN RAALTE AND ANTOINETTE M. MINNITI			
56	Developing professional philosophy for sport psychology consulting practice	895	
ARTUR POCZWARDOWSKI, MARK W. AOYAGI, JAMIE L. SHAPIRO AND JUDY L. VAN RAALTE			
57	Understanding athletes' psychological needs	908	
BURT GIGES AND PAUL MCCARTHY			



## CONTENTS

---

- 58 Using quantitative psychological assessment to optimize athletes' and exercise participants' physical performance 922  
MARIA PSYCHOUNTAKI, NEKTARIOS A. STAVROU, SYMEON P. VLACHOPOULOS, JUDY L. VAN RAALTE AND ANTOINETTE M. MINNITI
- 59 Issues in the diagnosis of psychopathological disorders 936  
HENRY (HAP) DAVIS IV, JOHN P. SULLIVAN, CHRIS CARR, DAVID B. COPPEL, ADAM SHUNK, JENNIFER CARTER, SCOTT GOLDMAN, THOMAS HAMMOND AND PATRICK H.F. BAILLIE
- 60 Technological advancements in sport psychology 953  
THOMAS SCHACK, MAURIZIO BERTOLLO, DIRK KOESTER, JONATHAN MAYCOCK AND KAI ESSIG
- 61 Professional training, supervision, and continuing education 967  
ANTOINETTE M. MINNITI AND JUDY L. VAN RAALTE
- 62 Ethical issues in sport and exercise psychology 976  
DIETER HACKFORT AND GERSHON TENENBAUM

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# Introduction

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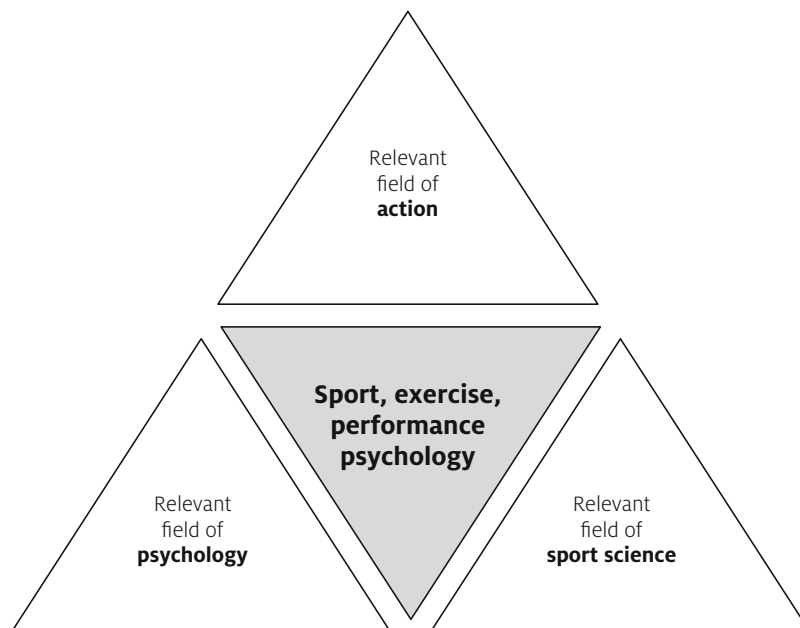
We have had great interest in and support for this book project from the very beginning. The very moment we introduced the concept to the International Society of Sport Psychology (ISSP), immediately there was considerable enthusiasm for such a huge project; ISSP council members were convinced that this undertaking really would fit with the mission of the organization to support and provide a global approach and international perspective on sport and exercise psychology issues. Of course, questions emerged on how to handle such a large body of work and how to coordinate experts from around the world to ensure a global perspective, not only across the issues raised in this book but also with regard to the various themes dealt with in the individual chapters. It was always our aim to encourage and manage international and cross-cultural cooperation as much as possible, and to bring together outstanding researchers and scholars with international reputations in their fields of specialization to realize this book. Now, after three years of intensive and extensive work on the project we are thrilled that 144 colleagues from 24 countries were able to work together to realize this book's mission.

The title of this book, *Routledge Companion to Sport and Exercise Psychology: Global Perspectives and Fundamental Concepts*, is both a message of the key purpose and mission of the project as well as a strong signal for the identification of the publisher with this opus. In complementing the official journal of the ISSP (*International Journal of Sport and Exercise Psychology*) and the series on *International Perspectives on Key Issues in Sport and Exercise Psychology*, to which this volume is but one contribution, we see the realization of the ISSP's vision to disseminate knowledge and

skills from outstanding experts in sport and exercise psychology around the world.

The ISSP was founded in Rome in 1965 by a group of enthusiasts from medicine, psychology, and pedagogy who were strongly interested in sports. The initiative was led by the Italian psychiatrist, Dr. Ferruccio Antonelli. At the time, it was commonly understood that sport psychology centered on issues of exercise and performance. During the following five decades various disciplinary relations, especially in the scope of sports sciences and special areas of research led to differentiations and modifications in the labels used to describe sport psychology (see Morris, Hackfort, & Lidor, 2003). In the twenty-first century the expansion of health-oriented contributions led to the inclusion of "sport and exercise" to the discipline. A recent and strong tendency towards the development of performance psychology may yet put an additional emphasis on the integration of sport, exercise, and performance psychology. However, the wide range of issues represented in this volume provide a clear picture of key topics, concepts, and the most up-to-date knowledge in the field at the intersection of sport science and psychology.

Considering perspectives from around the world and approaches characterized by various cultural, methodological and theoretical backgrounds not only enlarges the scope of knowledge but also enriches the body of relevant issues. As a result, on one hand, we must accept differentiation and integration in order to further develop our discipline, and on the other hand it is necessary to reflect on fundamental relations in and the scientific network of the discipline. Figure 1 provides an illustration of this idea.



**Figure i** Constitutional relations for sport, exercise, and performance psychology.

Although sport psychology (the original denomination of the discipline) is a relatively young branch in the scientific network there are already global (ISSP), continental (AASP, ASPASP, ASSP, FEPSAC, SOSUPE), regional and national societies to represent the discipline, as well as the many other journals that have a slightly different focus (research or oriented around applied theory). Sport and exercise psychology is represented in societies for psychology as well as sport science. These are strong indicators for the fast development and significant reputation of the discipline in the relevant fields of science and application. The first laboratory for experimental psychology was founded in 1879 in Leipzig (Germany) by Wilhelm Wundt and one of his assistant researchers, Robert Werner Schulte, who established the first sport psychology laboratory in Berlin (Germany) in 1920. At about the same time, scholars opened sport psychology laboratories in other countries, for example in the US Coleman Griffith opened a laboratory at the University of Illinois in 1925. And even before this, in 1913, Pierre de Coubertin, the

founder of the modern Olympic Games, had organized the First International Congress on the Psychology and Physiology of Sport, and at the time it was the first conference of its kind. During the 1960s, the discipline was developed in Europe and in the US by university professorships, and with the foundation of the ISSP in 1965. Since then, sport, exercise, and performance psychology has developed into a prominent research domain, a scientific discipline taught in academic institutes worldwide and a widespread field of application.

Sport psychology might be a relatively new research discipline but concepts and practices of sport psychology have existed in various cultures for centuries. Scholars have started providing evidence about concepts and applications of sport psychology in Ancient Greece, India and China (e.g., Acharya, 2011; Zervas, 2001; Zhang, 2013), which today are at the center of psychological research, for example, the fundamental philosophical or meta-theoretical concepts of eudaimonia in Ancient Greece and mindfulness in the Buddhist tradition. In the years to come we might learn more

about the conceptualization of these and other constructs and the related implications for human physicality and movement in past civilizations. Traditions related to the maximization of motor performance and the promotion of health and psychological well-being through movement can be found across various cultures, and each of these traditions has deep roots in the historical evolution of each culture. Nevertheless, on an individual level, we still know too little about traditions and practices in cultures other than our own. Despite the vast progress in technology and transport and the impressive development of sport psychology research in many countries, we have yet to develop the collective knowledge that we need in the globalization era. We have only just begun to explore cultural variations, not only into traditions and practices relevant to psychological preparation for sport contests, but also into the definition of the very concepts which are at the core of sport psychology research and practice, like the diverse meaning of psychological well-being and happiness across cultures (e.g., Fowers, 2012; Joshanloo, 2012; Lu, Gilmour & Kao, 2001). Hence, on a global level we have still to develop a collective understanding of the variety of pathways across cultures that lead to different end states, such as the different conceptualizations of psychological well-being of international athletes and exercise participants.

## **THE STRUCTURE OF THIS BOOK**

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This book is an introduction to sport and exercise psychology. Its main aim is to help readers understand the challenges, the fundamental concepts and how to apply the theory of modern sport and exercise psychology. Each chapter focuses on “what is important to know” and “how to do it”. Although each chapter has been written by experts with an impressive record of research and contribution to theory development on their topic, each contributor has presented research and theories concisely and coherently.

Therefore, a central aim of the ISSP is to develop projects like the present book in the series on *International Perspectives on Key Issues in Sport and Exercise Psychology*, bringing together authors from different countries to delineate the existing state of the art of sport and exercise psychology and to facilitate the process of communication among researchers and practitioners across the world. This enables scholars not only to extend international dialogue and research and synthesize diverse perspectives but also to develop new scientific approaches fueled by the richness of cultural diversity. Thus, for this book, we encouraged authors to collaborate with scholars in different institutions and countries. Although this was occasionally challenging, collaborations were accomplished for the large part of this book. We see an essential benefit of this collaboration at a symbolic level. The contribution of 144 authors from 24 countries to the present collective volume elevates the image of the collective international effort for the promotion of sport and exercise psychology across the world, but it is not to downplay the kudos due to individuals and their countries for their unique contribution to the development of sport psychology. We are more than grateful to all outstanding scholars who accepted our invitation to contribute to this book.

This book consists of nine parts, shown schematically in Figure ii. This figure illustrates how sport and exercise psychology consultants interact with individuals and teams, and how social factors influence the behaviour of participants in sport and exercise settings. The major goal of sport and exercise psychology consultants is to help participants to achieve optimal outcomes in sport and exercise settings. These outcomes include motor skill learning and performance enhancement, promotion of exercise, health and psychologi-

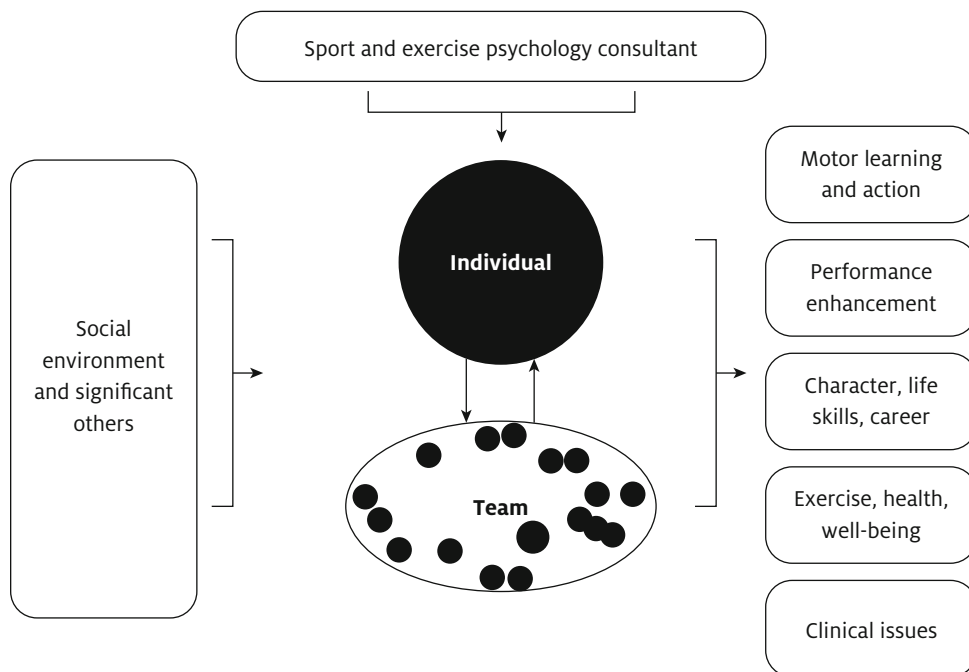


cal well-being, and coping with clinical issues in sports, but they are also related to the wider life of participants, such as developing character and social skills that enable them to have successful lives and careers. Thus, sport and exercise psychology consultants need to have knowledge about participants and teams, the social environment, how to achieve the required outcomes and, indeed, how to develop themselves as professionals. Accordingly, each of the shapes in Figure ii corresponds to a particular part of the book, and in each shape are the topics connected with the message conveyed in that part of the book.

The chapters of the first part focus on the most important characteristics and needs of individuals in sport and physical activity settings that should be taken into consideration by practitioners, parents and consultants who wish to offer them appropriate experiences. These ten chapters were managed by Athanasios Papaioannou (Greece) and Cliff Mallett (Australia). In the first chapter, Thelma S. Horn and Joanne Butt address age-related

characteristics and needs, explaining how physical, motor and psychological development occurs from early childhood to late adolescence and how sport and physical activity experiences can be developmentally appropriate for participants. Based on this knowledge, Jean Côté, David J. Hancock and Bruce Abernethy move one step further to provide important information about how talent development in sport can be realized through developmentally-appropriate activities led by coaches and various types of parents' support.

Talent and psychological attributes such as self-esteem determine achievement and adherence in sport and physical activity settings. Coaches and physical education teachers know that most psychological attributes are nurtured, yet they often classify participants according to these features. Of course, it is more fruitful to focus on the exact socio-psychological processes that shape individuals' attributes. Extensive information about environmental influences in shaping



**Figure ii** Schematic representation of the structure of this book.

character is provided in later parts of this book. However, the first part includes our current knowledge about how some important psychological attributes of the person are constructed. In their chapter, Kenneth Fox and Magnus Lindwall unfold why self-esteem is an indicator of positive health and why it determines participation, performance and positive experiences in sport and exercise, how it is constructed and how significant others can help individuals to build high self-esteem. The role of perceptions of competence in participation and performance in sport is addressed by Glyn Roberts and Athanasios Papaioannou, who explicate how socialization might influence individuals to endorse different definitions of competence that result to divergent types of achievement-related behaviour, emotions and cognitions in sport. Sport motivation is also the topic of Nikos Ntoumanis and Clifford Mallett who explain how coaching might support or thwart sport participants' psychological needs and subsequent motivation. Juri Hanin and Panteleimon Ekkekakis elaborate the concept of emotion by separating it into its various dimensions and types and explaining not only how these influence performance and adherence in sport and exercise but also why they are inherently connected with the notions of psychological well-being and ill-being.

The last four chapters of Part 1 focus on individuals who are often considered as not "typical" participants in sports. These chapters address the needs, the psychological processes and the challenges that these individuals face when they participate and perform in sports. Jeff Martin, Francesca Vitali, and Laurel Whalen remind us that individuals with disabilities derive many physiological and psychological benefits from participation in sport but face a multitude of personal, social and environmental barriers unique to their condition. This chapter offers several recommendations stemming from sport psychology research that will be of great help to those who wish to support individuals with disabilities to

participate and improve their performance in sport and physical activity settings. Vikki Krane and Caroline Symons present the social barriers for participation and performance in sport for transgender, transsexual and intersex people and provide instructions for these individuals to construct inclusive sport environments. Diane Gill and Tatiana Ryba explain why sport and exercise psychologists should develop cultural competence to address the needs of athletes from different cultures and help practitioners, athletes and exercise participants to become aware of biases and stereotypes, reduce discriminations and develop skills to interact effectively with individuals across cultures. Finally, Howard Hall, Gareth Jowett, and Andrew Hill illustrate how perfectionism is construed within the framework of major theories of personality, and argue that while perfectionism might induce achievement striving, it may also lead to emotional distress.

Part 2 covers the social environmental influences on participants' sport and physical activity experiences. The six chapters included in this part were managed by Athanasios Papaioannou (Greece) and Sophia Jowett (UK). The first three chapters focus on athletes' relationships with significant others and the effects of these relationships on sport involvement. In their chapter, Ross Lorimer and Sophia Jowett provide an overview of the conceptualization of the coach-athlete relationship and the factors contributing to those successful relationships. They offer recommendations for the development of harmonious relationships between coaches and athletes. Sam Carr and Daniel Weigand move the discussion to the parent-athlete relationships and provide guidance for those aiming to strengthen the attachment bond in families and create a positive parental climate for children in relation to their involvement in sport. Alan Smith and Fabienne d'Arripe-Longueville explain how friendships and good peer relationships contribute to learning and motivation in sport and provide implications for coaches that

enable them to promote positive peer relationships in sport and physical activity. The next three chapters of the second part address the effects of audiences and media on athletes' and sport officials' experiences. Bernd Strauss and Clare MacMahon explain how audience might affect sport performance and review findings of studies focusing on the home advantage effects. In a second chapter, Strauss and MacMahon illustrate how the crowd and other aspects of competitions such as positioning of officials, reputation of the athletes, order that the athletes compete and color that athletes wear affect officials' judgment and decision making. Finally, Elsa Kristiansen and Gill Lines explain how media affects young individuals' sport-related attitudes and stereotypes and how elite athletes cope with media stress and they provide instructions that might help athletes to develop an adaptive relationship with journalists.

In Part 3, managed by Thomas Schack (Germany) and Hiroshi Sekiya (Japan), essential issues are covered as well as the most up-to-date approaches on the functions of motor action and understanding and promoting motor skills by outstanding experts in the field. Kai Essig, Dirk Koester, Francesca Borgo, and Christopher Janelle emphasize the role of attention from a neurocognitive perspective and refer to various sport situations that are in different ways reliant on attentional width and direction for effective information processing. They report on research in which processes have been deeply investigated by eye-tracking methods and highlight attentional problems and strategies for how to handle them. In the following chapter on modeling and feedback David Anderson, Amanda Rymal, and Diane Ste-Marie highlight two of the most common variables used by instructors to facilitate motor skill learning. They explain the range of factors known to mediate the effectiveness of these two most relevant variables for instructors. David Wright, Hiroshi Sekiya, and Joohyun Rhee elaborate on the organization of practice and Thomas Schack, Bettina Bläsing,

Charmayne Hughes, Tamar Flash, and Malte Schilling extend and specify this issue by elements and construction of motor control. The center of attention is given to the connections between basic elements and sensory inputs, and how internal models account for the various processes of action planning and execution.

Part 4, managed by Dieter Hackfort (Germany), Gershon Tenenbaum (Israel and United States), and Tony Morris (Australia) focuses on enhancing performance and encompasses 12 chapters, each covering a different issue. Joaquin Dosil, Gualberto Cremades, and Santiago Rivera deal with psychological skill training and the focus in this chapter is on implementing psychological skills to enhance performance, establishing effective goals, using relaxation techniques, practicing imagery, reflecting on mental processes, and positive self-talk. Robert Weinberg and Joanne Butt look at goal-setting and sport performance. Their specific aim is to provide guidelines on how to develop and implement a goal-setting program with sports teams and individuals. Tirata Bhasavanija and Tony Morris take on mental techniques which are predominantly used in elite sports like imagery. They explain how imagery can be used for a diverse range of purposes, including learning and practice of skills, preview and review of performance, problem solving, developing psychological variables, supporting injury rehabilitation, and facilitating recovery from heavy training. Antonis Hatzi-georgiadis, Nikos Zourbanos, Alexander Latinjak, and Yannis Theodorakis discuss self-talk and positive thinking. The authors take the reader from definitions and conceptualization to taxonomies, tools for the assessment, factors which shape and influence athletes' self-talk up to guidelines for implementing effective self-talk interventions. Jayashree Acharya and Tony Morris look at techniques for "psyching up" and "psyching down". These terms refer to techniques that are used to increase arousal (psych up) or decrease arousal

(psych down). Psyching up techniques (e.g., breathing techniques) include use of arousing words and phrases, behaving in physically arousing ways, and imagining arousing situations in sport, arousing behavior of teammates, as well as stimulating music played before or during performance. Psyching down techniques include bodily relaxation techniques (muscle/somatic), mental relaxation techniques, and other techniques that are based on psychological processes used to manage thoughts and feelings. Boris Blumenstein, Tsung-Min Hung, and Iris Orbach cover self-regulation and biofeedback. This chapter provides the main knowledge about biofeedback, the development of biofeedback and biofeedback training, and two biofeedback training models. In this part of the book, key concepts are also discussed. Deborah Feltz and Erman Öncü look at self-confidence and self-efficacy. They look at the theory of self-efficacy in sport, including sources of self-efficacy information and consequences of high and low self-efficacy beliefs are presented, and methods to enhance beliefs of self-efficacy are described. Sheldon Hanton and Stephen Mellalieu discuss coping with stress and anxiety and provide an outline which enables the reader to understand the stress process and the major strategies deployed for successful coping with stress and anxiety. Daryl Marchant, Rouhollah Maher, and Jin Wang deal with the phenomenon of “choking,” focusing on a better understanding of the phenomenon and reports on strategies to reduce the likelihood of choking or beneficial solutions for athletes that experience choking repeatedly. Gershon Tenenbaum and Lael Gershgoren take on individual and group decision making. In this chapter the reader is introduced to the basic perceptual-cognitive processes which determine the act of decision making, cognitive components underlying the decision-making process, such as visual attention, selective attention, working and long-term memory, mental representations, and knowledge base and structure. Ronnie Lidor, Dieter Hackfort,

and Thomas Schack tackle performance routines. The authors explain how routines contribute to achievement and they provide empirical evidence stressing the benefits that athletes can gain by the consistent use of routines, and they also give a number of examples of routines that can be used by athletes. In the final chapter of Part 4, Gangyan Si, Traci Statler, and Dietmar Samulski (this was Dietmar’s final contribution during his very intensive and busy life in and for sport psychology to his beloved professional field) report on their experiences in different countries and settings on the preparation of elite athletes for major competitions. All of these chapters refer to theoretical aspects, research and empirical evidence as well as to the application of psychological strategies and mental techniques. They provide a broad scope of insight from various backgrounds, cultural settings, and approaches.

Mark Eys (Canada) and Packianathan Cheladurai (US) managed the six chapters of Part 5, which is devoted to team issues. Although each chapter focuses on a different topic, all of them address the question of how a coach or a physical education teacher can become an effective leader who can maximize teams’ performance and individuals’ outcomes and well-being in sport and physical activity settings. Blair Evans, Mark Eys, Mark Bruner, and Jens Kleinert overview the processes that unite groups’ members and the resulting benefits in sport and exercise settings. They portray team building strategies that were used in interventions to promote group cohesion. Michael Van Bussel and Melanie Gregg provide a definition of norms in the prevailing sport culture and their impact on teams. They explain how norms and rules are formed and changed and how they are used to sustain discipline and, interestingly, positive discipline in sport. Based on achievement goal theory and self-determination theory, Joan Duda, Athanasios Papaioannou, Paul Appleton, Eleanor Quested and Charalampos Krommidas define motivational climate in sport, overview

its determinants and consequences and provide evidence-based instructions to coaches and physical education teachers concerning the creation of a positive motivational climate in teams and physical education classes. Philip Sullivan, Sophia Jowett, and Daniel Rhind analyze the communication process in teams and the factors that influence this process and they offer strategies for effective communication between coaches and athletes and between peers. Katie Morton, Benjamin Sylvester, Justine Wilson, Chris Lonsdale, and Mark Beauchamp portray profiles of coaches who exhibit transformational leadership by inspiring, motivating, and encouraging athletes. They provide an overview of the positive outcomes of this important type of leadership on athletes, exercise participants and physical education students and provide instructions for coaches and physical education teachers that might help them to become transformational leaders. Todd Loughhead, Lauren Mawn, James Hardy and Krista Munroe-Chandler move the discussion to what makes athletes leaders in their teams. They overview theory, research and practices in sport about how athlete leadership is developed by portraying the various challenges and particularities of sport regarding the selection and training of captains and they analyse the important role of coach mentoring for athlete leadership development.

Part 6 is devoted to the careers and lives of athletes and other individuals that participate in physical activity. Athletes, physical education students and exercise participants have their own personal life which is affected by their sport and physical activity experiences. If they perceive that their participation in sport and physical activity helps them to deal effectively with their challenges in life they will be better adjusted in sport too. Coaches, physical education teachers and policy makers need to know how to offer meaningful sport and physical activity experiences to athletes and students and help them to develop the character and skills that are required to cope

effectively with challenges of everyday life and to participate in life in an adaptive manner for themselves and others. Brenda Bredemeier (US) and Athanasios Papaioannou (Greece) edited this part, which is composed of five chapters. Natalia Stambulova and Paul Wylleman describe the variety of challenges and experiences during different stages of athletes' careers, what we know about determinants of long and successful athletic careers and post-sport careers, and they offer advice that might help athletes to cope effectively with the various challenges during different stages of their career and eventually achieve long and successful careers in sport and life. To achieve the latter, an athlete needs to develop the social and emotional skills that are described by Taru Lintunen and Daniel Gould. These authors also illustrate how to develop sport and physical education programs to effectively teach social emotional skills. Beyond skills one needs to develop character useful to the individual and others, argue Brenda Bredemeier and David Shields. Importantly, these authors provide guidelines for the development of moral and positive characters in sports. An important attribute of a positive character is the ability to control anger and the elimination of aggressive behavior using the skills and strategies which Chris Gee and Luke Potwarka describe. These authors also provide recommendations to make sports less violent. Finally, Robert Vallerand, Jérémie Verner-Filion, and Yvan Paquet explain that to have a successful athletic career and a happy life one needs to be harmoniously but not obsessively passionate in sport. These authors describe the social-psychological processes leading to harmonious or obsessive passion and the resulting emotional, cognitive and behavioral outcomes in sport and life, and they provide implications for the development of harmonious passion in sport and physical activity settings.

Part 7 focuses on the psychology of physical activity, exercise and health. Athanasios Papaioannou (Greece) and Nikos Chatzisarantis

(Australia) invited authors to develop chapters describing the benefits of physical activity on mental health, the challenges that people face to be physically active, the determinants of regular exercise and interventions to promote physical activity. Panteleimon Ekkekakis and Susan Backhouse review the effects of physical activity on pleasant and unpleasant emotions and moods and provide recommendations for exercise professionals to optimize the affective responses to physical activity. Yu-Kai Chang and Jennifer Etnier illustrate the effects of physical activity on various types of cognitions across different populations. Stuart Biddle and Trish Gorely summarize evidence on the health detriments of long periods of sitting, delineate factors associated with high levels of sedentary behaviour and offer ideas to reduce sedentary behavior. Swarup Mukherjee outlines the health benefits of exercise and physical activity and the basic concepts and principles of the process of designing a regimen of physical activity aiming at improving overall health. Nikos Chatzisarantis, Martin Hagger, Masato Kawabata and Sviatlana Kamarova summarize the main theories of health behavior and they explain how they can be used to design effective interventions for physical activity promotion. These theories have been used in the interventions described in the following chapters of this part. Sarah Hardcastle and Adrian Taylor recapitulate the principles and strategies used in counseling to promote physical activity and they focus especially on motivational interviewing which is an effective method particularly with individuals who have not been regular exercisers in the past. Koji Takenaka and Leonard Zaichowsky recount how they applied theory-based interventions to organization settings and communities in Japan and Canada to promote physical and social activity and community-based sport. Finally, Ioannis Morres, Afroditi Stathi, Egil Martinsen and Marit Sørensen outline the positive effects of exercise programs on treatment of depression in adult patients with major depressive disor-

ders, and they provide recommendations for the structure of exercise programs and the provision of exercise consultancy to increase the motivation and participation of these individuals in exercise.

In Part 8 Trisha Leahy (Hong Kong and UK) managed four chapters addressing clinical issues in sport. Trent A. Petrie and Christy Greenleaf delineate types of eating disorders and the associated signs and symptoms and corresponding diagnostic methods. The authors describe the sport environment and the body image of athletes across various sports in relation to increased risks for developing athletes' eating disorders, and they offer instructions for sport-governing bodies, sport administrators and coaches aiming to prevent and treat eating disorders and establish a "body-healthy" sport environment. Trisha Leahy reminds us why all sport psychologists and coaches should be trained to adopt a definition of sexual abuse that minimizes this hideous but often obscure phenomenon in sport. Leahy also illustrates the traumatic impact of sexual abuse and athletes' disruptions across several life domains, and she summarizes the principles that specialists adopt to treat sexual abuse and the phases of therapeutic interventions. Matthew Martens and Jessica Martin demonstrate the prevalence of alcohol and performance enhancing drug use of athletes and exercise participants across various countries where relevant research has been conducted. They also explain how to diagnose these problems and how interventions such as motivational interviewing (see also Chapter 49 by Sarah Hardcastle and Adrian Taylor for another use of this method), relapse prevention, contingency management and the 12-step programs can be used to prevent and treat substance abuse problems in sport and physical activity settings. Urban Johnson and Leslie Podlog overview theory and research on the psychosocial antecedents to athletic injury and to athletes' return to sport following injury, and they explain how sport psychologists can intervene to prevent injury

and to help injured athletes during the rehabilitation process.

The final part, Part 9, is designed to cover fundamental or superior issues in sport and exercise psychology professional development, education, application, and practice. Editors Antoinette Minniti (UK) and Judy Van Raalte (US) managed seven chapters in this area. Artur Poczwardowski, Mark Aoyogi, Jamie Shapiro, and Judy Van Raalte provide information relevant for the development of a professional philosophy and sport psychology consultation. Burt Giges and Paul McCarthy discuss how sport psychology practitioners can identify and understand athletes' psychological needs, and help them with needs that have not been fulfilled. Maria Psychountaki, Nektarios Stavrou, Symeon P. Vlachopoulos, Judy Van Raalte and Antoinette Minniti focus on assessment and diagnosis and the quantitative methods to optimize athletes' and exercise participants' physical performance in particular. Henry (Hap) Davis IV, John P. Sullivan, Chris Carr, David B. Coppel, Adam Shunk,

Jennifer Carter, Scott Goldman, Thomas Hammond, and Patrick Baillie emphasize issues in the diagnosis of psychopathology among athletes. Thomas Schack, Maurizio Bertollo, Dirk Koester, Jonathan Maycock, and Kai Essig then provide an overview of technological advancements in sport psychology and introduce various most updated methods used in neurocognitive-oriented research. Antoinette Minniti and Judy Van Raalte identify professional training, supervision, and continuing education as central issues and they present an overview of essential features related to this sector of growing importance. In the concluding chapter of this book, by Dieter Hackfort and Gershon Tenenbaum, ethical issues are addressed. The authors provide resources, describe ethical and moral standards, demonstrate consequences in terms of risk assessment for ethical decision making, and offer guidance related to ethical considerations in applied and empirical work in the field of sport and exercise.

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## CONCLUSION

The impressive amount of knowledge brought together by the outstanding authors in this book covers almost all major concepts that have been examined and applied in the scientific discipline of sport and exercise psychology. This book is designed to provide an introduction for anyone studying this discipline but it will also be useful for coaches, physical education teachers, fitness instructors or prospective professionals in sports and physical activity work settings. All chapters include a vast array of strategies, examples of interventions, and detailed implications for practitioners. The information has been written in such a way that makes this book easy to read, even by individuals who are not experts in sport and physical activity. For those who want to further develop their knowledge in

sport and exercise psychology, the authors provide further readings that focus on more advanced information on each topic. The comprehensive coverage of all concepts makes each chapter essential reading for sport and exercise psychology modules. Once again we would like to express our gratitude to all authors for their excellent cooperation in this project and the unique contribution to the development of this book. The *Routledge Companion to Sport and Exercise Psychology: Global Perspectives and Fundamental Concepts* is destined to assist our international colleagues in their efforts to provide high quality education to the next generation of sport and exercise psychologists, sports scientists, and other professionals in sport and physical activity settings all over the world.



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Part One

# **Understanding participants in sport and exercise contexts**

EDITED BY ATHANASIOS G. PAPAIOANNOU AND CLIFFORD J. MALLET

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# Developmental perspectives on sport and physical activity participation

THELMA S. HORN AND JOANNE BUTT



## SUMMARY

The purpose of this chapter is to provide a developmentally-based perspective on youth participation in sport and physical activity contexts. The first part of this chapter contains an overview of the changes that occur over childhood and adolescent years in three domains (physical, motoric, and psychosocial). Within each of these sections, developmental progressions are summarized, and recommendations are provided for practitioners. The second part of this chapter summarizes the research on stages of sport participation and provides recommendations for constructing developmentally-appropriate sport and physical activity experiences. The primary perspective on which this chapter is structured is that the degree to which sport and physical activity programs can exert positive effects on children and adolescents depends on the extent to which such programs are consistent with the research and theory on developmental processes.

## INTRODUCTION

Meet Charles Brown. He has spent the last ten years coaching hockey teams at the young adult club level (athletes ranging in age from 19 to 24 years old) and has enjoyed much success (e.g., he developed a number of athletes who now compete at the international level, received numerous coach-of-the year awards, and won several championships). However, Charles has decided to “retire” from the adult

sport world and has taken a position as coach of an elite club hockey team at the 12-year-old level. He was specifically hired in this role because of the success he achieved at the older club. However, halfway into the new season with the 11 and 12-year-old athletes, Charles has noted, “this is like learning to coach all over again!” In explaining his frustration, Charles further remarks that: “I can’t just coach

the way I did when I was working with young adults. I know hockey...I know how to win...I know how to develop players' skills...but I guess I just don't know yet how to work with 11 and 12 year olds!" We (the authors) sympathize with Charles. We have been there, and we

know that working with younger athletes is very different than working with older athletes. In this chapter, we explain how and why the age/developmental stage of the children/adolescents with whom adults work is such an important thing to consider.



## OBJECTIVES

After reading this chapter, individuals should be able to:

- 1 Describe the developmental stages on the road to physical, motoric, and psychosocial maturation.
- 2 Provide recommendations for physical activity practitioners who work with children of varying ages.
- 3 Describe the stages from initial entry and through the later stages of participation in sport.
- 4 Identify the characteristics of "developmentally-appropriate" sport and physical activity learning environments.

## DEVELOPMENTAL PERSPECTIVES ON SPORT AND PHYSICAL ACTIVITY PARTICIPATION

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Participation by children and adolescents in organized youth sport and physical activity programs has been identified as a valued commodity by national and world health organizations (cf., Mountjoy, Andersen, Armstrong, Biddle, Boreham, Bedenbeck, et al., 2012) due to its potential positive effects on children's physical and psychosocial health. Correspondingly, organized sport participation has been linked to the acquisition of important life-skills (e.g., Gould & Carson, 2008). However, some researchers (e.g., Fraser-Thomas & Côté, 2009) have identified possible negative effects of sport participation on the health and well-being of children and adolescents.

Whether or not any particular sport or physical activity program will exert positive, negative, or even zero effects on children and adolescents is likely due to the quality of the program itself. Effective programs are those

that are developed to maximize the growth and development of individual children and are based on developmentally-appropriate structures.

The purpose of this chapter is to provide a developmentally-based perspective on youth participation in sport and physical activity contexts and use this research base to establish recommendations for practitioners. This chapter begins with an overview of the stages through which children progress in the physical, motoric, and psychosocial domains. In the second part, the research and theory concerning the stages through which children progress in the competitive sport environment are summarized, again for the purpose of providing recommendations for practitioners on the construction of developmentally-appropriate youth sport programs.

## DEVELOPMENTAL AGES AND STAGES: AN OVERVIEW

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A significant amount of physical growth and maturation occurs over the infancy, child-

hood, and adolescent years (Malina, Bouchard, & Bar-Or, 2004; Payne & Isaacs, 2011). Consider,

for example, that the average full-term baby is approximately 20 inches (50.8 cm) at birth but may grow to reach an adult height of 70 inches (5' 10" or 177.8 cm) by 18 years of age. This growth in total height does not occur at a consistent rate. Rather, there are periods of rapid and slow growth, and different parts of the body may grow at different times. A general summary of the growth patterns is provided in Table 1.1.

As Table 1.1 shows, during the first (prenatal) period physical growth and maturation is very fast (one of the three fastest growth peri-

ods), with the primary growth occurring in the head and upper body. Thus, a newborn infant's head and trunk typically comprise about 85% of total body length with the legs being relatively shorter and less developed. The second developmental time period occurs during infancy (birth to 2 years) and represents the second of three fastest growth periods. Again, growth and development are particularly evident in regard to the upper body. As a consequence, a two-year-old child can still appear top-heavy, with a relatively longer head and trunk and comparatively shorter legs.

**Table 1.1** Overview of general physical growth and maturation patterns

Growth stage	Approximate age range	Growth patterns
Prenatal	Conception to birth	<ul style="list-style-type: none"> <li>● Very fast growth</li> <li>● Head and trunk grow faster than legs (sitting height at birth comprises about 85% of total body height)</li> </ul>
Infancy	Birth to 2 years	<ul style="list-style-type: none"> <li>● Very fast growth (especially in early months of infancy)</li> <li>● Head and trunk still growing and developing comparatively fast</li> </ul>
Early childhood	2 to 6 years	<ul style="list-style-type: none"> <li>● Slower growth rate</li> <li>● Lower legs grow faster than head and trunk (sitting height at 6 years comprises about 55% of total body height)</li> <li>● Relative loss of fat and increase in muscle and bone</li> </ul>
Middle childhood	6 to 10 years	<ul style="list-style-type: none"> <li>● Slower growth rate but some children exhibit a mid-growth spurt between 6.5 and 8.5 years</li> </ul>
Late childhood through early adolescence	10 to 15 years	<ul style="list-style-type: none"> <li>● Very fast growth rate</li> <li>● Sexual maturation begins</li> <li>● Body shape and composition changes</li> </ul>
Middle to late adolescence	15 to 20 years	<ul style="list-style-type: none"> <li>● Slower growth rate</li> <li>● Continuation of sexual maturation</li> <li>● Continuation of body shape and composition changes</li> </ul>

Note: Average boy reaches full physical maturation (end of skeletal growth and completion of sexual maturation) by 20 years of age, and average girl reaches that point by 18 years. For further information on the physical growth and development process, see Malina et al. (2004) and Payne and Isaacs (2011).

The third (2 to 6 years) and fourth (6 to 10 years) growth periods are characterized by slower but very steady growth rates. Furthermore, especially from 2 to 6 years, the legs grow faster than the trunk, and bone and muscle mass generally increase more than does fat. Thus, by the age of 6 years, body length (height) is more evenly divided between the upper and lower body areas, and the increased growth and development of the muscular and skeletal systems provide the six-year-old with more motor and physical skill attributes.

The fifth growth period (late childhood to mid-adolescence) constitutes the last of the three fastest growth times. For girls, the age range from 10 to 13 years represents a time of very fast growth, particularly in regard to height as they may grow eight to nine inches (20.3 to 22.9 cm) in height and gain 30–35 pounds (13.6 to 15.9 kg) in body weight. Typically, such growth begins in the feet and hands and then proceeds to the legs and finally the trunk. Boys go through this same pattern of pre-adolescent growth spurt, but it occurs a bit later (12 to 15 years) and may be somewhat more intense (gain in height of 9 to 12 inches, 22.9 to 30.5 cm, combined with a gain in weight of 35 to 45 pounds, 15.9 to 20.4 kg). Sexual maturation also begins, and some changes in body shape and body composition are evident as well.

The sixth and final growth period occurs during the mid- to late-adolescent years (15 to 20 years). Smaller changes in height, body composition, shape, and sexual maturation are observed.

The information contained in the previous paragraphs and in Table 1.1 provides a description of the growth and development of the average child (i.e., progressions are based on compilation of data from large samples of children). In reality, there is considerable inter-individual variability in regard to both the velocity (tempo) and the rate at which children progress through these timelines (Malina et al., 2004; Payne & Isaacs, 2011). First, in the

third period of rapid growth, while many children may exhibit a relatively consistent pattern of growth across the entire three-year period, there are others who go through extreme growth patterns in a more abbreviated timeline. That is, a boy who is 14 years of age may grow eight to nine inches (20.3 to 22.9 cm) over just a few months. Similarly, sometimes a very rapid growth that occurs in the feet (e.g., a boy moving from size six feet to size ten feet in just a few months time) and which precedes growth in the legs and trunk can cause that child to be somewhat motorically awkward (possibly causing a temporary disruption in coordination, balance, and agility).

Another important thing to know is that there is variability between children in the rate at which they go through the stages depicted in Table 1.1 (Malina et al., 2004; Payne & Isaacs, 2011). Early maturing children are those who go through the growth and development patterns at an earlier chronological age than average. Thus, an early maturing girl may go through a big spurt in height between the ages of 8 to 11 (rather than the more typical 10 to 13 years) and also proceed through the next stage at a faster pace, thus reaching full adult height, shape, and composition as well as full sexual maturation by the age of 14 to 15 years (rather than the 18 years evidenced for the average maturer). In contrast, a late maturing girl would be comparably delayed. Her big growth spurt in height may occur between 12 to 15 years, and she would not reach full physical maturation until 19 to 20 years. Similar contrasting patterns are observed among boys.

Since most youth sport programs are set up on the basis of chronological age, it can be obvious that children on the same chronologically-aged team may differ considerably in where they are in the growth and maturation process. Table 1.2 provides comparative profiles of early, average, and late maturing boys and girls (see also, Branta, 1989).

As is evident from these charts, one child (particularly the early maturing one) could possibly look like a “star” athlete at the early

**Table 1.2** Comparative profiles of six children differing in rate of biological maturation

Boys	Chronological age	Andre Average	Edward Early	Luiz Late
	12 years	4' 10" (147.3 cm) 118 pounds (53.5 kg)	5' 7" (170.2 cm) 153 pounds (69.4 kg)	4' 8" (142.2 cm) 98 pounds (44.5 kg)
	15 years	5' 7" (170.2 cm) 153 pounds (69.4 kg)	5' 9" (175.3 cm) 177 pounds (80.3 kg)	4' 10" (147.3 cm) 121 pounds (54.9 kg)
	18 years	5' 9" (175.3 cm) 177 pounds (80.3 kg)	5' 10" (177.8 cm) 185 pounds (83.9 kg)	5' 7" (170.2 cm) 153 pounds (69.4 kg)
	21 years	5' 10" (177.8 cm) 185 pounds (83.9 kg)	5' 10" (177.8 cm) 190 pounds (86.2 kg)	5' 10" (177.8 cm) 180 pounds (81.6 kg)
Girls	Chronological age	Anabelle Average	Emily Early	Linda Late
	10 years	4' 11" (149.9 cm) 107 pounds (48.5 kg)	5' 7" (170.2 cm) 137 pounds (62.1 kg)	4' 9" (144.8 cm) 97 pounds (44.0 kg)
	13 years	5' 7" (170.2 cm) 137 pounds (62.1 kg)	5' 9" (175.3 cm) 153 pounds (69.4 kg)	5' 0" (152.4 cm) 108 pounds (49.0 kg)
	16 years	5' 9½" (176.5 cm) 153 pounds (69.4 kg)	5' 10" (177.8 cm) 160 pounds (72.6 kg)	5' 8" (172.7 cm) 138 pounds (62.6 kg)
	19 years	5' 10" (177.8 cm) 160 pounds (72.6 kg)	5' 10" (177.8 cm) 165 pounds (74.8 kg)	5' 10" (177.8 cm) 150 pounds (68.0 kg)

Note: Profiles adapted from similar examples provided by Branta (1989).

adolescent age because he/she is taller, more muscular, and generally more biologically mature than her/his peers. For example, on an all-girls 13-year-old basketball team, Emily Early is only a year away from full physical maturation. Thus, she is already 5' 9" (175.3 cm) and has the bone and muscle structure of someone who is 15 to 16 years old. In contrast, Linda Late is only 5' (152.4 cm) tall and still has the body composition and shape of a pre-adolescent. For boys, as well, Edward Early at age 15 would certainly look like a "superstar" due to his more biologically mature body (5' 9"/175.3 cm) that includes broader shoulders and more defined muscle mass. In comparison, Andre Average at the age of 15 years has

just completed a big growth spurt in terms of height (5' 7"/170.2 cm), but has yet to fully develop in terms of body composition and shape. Thus, he may still be relatively linear in body shape with less muscle mass than Edward Early. Even more at a disadvantage is Luiz Late who, at 15 years of age, is still in the early stages of the pre-adolescent growth spurt and thus may look gangly (extra large feet but shorter height and no significant bone/muscle mass).

This variability in rate of maturation is an important factor to consider in sport and physical activity contexts for several reasons. First, it is clear that adults should be cautious about forming expectations or judgments of children's ultimate athletic potential before they



are fully mature (see further discussion on this topic by Horn, Lox, & Labrador, 2010). Second, it is important to know that children who are significantly ahead (early maturers) or behind (late maturers) their chronologically-aged peers may differ from their average maturing peers in psychosocial well-being. Research studies have shown that early maturing boys tend to have higher self-esteem and enjoy a higher social status while late maturing boys may be less advantaged psychosocially (e.g., Fairclough & Ridgers, 2010). In contrast, it is the early maturing girls (beginning in the early adolescent years) who may tend to have lower self-esteem, a more dissatisfied body image, and higher levels of social physique anxiety (cf., Negriff & Susman, 2011). Such gender differences are likely due to factors in the sociocultural environment (e.g., media, coaches, parents) that affect boys and

girls in different ways (cf., Horn, Lox, & Labrador, 2010).

Finally, adults should be aware that pre- or early-adolescent children on competitive youth sport teams may be encouraged to specialize in one sport based on their current body size, shape, and composition. So, early maturing children may appear to be most suited for sports that emphasize height, power, and strength (e.g., football, basketball) while later maturing children might be pushed into other sports (e.g., long-distance running, gymnastics). However, once the differing maturation rates even out (mid- to late adolescence), early sport specialists (those who chose, or were pushed into, just one sport from an early age) may end up in a sport activity for which they are no longer well suited.

Similarly, pre-adolescent children on competitive youth sport teams may also be



**Figure 1.1** Children's sport performance and proficiency may be affected by where they are in the physical growth process.

assigned to playing positions based on their current body size, shape, and composition. In sports where height is an important factor (e.g., basketball, volleyball), the early maturing (and probably taller) children would tend to be assigned to playing positions such as post/center (basketball) and hitter/blocker (volleyball). In contrast, the average and late maturers would be assigned to guard (basketball) and libero/backrow (volleyball) positions. Although this practice may most benefit the

success of the team at that chronological age level, it can result in a situation where each child only learns the skills for one position (a practice known as position specialization). However, as these children advance in the sport development process, their relative sizes and physiques change. The problem, then, becomes that some children/adolescents have not developed the skills for the position that they could/should now play.

## **RECOMMENDATIONS FOR COACHES, PARENTS, AND OTHER PRACTITIONERS**

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- 1 Understand the general physical growth patterns that children go through so that they remain aware of where each child is in the biological growth and development process.
- 2 Use caution in “cutting” children from competitive sport programs as those who are cut may tend to be the later maturers in their chronological age group. Therefore, if possible, youth sport programs should provide opportunities for all children to participate, perhaps with late maturers placed at more developmentally-based
- 3 Discourage the practice of specialization in only one sport or physical activity until the mid-adolescent years.
- 4 Ensure that all children on youth sport teams are taught the skills for all positions as it is not always possible to anticipate the position they may be best suited for by the end of the physical growth and maturation process (mid-to-late adolescence).

## **MOTOR SKILL DEVELOPMENT**

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Just as there is a pattern as to how children exhibit physical growth and development from birth through adolescence, there is also a pattern as to how children acquire (or can acquire) development of motor skills and proficiencies (Payne & Isaacs, 2011). This pattern can be divided into three major levels. At the first level (infancy years from birth to 2 years), the child acquires selected reflexes (e.g., searching, rooting, sucking), postural control skills (e.g., rolling over, sitting upright, standing upright), grasping and manipulative skills (e.g., reaching for, grabbing, and manipulating objects), and basic locomotor skills (e.g., creeping, crawling, walking). At the second level

(early through late childhood from ages 2 to 10 years), children should acquire the mature pattern for a number of fundamental locomotor (e.g., running, jumping, leaping, hopping) and manipulative (e.g., overhand throwing, catching, kicking) skills. Most typically, children proceed through a series of stages in their acquisition of each of these skills. These skills are labeled as “fundamental” motor skills because they ultimately will serve as building blocks for children’s/adolescents’ acquisition of more sport-specific skills. For example, once a child has acquired the most mature stage in the fundamental motor skill of the overhand throw, then that child’s tennis coach

can use that basic pattern to teach that child a tennis serve and a smash. Similarly, the baseball or softball coach can use the basic overhand throwing pattern to teach a child to throw or pitch (overhand), and the volleyball coach uses the basic overhand throwing pattern to teach children to hit and serve in his sport. At this second level of motor development, children should also acquire some basic fine-motor skills (e.g., eye-hand coordination, eye-foot coordination, balance), as well as body control skills (e.g., stopping, starting, accelerating), and information-processing and decision-making skills (e.g., scanning full visual field and selecting task-relevant cues, speed of simple and choice reaction time).

At the third and final level of the motor skill development process, children, adolescents

(and adults) move on to acquire sport-specific or activity-specific skills of their choice. Thus, as noted earlier, individuals who are at this third level use the previously acquired fundamental motor patterns to develop skills and abilities that are specific to a range of sport and physical activities.

The important issue to consider here is that all children (with certain exceptions) should acquire some degree of proficiency at the skills in the first two levels. Although all (or most) children do acquire the motor skills at the first level of development, not all children acquire proficiency in the motor skills identified at level 2. Those who don't may be more limited at older ages (adolescent and adult years) in regard to their choice of sport or physical activity participation.



**Figure 1.2** Participation in specialized sport activities requires prior mastery of basic fundamental motor and body control skills.

**RECOMMENDATIONS FOR COACHES, PARENTS, AND PRACTITIONERS**

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- 1 Provide sufficient physical play experiences for children in the infancy years so that they are able to acquire the designated motor/physical skills.
- 2 The primary focus during the childhood years (ages 2 to 10) should be on the development of the fundamental locomotor and manipulative skills. Although children can (and certainly may want to) participate in sport- or activity-specific programs (e.g., soccer, baseball, martial arts, swimming, dance), the emphasis in these programs should still be focused on development of all of the fundamental skills.
- 3 Children should likely not specialize in one sport or physical activity prior to the mid-adolescent years as they might be apt to develop only the fundamental motor skills (at level 2) that are important to their particular specialized sport or activity. They may not, then, develop relevant other motor skills at this level that they will want or need later (as adolescents and adults) as they expand their sport and physical activity repertoire for competitive, leisure, social, or fitness reasons.

**PSYCHOSOCIAL DEVELOPMENT**

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A number of theories have been developed in the psychosocial and cognitive literatures to describe how children grow and develop over infancy, childhood, and adolescent years. Two of these theories may be particularly applicable to the youth sport setting. This includes the theories related to self-concept/self-esteem (e.g., Harter, 1999) and those that center on the development of the concept of ability (e.g., Nicholls, 1989).

The more recent theories of self-concept/self-esteem (cf., Horn, 2004) are built on the notion that children's and adolescents' self-esteem or self-worth is based on their perceptions of competence in multiple domains (e.g., academic, social, physical). Theoretically, then, if children's/adolescents' participation in physical activity or sport can enhance their perceptions of physical competence (i.e., encourage them to believe that they are capable or competent in their sport or physical activity) and/or their perceptions of their physical appearance (i.e., help them to feel satisfied with their bodies), then their overall self-concept/self-esteem can also be positively enhanced. The problem may be that not all children/adolescents experience enhanced perceptions of physical competence and/or

physical appearance through their participation in sport/physical activity (e.g., Gould & Carson, 2008; Fraser-Thomas & Côté, 2009). To understand such differential experiences, we need to understand how children of different ages evaluate or judge their physical competence. The research in this area suggests the following developmental sequences (cf., Horn, 2004).

Young children (ages 4 to 7 years) tend to evaluate or judge how good they are in any domain or task based on three things: (1) the feedback they get from significant adults (usually those who are nurturing); (2) simple task accomplishment (completion of a task); and (3) personal effort. Thus, a six-year-old child might say, for example, "I'm really strong because I can lift this big bowling ball" or "I'm really strong because my teacher tells me I'm strong", or "I'm really strong because I tried really hard to lift this bowling ball and then I did!" Children at these younger ages, then, do not really differentiate between ability and effort, and also do not take task difficulty into consideration in their judgment of their competence (e.g., maybe the big bowling ball is not really that heavy and/or maybe everyone their age can lift that ball) (Nicholls, 1989).

As children progress to the next developmental level (ages 7 to 12 years), their judgments or evaluations of their competence at physical tasks become more complicated (i.e., they use more sources of information), but remain very concrete. Thus, children within this age range primarily use such sources as: (a) peer comparison; (b) evaluative feedback (from parents, peers, coaches); and (c) performance outcomes (winning/losing). In particular, the use of peer comparison tends to increase across this age range. Thus, by the time that children reach 12 years of age, it often is one of their primary sources of information. In addition, this peer comparison process is based primarily on comparison to “near” peers (i.e., those peers that the child knows and can directly compare her or himself to on a regular basis) (cf., Horn, 2004).

It’s important to note here that children at this developmental age/stage *can* use other sources of information to judge their competence (e.g., skill mastery, learning) but because the peer comparison process may be so obvious and concrete, it becomes the most relevant way. While the use of the peer comparison process may prove effective for some children/adolescents (i.e., those who are the “superstars” in their age group will clearly develop high perceptions of physical or sport competence), their classmates or teammates who do not fare well in the peer comparison process (e.g., the child who scores at the bottom end of his class on physical fitness tests) are certainly at risk for developing low perceptions of physical competence. If, however, significant adults within the sport/physical activity environment encourage and assist their young charges to use other ways to evaluate/judge their competence (e.g., keep a chart in a visible space that highlights the improvement of each child in the physical fitness tests rather than the comparison of children’s scores on the tests), then all children’s/adolescents’ perceptions of competence can be enhanced.

As children move into the adolescent years (13 through 18 years), the sources of informa-

tion they use to evaluate or judge their physical competence expands to include: (a) peer comparison; (b) evaluative feedback (coaches, peers, parents, spectators, media); (c) competitive outcomes (win/loss and game performance statistics); (d) achievement of self-set goals (e.g., skill mastery); (e) speed/ease of learning (e.g., how quickly/slowly they can learn a new sport or skill); (f) internal information (e.g., perceived effort, self-regulated learning, pre/post competitive event feelings, sport enjoyment, perceived skill knowledge and decision-making abilities) (cf., Horn, 2004).

Adolescents’ use of some sources may also change. In regard to peer comparison, for example, adolescents now have the ability to compare themselves not only to known or “near” peers (e.g., teammates, classmates, opponents) but also to unknown or “extended” peers (e.g., others of the same age or developmental level but from such other broader context as national/international). This extension of the peer group can certainly result in changes in the adolescent’s perception of sport/physical competence. For example, a hockey athlete who has always been the best player in her/his age group (school, league) may now start comparing her/himself to a broader peer group (all individuals in her/his state/region or country). Thus, the athlete’s perception of competence could actually decline somewhat.

Additionally, while athletes’ use of evaluative feedback from a variety of others (e.g., parents, peers, coaches) continues, there is also some evidence that the value of these different sources can change. Specifically, parents’ feedback may decline in importance, while that from spectators, peers, and especially coaches may increase. Interestingly, older adolescents do appear to use speed/ease of learning as a source of competence information. But, they are now able to differentiate between effort and ability. Thus, if it takes a long time to learn a particular skill, then an individual athlete may perceive that he/she has less ability at that skill/task (Nicholls, 1989).

By the end of adolescence, it may be important that individuals learn to use a variety of sources to evaluate their competence at any particular task, activity, or sport. That is, for older adolescents or adults to continue participation in a physical activity, they need to be able to use not just one source of information (e.g., peer comparison or win/loss record) but also be able to evaluate their competence using additional/other sources (e.g., skill improvement, enjoyment of the activity, achievement of self-set goals). That way, if they lose an

important game/match or fail to make a very select team, they can still perceive competence using these other sources of information. Similarly, an older woman who begins participation in competitive running (e.g., triathlons, marathons) can enjoy high perceptions of competence if she evaluates her ability in this activity by using self-comparison sources (e.g., “Am I getting better with continued training?”) rather than just performance outcomes (e.g., “Did I win my age-group race?”).

### RECOMMENDATIONS FOR COACHES, PARENTS, AND PRACTITIONERS

- 1 Provide younger children (ages 4 to 7 years) with high frequencies of positive feedback and multiple opportunities for simple task accomplishment (e.g., “Can you throw this ball to that wall that is all the way over there?”) as opposed to structuring tasks that contain a more outcome-oriented standard (e.g., “You need to knock down all ten pins.”).
- 2 Incorporate the opportunity for children (especially between the ages of 7 through 12) to obtain a wide variety of mastery experiences (e.g., tasks that they cannot initially do but are able to achieve with effort) (e.g., learning to jump rope/hopscotch/serve overhand). Once the child exerts that effort over a period of trials/days/weeks/months and succeeds in mastering the task, provide the child with positive feedback for task outcome but also, and more importantly, for their mastery efforts.
- 3 Decrease the importance of peer comparison (e.g., “How many push-ups did you do today compared to your classmates?”) for children and adolescents (ages 7 through adolescence) and increase the use of self-comparison techniques to evaluate personal competence (e.g., “How many push-ups were you able to do three weeks ago and compare that to how many you did today?”).
- 4 Encourage older adolescents (ages 14 through 18 years) to use multiple sources of information to determine how good they are.
- 5 As a coach, try to find ways to show each adolescent athlete the value of the specific role that they play in relation to team success (e.g., “It may not be whether you are our leading scorer, but whether you do the things that only you can do for our team.”) (see, also, discussion on the facilitation of group/team cohesion in Chapter 33 of this volume).
- 6 Establish a positive, encouraging, and autonomy-supportive socio-emotional environment (see more specific detail in Chapters 4, 35 and 38 in this volume) as this type of motivational climate has consistently been linked to positive psychosocial growth in children, adolescents, and young adults.

In general, then, the developmentally-based information presented in the previous sections clearly shows that children and adolescents do differ significantly from one developmental stage to the next. Adults should use this information to structure sport and physical activity programs that are appropriate for children and adolescents at each maturational stage. In the next section of this chapter, some recommendations regarding this process are provided.



**Figure 1.3** Children’s sport enjoyment will be enhanced with the use of developmentally-appropriate learning activities.

## **CREATING DEVELOPMENTALLY-APPROPRIATE YOUTH SPORT AND PHYSICAL ACTIVITY ENVIRONMENTS**

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Identifying the characteristics of developmentally-appropriate sport and physical activity environments would appear to be a daunting task. However, this process was made easier with the publication of the Developmental Model of Sport Participation (DMSP) (Côté, Baker, & Abernethy, 2007) (see further discussion of this model and its relationship to talent development in Chapter 42 of this volume). The origins of this model began with a 1999 study by Côté which resulted in the identification of three stages of sports participation, spanning from early childhood through late adolescence. These stages were identified as the sampling (ages 6–13), the specializing (ages 13–15), and the investment years (ages 15–20). Subsequent additional support for Côté’s DMSP

has been documented in various athletic talent development studies (e.g., Strachan, Côté, & Deakin, 2009).

Within this DMSP model, the sampling years are characterized by participation for enjoyment and by sampling from a variety of sport-related activities. Children at this stage should be introduced to organized activities (sports and games) in the form of what Côté and colleagues (Côté, 1999; Côté & Hay, 2002) termed deliberate play activities. The primary aim of these activities is to increase motivation and enjoyment. While activities tend to be structured, they do not include significant involvement from adults. Parents, however, should support the emphasis on play (rather than focusing solely on practice) and offer

encouragement and support to their child. Coaches should provide children with opportunities to develop fundamental motor skills while also promoting positive motivations and beliefs about sports participation.

During the specializing years, athletes invest significantly more time and effort in practicing the specific skills for their preferred sport(s) as training and competition become more important. Despite the shift toward a more structured training regime, enjoyment should still remain central to athletes' experiences, thus maintaining a balance between deliberate play and practice. Given the focus at this stage on the development of specific sports skills, there may be a need for a more specialized and expert coach.

The transition into the investment years typically occurs around age 15. For those athletes that successfully transition, the focus switches to achieving an elite level of perfor-

mance, primarily in one selected sport. During this career stage, athletes invest considerable time and effort in the development of skills and strategies for competition through deliberate practice. It is important that practitioners are aware of the many sacrifices (e.g., personal, extra-curricular activities) that athletes will likely make at this stage of their careers to concentrate on training and competitions.

From an applied perspective, the question still remains – how can practitioners (e.g., coaches, parents) meet the needs of young athletes at various stages of their participation in sport? Based on the research conducted by Côté and his colleagues (Côté, 1999; Côté & Hay, 2002), some guidelines can be identified. Due to the extensive developmental changes that occur between the ages of 6 and 15 (see first section of this chapter), the practical implications provided in the next sections focus on the sampling and specializing years of participation.

## **RECOMMENDATIONS FOR CREATING AN EFFECTIVE ENVIRONMENT: THE SAMPLING YEARS**

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As noted earlier, enjoyment and intrinsic motivation should constitute the foci of the sampling years. Indeed, a lack of enjoyment experienced in the latter stages of these years is one reason why children may decrease their participation and/or dropout altogether. To maximize children's enjoyment, adults should create a positive and encouraging environment (cf., Gilbert, 2006).

- 1 Significant adults should provide ample learning opportunities for children at this stage to develop a wide range of skills. Such an environment will enable all children to demonstrate mastery-based competence and thus develop high perceptions of ability.
- 2 Coaches should design their play and practice activities in ways that promote excitement and challenge so as to maximize children's levels of enjoyment.

- 3 Coaches will need to continuously modify task difficulty and provide quality verbal feedback (i.e., technical learning cues combined with positive reinforcement) to children of varying abilities so that all children can experience continued success throughout their years within this stage.
- 4 For children at this level, enjoyment is very much dependent on the presence of strong peer relationships. Thus, coaches should create a mastery-oriented climate (i.e., emphasize self-improvements) as opposed to using peer-rivalry in order to motivate young athletes' practice efforts.
- 5 Children's sources of enjoyment appear to change across the sampling years (cf., McCarthy & Jones, 2007). In particular, as children get older, they enjoy competitive experiences. Thus, coaches should provide competitive opportunities and skill-based challenges during deliberate play activities.



However, the emphasis during these tasks should still remain on the individual athlete's mastery rather than on performance outcomes or the peer comparison process.

- 6 Placing less emphasis on outcome (i.e., winning) does not need to occur at the expense of competitive play and practice. Rather, coaches can and should provide aspiring young athletes with opportunities to be competitive because a competitive mentality is an important psychological characteristic that athletes will need as they successfully transition into the investment years (Mills, Butt, Maynard, & Harwood, 2012).
- 7 Developing fundamental motor skills through deliberate practice activities

remains central to the sampling years of participation. It is possible that children who spend appropriate time engaging in deliberate play activities will spend less time in deliberate practice during the specializing years (cf., Côté, 1999; Côté & Hay, 2002). With this in mind, parents and coaches should avoid the temptation to push children into sport specialization at younger ages.

- 8 Both parents and coaches should adhere to the notion that intrinsic reasons are the primary focus for participation at this stage. Parents, in particular, should adopt an appropriate perspective on their child's sporting involvement, provide social support, and also encourage ownership (cf., Gould, Lauer, Rolo, Jannes, & Pennisi, 2008).

## RECOMMENDATIONS FOR CREATING AN EFFECTIVE ENVIRONMENT: THE SPECIALIZING YEARS

As outlined earlier, following the transition into the specializing years of participation, athletes will begin to invest a great deal of time and effort into practicing their preferred sport(s). Accordingly, training and competition become increasingly structured, and there is a more pronounced focus on the development of sport-specific skills.

- 1 Coaches should avoid creating an environment that focuses solely on intense levels of training because this can lead to decreases in athletes' intrinsic motivation, and corresponding increases in burnout (cf., Goodger & Kenttä, 2012).
- 2 Coaches should maintain a balance between deliberate play and deliberate practice activities, as it is still important for athletes at this stage to be exposed to successful mastery experiences in order to maintain or increase their levels of confidence. This can be accomplished through the use of individual and team performance goals (i.e., goals in relation to one's own previous performance).

- 3 Coaches and parents should teach and encourage athletes to view "making mistakes" as being part of the learning and development process. This attitude will enhance athletes' persistence in learning and developing their skills.
- 4 Creating friendly-rivalry through challenging and competitive practices is linked to the development of mental toughness. Thus, coaches should encourage athletes to "use" each other in practice to push themselves to improve their skills.
- 5 Athletes develop their own self-confidence as well as confidence in their coaches during these specializing years (Cote & Hay, 2002). To maximize this process, coaches can implement practices that provide athletes with accomplishments and also acknowledge their achievements. Coaches can also provide athletes with opportunities to "model" confident athletes (e.g., through observing video film or other teammates).
- 6 Coaches should provide opportunities for athletes to be involved in some decision

making to help empower them to take ownership of their sport development. Specifically, setting up practices that involve active learning (e.g., questioning methods) and problem solving type drills can be implemented. In addition, it may be important for coaches to use strategies to help athletes become aware of their performance (e.g., analysing performance combined with coach–athlete dialogue) through engaging in self-reflection and problem solving drill-based activities.

To conclude, this section of the chapter has revealed that young athletes' journey through the developmental stages of sport participation is a complex and multidimensional process that takes place over a sustained period of time, and is influenced by a range of individual and environmental factors. To assist practitioners who work with these children (e.g., coaches, parents, sport psychology consultants), some practical implications were identified in order for such adults to provide developmentally-appropriate learning environments.



### LEARNING AIDS

- 1 Describe the range of body sizes and shapes a coach might see in a coeducational sport team comprised of children who are all chronologically 12 to 13 years old.

*These children are in the late childhood to early adolescent age range. This is a time of rapid growth where many body size, shape, and composition changes occur. Due to variability between children in rate of maturation, the early maturing athletes may already be displaying a more mature body size and shape (i.e., being much closer to their full adult size and shape) while their late maturing peers are still exhibiting a more linear and child-like physique with many maturational changes still to come. Thus, coaches at this age level will likely see a full range of maturational levels within their team.*

- 2 Compare a 12-year-old child's use of near peer comparison to evaluate her or his sport competence with the older adolescent's use of both near and far peer comparison.

*"Near" peers are defined as peers that the child knows and can directly compare herself or himself to on a regular basis (e.g., friends, teammates, classmates). As children move into adolescence (13 through 18 years) the sources of information they use to evaluate their physical competence expands and they have the ability to compare themselves not only to "near" peers but also to unknown or "extended" peers (e.g., others of the same age or developmental level but from broader contexts, such as national/international). Due to the extension of the peer group, during these years, adolescents' perceived sport/physical competence might decline because they may now start comparing themselves to a broader peer group (all individuals in their state/region or country).*

- 3 Identify the three stages of sports participation that are included in Côté's Developmental Model of Sport Participation (DMSP) and explain the key characteristics that define and distinguish each of these stages.

*The sampling years are characterized by participation for enjoyment and participation in a variety of sport-related activities. Children are introduced to organized activities (in the form of deliberate play activities) and while activities tend to be structured, they do not include a great deal of involvement from adults.*

*In the specializing years, athletes invest significantly more time and effort in practicing their preferred sports. Training becomes more important and there is a focus on developing sport-specific skills.*

*During the investment years, the focus switches to achieving an elite level of performance. Athletes will likely select one sport and invest a great deal of time and effort in the development of skills and strategies for competition through deliberate practice.*



## REVIEW QUESTIONS

- 1 A recommendation that was consistently identified in this chapter was that children should probably not specialize in one sport during the childhood and even into the early adolescent years. Provide a rationale for this recommendation using the information from the following three sections/parts of this chapter: (a) physical growth; (b) motor development; (c) stages of participation.
- 2 Given that children of the same chronological age may vary from each other in their rate of maturation, explain why parents of young athletes who are in the 12–15 year age range should encourage them to use sources other than peer comparison to evaluate how good they are at a sport.
- 3 You are the coach of a team of young athletes who are in the sampling years. Describe the type of climate you should create. How would this type of climate differ from that which you might create if your young athletes were in the specializing years?



## EXERCISES

- 1 Interview project

Assignment goal: To provide students with an opportunity to see how children of varying ages or stages use different sources of information to evaluate their physical competence.

Assignment description: Students should interview six children, two from each of the following age periods: (a) 4 to 7 years; (b) 8 to 12 years; and (c) 13 to 18 years. Begin the interview by identifying a physical or sport task that each child thinks she or he is really good at. For the younger children, this might be a fundamental motor skill (e.g., running, hopping, throwing) while for older children it might be a more sport-specific skill (e.g., batting in baseball/softball; shooting in basketball; playing defense in volleyball). Once each child has identified such a physical or sport task, ask the child a series of questions to determine how she or he has made that competence judgment. Specifically, the goal of

each interview is to determine what sources of information each child uses to evaluate her or his competence at that physical activity or sport task. Follow up this series of questions with a similar set of questions to determine how each child arrives at the conclusion that he or she is not good at a physical activity or sport. When all interviews are completed, write a paper summarizing your results. Discuss not only possible age/stage differences in the sources of information children use but also possible differences between children at the same age level (i.e., two eight year olds may use different sources of information). You might also want to address why some children use different sources to evaluate high and low competence. Why do you think such differences might occur?

## 2 Case study

Assignment goal: To provide students with an opportunity to understand how an athlete has developed his/her talents to become successful.

Assignment description: Students will be required to conduct a case study by finding an experienced athlete (collegiate or professional athlete) to interview. Using retrospective recall, the interview will focus on the athlete's developmentally-based sport experiences and how he/she progressed through the stages of sport participation. For the interview, students should consider obtaining information about the following important points: (a) the age at which this athlete began to focus on specializing in his/her sport; (b) the factors that influenced the athlete's decision to select and continue participation in his/her chosen sport; (c) the role of significant others (e.g., parents, coaches, teammates); and (d) positive and negative factors influencing transitions into higher levels of participation. At the end of the interview task, students will write a written report on the developmentally-based experiences of the athlete.

## 3 Development of a model youth sport program

Assignment goal: To provide students with experience in designing a developmentally-appropriate model of sports participation for children and youth that have been selected to participate in a youth sports development academy.

Assignment description: Students should work in small groups to develop an applied model of sports participation. Each group can select a sport of their choice for this assignment. The role for students in each group is to develop, present, and promote their model to the academy performance development manager (i.e., role-playing scenario) and persuade him/her that their model should be adopted because it will be more effective in developing athletic talent. The participants in the academy are aged between 6 and 15 years. In completing this assignment, students should consider some of the following important points: (a) the characteristics of the environment and its appropriateness for participants of varying ages; (b) the role of coaches and parents; and (c) the development of key physical and mental skills.



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# Nurturing talent in youth sport<sup>1</sup>

JEAN CÔTÉ, DAVID J. HANCOCK AND BRUCE ABERNETHY



## SUMMARY

In this chapter, we outline key variables regarding nurturing talent in youth sport. To begin, we present four types of developmental activities that youth engage in, which are important for athletes' development: Deliberate practice, play practice, spontaneous practice, and deliberate play. The role of the coach is also paramount for developing talent in youth athletes, and we provide a definition of an effective coach that is broken down into three components: coach knowledge, coach contexts, and athlete outcomes. Furthermore, we identify key coaching principles that should be implemented depending on the athletes' developmental stage. Finally, we examine the role of parents for developing talent. Parents offer several types of support for their children including emotional, informational, tangible support and companionship. We discuss how parents can fulfill these roles and also offer suggestions for how parents can support their children based on the type of youth sport in which they are engaged.

## INTRODUCTION

Achieving elite performance in sport is a feat that is highly acclaimed and can be financially rewarding in today's society and in most countries in the world. Athletes that have the commitment, opportunities, and chance to make it to the top of their sports are highly celebrated and recognized public figures. Achieving Olympic or professional levels of performance in sport has several appealing outcomes; however, the long-term personal and social resources associated with talent

development in sport are considerable and are often overlooked when examining only the pinnacle accomplishments of expert athletes.

Talent development in sport is a long-term journey that begins in childhood and has important transition points during adolescence and adulthood. Adults who lead youth sport often generate conflicting messages regarding early talent development that are incongruent with healthy youth development and long-term sport participation. For instance, there is a long history

of adult-led youth sports that are based on a talent identification model, in which adults use a rigid skill-based approach to evaluate talent and weed out the less skilled children. This approach implements early selection of “talented” children, which involves an increase in the amount of resources allotted to a special group of athletes, and entails a training schedule that may be inconsistent with a child’s motivation to participate in sports. There are a number of problems with these traditional methods of talent identification when applied to children (Vaeyens, Gullich, Warr, & Philippaerts, 2009). For example, characteristics that distinguish success in an adult athlete (i.e., size or speed) may not become apparent until later adolescence. At the same time, there is no guarantee that a young athlete who possesses a desired attribute will possess that attribute as an adult athlete. Additionally, there is the major concern that youth begin maturing at different times and rates; late maturing athletes could be summarily dismissed through traditional early talent identification methods. Finally, there are a number of negative consequences associated with intensive training and rigid skill-based models of children’s sport, such as increased level of injuries, burnout, and dropout (Côté, 2009).

The application of a talent selection approach to youth sport programs, such as the one described above, may be effective for the development of talent in sports with large bases of participants in which children could be substituted with other individuals if they do not perform according to standards set by adults. This approach to talent development during childhood rarely considers the well-being and retention rate of children in sport.

Considering that talent in sport is difficult to assess during childhood, an alternative approach is to engage children and create a positive environment in which all children have an equal opportunity to develop their talent. Such a developmental perspective to talent requires input from personal (e.g., motivation, effort, and concentration) and social (e.g., coaches, parents, and equipment) variables over a long period of time for its realization. This chapter presents and discusses the different developmental activities that affect youth involvement in sport and the long-term acquisition of skills by focusing on a talent development approach. Different aspects of talent development in sport will be presented, including the effect of different developmental activities and the influence of coaches and parents.



## OBJECTIVES

The four objectives of this chapter are to:

- 1 Define the developmental activities of practice and play, and their long-term impact on participation and talent development in sport.
- 2 Understand the concepts of diversity (participating in several sports) and intensity (frequency and number of hours participating in one sport) as variables that affect talent development in sport.
- 3 Define the role of the coach at different stages of an athlete’s development in sport.
- 4 Define the supporting roles of parents at different stages of athletes’ development in sport.

## DEVELOPMENTAL ACTIVITIES

Several authors have analyzed and discussed the type of activities that have the most significant impact on talent development in sport.

Côté, Erickson, and Abernethy (2013) recently reviewed this literature and suggested a taxonomy of activities that could be generally catego-



rized as either practice or play. The fundamental difference between practice and play resides in the goal that the activity aims to achieve in a specific sporting situation. The goal of practice activities is to improve performance, whereas the goal of play activities is to have fun. The various practice and play activities that constitute sport fulfill different needs in youth and ultimately affects their current and future sport involvement. The intrinsically-motivating and self-directed nature of primarily play-oriented activities contrasts with the outcome-oriented and often adult-driven nature of mainly practice-oriented activities.

Côté et al. (2013) suggested that the developmental activities of youth in sport can be separated by two axes; first, the social structure of the activity and second, the personal value the activity provides to the participants. The first axis shows the amount of instruction and input that is vested by supervising adult(s) (i.e., the coach) versus the participating youth. At one end of this axis there are sport activities where adults have minimal roles in providing instructions, as in play activities. At the other end of the axis there are sport activities in which adults set the direction and provide instruction in a structured environment, such as the structured practices of organized sport. A second axis relates to the personal values associated with an activity, varying from extrinsic to intrinsic values. Extrinsic values describe activities that are performed with the goal of improving skills or performance (e.g., practice), while intrinsic values symbolize activities that are done for inherent enjoyment (e.g., play). When combined, these two axes form a matrix in which the prototype activities of youth sport can be located and a distinct learning context emerges. Accordingly, the prototype activities of deliberate practice (Ericsson, Krampe, & Tesch-Römer, 1993), play practice (Griffin & Butler, 2005; Launder, 2001), spontaneous practice (Livingstone 2002), and deliberate play (Côté, 1999; Côté, Baker, & Abernethy, 2007) result from the intersection of these two axes. Each of these prototype activities are defined below.

Activities led by adults to improve performance:

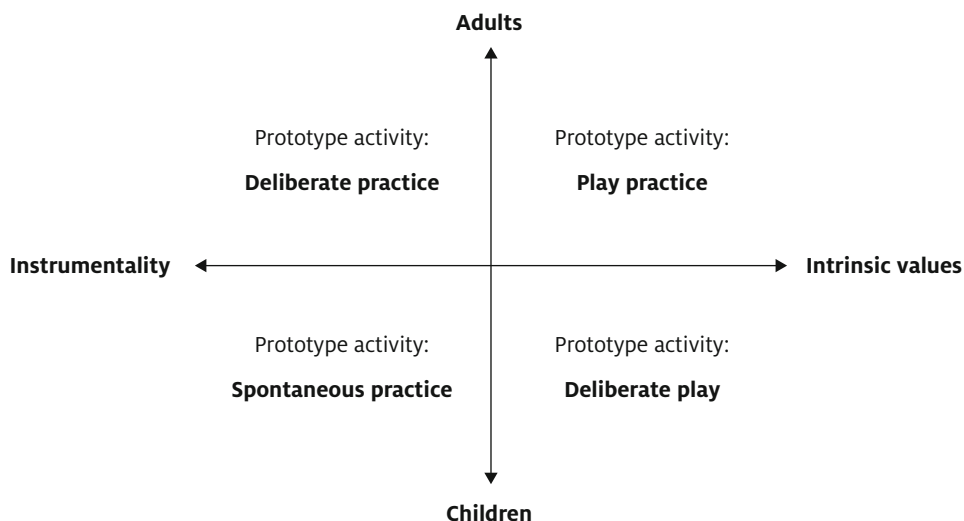
- **Deliberate practice:** According to Ericsson and colleagues (1993), engagement in deliberate practice requires effort, generates no immediate rewards, and is motivated by the goal of improving performance rather than its inherent enjoyment. The typical type of deliberate practice in youth sport includes coaches setting up drills that are aimed at improving specific skills in their young athletes. For example, a tennis coach provides instruction and technical feedback to an athlete who purposefully tries to improve her serve during a practice.

Activities led by adults to have fun:

- **Play practice:** Launder (2001) used the term 'play practice' to describe a generic type of activity in sport that is led by adults to emphasize fun and games in a practice environment. An important aspect of play practice activities is to keep youth motivated by designing activities that are enjoyable and represent the typical games that are played by youth. For instance, a coach may design an adapted game in a volleyball practice where all players have to hit underhand shots.

Activities led by youth to improve performance:

- **Spontaneous practice:** Livingstone (2002) suggested that learning that occurs outside of the curriculum of formal institutions or programs is considered an important form of education. An activity that describes this type of learning in sport could be labeled as 'spontaneous practice'. Spontaneous practice in sport is structured by youth in their free time with the goal of improving aspects of their sport skills (e.g., extrinsic value). However, in spontaneous practice, youth do not follow an adult-specified curriculum nor do they



**Figure 2.1** Different dimensions of play and practice.

necessarily work on the most important skills to improve their performance. Spontaneous practice is not systematically or pedagogically planned; rather, it originates sporadically in certain situations, which are coordinated and led by the youth themselves. An example of spontaneous practice is when two athletes use their free time to practice their jump shots in basketball without supervision or direction from an adult.

Activities led by youth to have fun:

- **Deliberate play:** Côté and colleagues (Côté, 1999; Côté et al., 2007) defined deliberate play as an intrinsically-motivating activity, that provides immediate gratification, and one that is specifically designed to maximize enjoyment. Deliberate play activities, such as street basketball or soccer, are regu-

lated by rules adapted from standardized sport rules and are set up and monitored by the youth in the activity. An example of this activity is when youth get together in a yard or a public park to play soccer.

Deliberate practice, play practice, spontaneous practice, and deliberate play, and organized competition do not constitute a complete and exhaustive list of all the activities of youth sport. However, these activities are a representation of the typical characteristics of different types of involvement of youth in sport. It has been repeatedly shown that it is important to include each activity in youth sport programs as they contribute to long-term participation in sport and talent development. The developmental activities presented in this section play an important role in youth learning of new sport skills and in motivating young people to stay involved in sport.

## DIVERSITY AND INTENSITY IN YOUTH SPORT

Côté and colleagues' Developmental Model of Sport Participation (DMSP; Côté et al., 2007) described two different introductory paths toward elite participation in sport which

account for youths' psychosocial, physical, and talent development. In the first path of the DMSP, children aged 6 to 12 engage in sampling, which consists of participation in a wide vari-

ety of sports that involve high levels of youth-led activities. Children who wish to engage in sport for recreational purposes will continue from the sampling years into the recreational years (ages 13+). However, youth interested in elite development will continue into the specializing years (ages 13 to 15) and then into the investment years (ages 16+). The specializing and investment years are characterized by a gradual shift of involvement from diversified sporting activities to a more intense involvement in one organized sport.

The second path of the DMSP consists of an early specialization pathway that begins at approximately age 6. Early specialization involves an intense involvement in one sport that includes mostly developmental activities that are aimed at improving performance in one sport (e.g., deliberate practice).

When considering the dichotomy of sampling and early specialization, it is apparent that both approaches can lead to talent development under optimal conditions. However, the nurturing of talent through the diversification of sports without an intense focus on one sport during childhood can have more positive outcomes and less negative consequences for all children involved in sport. For instance, although an early specialization trajectory can lead to elite performance in sport, it has also been shown to result in a reduction in physical health (i.e., overuse injuries) and enjoyment (Law, Côté, & Ericsson, 2007). Côté and Abernethy (2012) reviewed and discussed the available developmental data on sport participants and highlighted significant costs associated with an early specialization trajectory in sport. The costs of intensity over diversity in sport during childhood can be summarized under three major themes: 1) burnout and dropout; 2) recreational participation; and 3) personal development.

**Burnout and dropout:** Studies of burnout and dropout athletes indicate that sport programs which focus on early specialization during childhood have more psychological and physical costs than childhood sport programs that focus on involvement in a variety of sports (i.e., early sampling).

**Recreational participation:** Early specialists have limited exposure to different sports during childhood and this has been shown to reduce their ability and choice to get involved in sport at a recreational level later on in their lives.

**Personal development:** Youth sport programs provide a platform for positive youth development, and if structured appropriately, they can have direct effects on a youth's development and productivity. The literature suggests that children who sample a variety of sports are exposed to unique socialization experiences that better shape development. Because of its focus on performance outcomes for a select number of children, early specialization programs do not have the same capacity for promoting positive youth development through sport.

Because of the limited number of hours available in a given year for school, sport, and other leisure activities, young people often have to make choices in sport between diversity and intensity. A diversity choice (i.e., early sampling) involves participation in multiple sports on a yearly basis, while an intensity choice (i.e., early specialization) involves a focus on one sport year-round. It is essential that youth and adults understand and appreciate the positive influence of sampling and the costs associated with early specialization in one sport during childhood, prior to making a choice between pursuing diversity versus intensity in youth sport.

## COACHING FOR TALENT DEVELOPMENT

Coaches are a central resource for talent development programs in sport. They play an important role in terms of developing athletes'

sport skills as well as the personal and social competencies needed to compete at high levels of performance. Côté and Gilbert (2009)

recently proposed an integrative definition of coaching effectiveness that focuses on coaches' knowledge, the different contexts in which coaches typically work, and on athlete outcomes. Based on a thorough review of coaching, teaching, athlete development, and positive psychology literature, the definition of coach effectiveness is:

The consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in specific coaching contexts.

Coach knowledge extends beyond the commonly examined area of professional knowledge (sport-specific knowledge), to include also interpersonal (connection with others) and intrapersonal (openness to continued learning and self-reflection) forms of knowledge. Coaching contexts refer to the varied sport settings in which coaching can take place, such as coaching children or coaching adults. The final component of the integrative definition is athlete outcomes, which are defined as the 4Cs (competence, confidence, connection, and character). While the nature of the knowledge required by coaches of different sporting contexts is highly variable, the 4Cs remain stable as the ultimate indicator of athlete outcomes and coaching effectiveness. Vierimaa, Côté, Erickson, and Gilbert (2012) defined the 4Cs as sport specific constructs that serve as a metric of coaching effectiveness.

**Competence:** Competence is conceptualized as a high level of achievement, performance, or athletic ability. More specifically, sport competence can be broken down into general dimensions, such as: 1) technical skills; 2) tactical skills; and 3) physical skills. Coaches' ability to develop sport competence in their athletes is the most obvious knowledge components of the coaching effectiveness coaching.

**Confidence:** The athletes' long-term sport experiences should lead to significant and enduring changes in sport confidence. Therefore "trait sport confidence" as opposed to "state sport confidence" should be the best indicator of coaching effectiveness. Using published definitions of sport confidence, Vierimaa et al. (2012) defined sport confidence in the context of coaching as the ability for coaches to instill in their athletes, the belief that they possess the capacity to be successful in the sport that they practice.

**Connection:** Sport is a social phenomenon that involves interactions with other individuals. Connection is an outcome that indicates the quality of the relationships that athletes develop with other individuals in their sport environment. In order to promote connection, coaches need to engage their athletes in meaningful and positive relationships with their peers and the adults (e.g., coaches and parents) who are also involved in the sport environment.

**Character:** Character is defined in terms of moral development and sportpersonship behaviors. Specifically, character in sport is generally typified by the engagement in prosocial behaviors and avoidance of antisocial behaviors. 'Prosocial behaviors' are voluntary actions intending to help or benefit others; for example, helping an injured opponent. Antisocial behaviors, on the other hand, are voluntary actions intending to harm or disadvantage others, such as deliberately injuring an opponent. It is important for coaches who are involved in nurturing talent in young athletes to promote the development of character.

The 4Cs provide a concise yet comprehensive framework with which to measure performance (competence) and psychosocial outcomes (confidence, connection, and character) in long-term talent development programs for athletes. Together, these four constructs represent a holistic approach to talent development that incorporates traditional goals of youth sport programs (e.g., skill

development and performance) with an added emphasis on positive psychosocial development. Because the road to talent development in sport involves distinct stages and learning contexts, coaches must be aware of the overriding sport context in which they work. In other words, coaches must recognize how the needs of their athletes change across the different talent development phases, from childhood to adulthood.

According to the definition of coaching effectiveness described in this section, coaches in different contexts will require a different mix of professional, interpersonal, and intrapersonal knowledge, in order to develop an athlete's competence, confidence, connection, and character. For example, developing 10-year-old basketball players' 4Cs will require different coaching expertise, than the development of 4Cs in professional basketball players. Based on an extensive review of athlete development literature, Côté and Gilbert (2009) suggested different profiles of coaching objectives for four different types of coaching contexts: 1) participation coach for children; 2) performance coach for young adolescents; 3) performance coach for older adolescents and adults; and 4) participation coach for adolescents and adults. The first three contexts are relevant to coaching athletes who are on a talent development pathway. Keeping with the terminology used in this chapter, we can re-conceptualize the first three of coach contexts as: 1) coach for children; 2) coach for young adolescents who choose to specialize in a sport; and 3) coach for older adolescents and adults who choose to invest in a sport. The different types of knowledge required by coaches at different phases of an athlete's development of talent in sport were adapted from Côté and Gilbert, and are reproduced below.

Coach for children:

- 1 Adopt an inclusive selection policy as opposed to an exclusive performance-based selection policy.

- 2 Organize a mastery-oriented motivational climate.
- 3 Set up safe opportunities for athletes to have fun and engage playfully in low-organization games.
- 4 Teach and assess the development of fundamental movements by focusing on the child first.
- 5 Promote the social aspect of sport and sampling.

Coach for young adolescents who choose to specialize in a sport:

- 1 Organize the sport experience to promote a focus on one sport.
- 2 Teach the "rules of competition".
- 3 Offer opportunities for fun with increasingly greater demands for deliberate practice.
- 4 Teach and assess physical, technical, perceptual, and mental skills in a safe environment.
- 5 Present positive growth opportunities through sport (i.e., civic engagement, responsibility).

Coach for older adolescents and adults who choose to invest in a sport:

- 1 Set up a training regime grounded in deliberate practice.
- 2 Allow athletes the appropriate amount of mental and physical rest.
- 3 Prepare athletes for consistent high-level competitive performance.
- 4 Teach and assess physical, technical, and tactical skills in a safe environment.
- 5 Provide opportunities for athletes to prepare for "life after sport".

The different profiles of coaches presented above illustrate the unique knowledge of each coaching context that is necessary to nurture talent development in sport, which require the integration of the 4Cs in talent development sport programs. Coaches that focus on devel-

oping talent will require a high level of professional, interpersonal, and intrapersonal knowledge. However, there will be variation between each context due to the nature of the

knowledge required to develop an athlete's competence, confidence, connection, and character.

## **PARENTS**

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In a large study of talented teenagers, Csikszentmihalyi, Rathunde, and Whalen (1993) suggested that "a home environment in which one is secure enough to feel cheerful and energetic, and challenged enough to become more goal-directed, increases teenagers' chances of progressively refining their talents" (p. 175). It is essential to recognize that the family is a social group that may appear in diverse forms; families appear in various settings, have a unique set of experiences, and are in constant development. Different types of families include parents and their biological or adopted children, single parent families, and extended families. These properties that define families, underline the distinctiveness of family groups that may be involved in sport. Independent of how a family is constituted, young athletes require a form of support from individuals within the family unit in order to realize their full potential in sport. Because sport literature has mostly studied parents as the provider of support for youth development in sport, the literature on parents will be described below. That being said, it is important to note that other individuals within a family unit can potentially provide the psychological and social

support necessary for youth to develop and maintain an identity, self-esteem, and motivation for sport participation and performance.

Hellstedt (1987) suggested that parents' involvement in their children's sport participation can be conceptualized on a continuum from under-involved, to moderately-involved, to over-involved. He proposed that moderately-involved parents provide more positive conditions to an athlete's talent development than over- and under-involved parents. Therefore, on this continuum, parental involvement could range from being perceived as insufficient to overwhelming for athletes, which provokes negative outcomes. Hellstedt's (1987) description of parental involvement provides a generic understanding of the amount of involvement that leads to continued participation in sport; however, the question regarding the optimal amount of parental support necessary for talent development in sport has been underexplored and deserves more consideration. The literature on parental support, which will be discussed next, extends this view by identifying the nature of the support associated with young athletes' motivation and talent development.

## **PARENTAL SUPPORT**

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Parents' psychosocial support is an essential element in the development of youth self-esteem, competence, and achievement. Côté and Hay (2002) suggested four categories of psychological needs for young athletes: 1) emotional support; 2) informational support; 3) tangible support; and 4) companionship. Emotional support is provided through parents' comforting gestures during times of stress and anxiety. When parents give their

child positive feedback on his or her ability or express belief in their child's capabilities, this enhances the child's belief that he or she is cared for. These supportive efforts and gestures can enhance a child's sense of competence and confidence (Cutrona & Russell, 1990). Informational support refers to parents' provision of advice or guidance in situations of uncertainty. For example, parents can provide general information on how to choose a suit-

able sport program and when to begin specializing in one sport.

Tangible support refers to the concrete assistance provided to children in order to sustain their participation in sport. Examples of tangible support include providing the financial assistance or the time commitment necessary for lessons, equipment, and travel associated with sport participation. Overall, tangible support is required for participation in most sport programs, and the lack of tangible support can certainly become a constraint to a child's sport participation and talent development. Companionship, or "network support", reflects informal relationships that enable an individual to engage in various forms of social and recreational activities (Cutrona & Russell, 1990). Parents can be involved in various kinds of companionship related to their child's participation in sport. For instance, parents can develop special relationships with their children through sports by attending professional or amateur sporting events with their child, collecting sports cards for their child, getting involved in deliberate play with their child, or simply by spending time travelling to and from practices with their child (Côté, 1999).

Fraser-Thomas, Strachan, and Jeffery-Tosoni (2013) recently reviewed the literature on parental influence and talent development and suggested a series of behaviors that emerge from various studies as being critical elements of parental support. They recommended that independent of an athlete's stage of talent development, parents of youth should create task-oriented climates at home that are supportive of youth autonomy. Furthermore, instead of creating or supporting unreasonable performance objectives for their child-athlete, parents should model life skills and positive sport participation. In terms of age-specific behaviors, Fraser-Thomas et al. emphasized the following behaviors:

Parents of children in sport (approximately ages 6–12):

- 1 Engage in **play** activities with child.
- 2 Provide opportunities to sample different sports.
- 3 Provide positive and encouraging feedback.
- 4 Avoid giving constant technical instruction.

Parents of adolescents who choose to specialize and invest in a sport (approximately ages 13–18):

- 1 Increase provision of tangible support.
- 2 Discuss career transitions and choices regarding intensity of training.
- 3 Provide feedback regarding youth attitude and effort in sport.
- 4 Avoid overemphasizing outcomes (e.g., winning).

Parents have a critical role in nurturing talent development in sport during childhood and adolescence. It is important to acknowledge the dynamic role parents play, which begins as a leadership role during childhood, and transitions to a guiding role during adolescence. Parents assume a leadership role during childhood by initially getting their children interested in sport by allowing them to sample a wide range of enjoyable sporting activities. When youth start to invest more seriously in one sport during adolescence, parents become guiding and supporting figures that help youth make the right decisions about the intensity of their involvement. During the stressful adolescent period of talent development in sport, parents' primary role is to foster an optimal learning environment rather than creating new demands or pressure.



## LEARNING AIDS

- 1 Define deliberate practice.  
*Deliberate practice is effortful, generates no immediate rewards, and is motivated by the goal of improving performance rather than inherent enjoyment.*
- 2 Explain the difference between talent identification and talent development.  
*For talent identification, adults evaluate skill-based performance and select “talented” children to become part of elite programs. Conversely, the primary purpose of talent development is to help children enjoy sport while learning skills and promote a sporting environment that focuses on the development of the person in sport.*
- 3 Describe the relationship between diversity and intensity in sport.  
*Typically, as diversity of sports decreases (e.g., going from playing four sports to two sports), the intensity of commitment to the remaining sports increases.*
- 4 Discuss the stages of the Developmental Model of Sport Participation (DMSP).  
*The sampling years (age 6 to 12) are characterized by diversity and involvement in various sports, low amounts of deliberate practice, and high amounts of deliberate play. The specializing years (age 13 to 15) involve a narrowing of sporting activities and equal amounts of deliberate practice and deliberate play. The investment years (age 16+) see a focus on one sport and a drastic increase in deliberate practice with low amounts of deliberate play.*
- 5 Identify the three main knowledge components of the coaching effectiveness definition.  
*Professional knowledge, interpersonal knowledge, and intrapersonal knowledge. These knowledge bases combine to impact athletes’ competence, confidence, connection, and character in sport.*



## REVIEW QUESTIONS

- 1 What are the four main types of developmental activities? Describe and provide an example for each activity.
- 2 What are the pros and cons of early specialization in sport? Which sports typically have athletes who specialize at an early age?
- 3 In your own words, what is the definition of coaching effectiveness? Provide a unique example of each component of the definition.
- 4 What types of parental support have been identified in this chapter? Describe and provide an example for each type of support.





## EXERCISES

- 1 Read a biography of a famous athlete. When reading, think about the types of coaching and parental support that the athlete received.
  - 2 Interview a friend regarding their sport experiences. Specifically, ask about the developmental activities that they engaged in (e.g., play versus practice), as well as the sport stream they entered (e.g., sampling versus specializing).
  - 3 Go to a local youth sporting event and sit in the stands with the parents. Record the types of support the parents offer the athletes. Do you think parents are mostly positive or negative with their support?
  - 4 Visit the following web address:  
[http://www.athleticmanagement.com/2012/02/28/timeless\\_lessons/index.php](http://www.athleticmanagement.com/2012/02/28/timeless_lessons/index.php). Based on this article, explain how John Wooden met the criteria of an effective coach.
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## NOTE

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# Self-esteem and self-perceptions in sport and exercise

KENNETH R. FOX AND MAGNUS LINDWALL



## SUMMARY

Experiencing self-esteem is one of the most important of psychological needs. It is associated with good mental health, how well we cope with the stresses and strains we face, and has an important influence on our choice of and persistence in behaviours. Our level of self-esteem is determined by the way we see ourselves, or our self-perceptions in the many aspects of life in which we are involved. Those aspects closest to us are the most salient, such as family and friendships, and how we look and how we perform at school or work. This complex of experiences is used to form an overall impression of worth or esteem that carries powerful emotions such as pride and shame. Because we enjoy feeling good about ourselves, we tend to make the most of those aspects of life which provide success and achievement and avoid negative experiences. Sport and exercise involvement is very public and can have strong positive or negative effects on self-perceptions and self-esteem. If coaches, teachers and health professionals are to get the best out of people in terms of their achievement and psychological well-being, it is critical that they understand the whole person and how experiences they help to create affect an individual's self-perceptions and self-esteem. This chapter presents examples from exercise participation and sport performance settings to help leaders develop effective strategies for fostering positive self-perceptions and self-esteem.

## INTRODUCTION

Think of times when you were growing up or even more recently as an adult when you might have felt embarrassed, incompetent, unwanted, downhearted, or a hopeless failure. These expe-

riences can seriously challenge your self-esteem. It may not have knocked all the stuffing out of you but it certainly made you feel low for a while. Several knocks like this in succession

could have a more permanent effect on your feelings and subsequent decisions. The most common response, and the one that seems very sensible at the time, is to avoid from that point on the situation that caused the bad feeling. At school, if you felt useless in sport or physical education, because you could not run fast, throw or kick a ball, or jump as high as others, then it is understandable that you don't look forward to PE lessons. You are likely to drop them as soon as you are allowed, especially if you are made to feel inadequate by an unsympathetic teacher or teasing friends. Similarly, if you feel unattractive or overweight, particularly if you have been told so by people who are important to you, then it might not be surprising that you lack confidence in front of others and tend to shy away from participation. Of course there can be a very positive side to playing sports and exercise. Performing well, being recognized as a good player, being part of a team, improving your fitness or losing weight through hard work can make you feel great and want more and more. These are examples from sport and exercise of how experiences in aspects of our lives can determine our self-perceptions, and how these in turn shape our choices, persistence and performances in different behaviours. These can have both short- and long-term consequences for our self-esteem.

What we think about our *physical* selves, or our bodies in terms of what they look like and how well they work to perform skills and activities, seems to be particularly important. Psychologists have suggested that the physical

self functions as the *public* self. Our body is what we display and what people see. It provides the way we present ourselves to others in terms of our prowess, status, personality and sexuality. This has a powerful effect on how one is viewed by others as a person, particularly in the early phases of acquaintance. This in turn can have an important influence on our lives and reflect how we see and value ourselves.

Compared to some behaviours and pastimes such as reading or playing computer games, sport and exercise inherently draw attention to the physical self. They usually take place in the presence of several other people whether they are co-participants or spectators. Our appearance and physical performance are therefore open to public evaluation, making the experience even more salient. Doing well and looking good can make us feel elated and confident, while a poor showing makes us feel incompetent or inadequate in the eyes of others. It is therefore very important for effective sport and exercise leadership to have a good understanding of the way participants react in terms of self-perceptions to their sport and exercise experiences. As sport and exercise professionals, we are usually in a position of power and are often well-regarded so we have a particular responsibility to help our clients develop positive views of their abilities and self-esteem. This in turn will stimulate their motivation, they will try harder, and it will help them to perform and participate to their full potential. This chapter is written to help sport and exercise coaches and teachers achieve this.



## OBJECTIVES

The overall aim of this chapter therefore is to help future sport coaches, physical education teachers, and exercise specialists to understand more about the psychology of self so that their practice can be more effective. Specifically by the end of the chapter you should be better equipped to:

- 1 Understand the meaning of self-esteem and how it is shaped by our feelings about ourselves in different aspects of our lives.
- 2 Understand how self-esteem affects our attitudes, choices, persistence and performances in sport and exercise.

- 3 Understand how coaching and teaching decisions can have positive or negative influences on self-esteem and self-perceptions.
- 4 Develop a style of coaching that promotes involvement in sports and exercise, improves performance and develops self-esteem.

## UNDERSTANDING THE SELF

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In addition to social and developmental psychology, the self has been the subject of research and debate in disciplines as diverse as sociology, philosophy, theology and even politics. As a result, there are volumes of literature and many different terms are used when discussing this topic, making its study seem complex and confusing.

**What is self-concept?** If asked to describe yourself, you are likely to mention the roles you hold in life such as being a daughter, student, or athlete, or personal characteristics such as the way you look and how you do things. This self description is often termed *self-concept* and does not necessarily carry any judgment about self. It is just a way of explaining what you see about yourself in terms of your characteristics and who you are.

**What is self-esteem?** Self-esteem is more critical in that it carries a value judgment. It is interpreted as overall (global) feelings of worth, respect and value for self, and summarized by the degree to which an individual feels they are a good or an 'OK' person. It is a fairly stable construct but powerful and consistent experiences can change self-esteem over time. It is important because it affects our emotions in a deep way helping us feel pride, satisfaction, and optimism when it is high, or sadness, shame and hopelessness when it is low. Each individual to some extent is free to use whatever criteria he/she wishes to determine the degree of 'OK-ness' so the sources vary according to what he or she values. However, the society or culture in which we live and the way we were brought up also set these values for us. Criteria will also vary across the lifespan as our expectations change, with older adults thinking somewhat differently to teenagers about how they would

like to see themselves. Looking slim, fit and attractive and being a high achiever in work or a pursuit such as sport are very powerful and pervasive criteria that hold high status in western societies. Being well brought up suggests that virtues such as honesty, empathy, being unselfish, or a good team player might be important. However, it is also possible that less virtuous characteristics might provide esteem in some subcultures. For example, being the most violent leader in a youth gang or the dirtiest player in the team can also bring esteem in circles that value those characteristics. In that sense, feeling good about the self does not necessarily mean moral goodness. It is derived from what is valued by the person and his/her subculture. Therefore to understand how self-perceptions drive an individual's motivation, we also have to establish what they consider important to them, or their value systems.

**What are self-perceptions?** This is a general term that usually refers to descriptions or appraisals in specific roles or life settings. Sometimes they reflect identities such as "I am an exerciser" and often provide assessments of competence such as "I am really good at sport", "I am one of the worst spellers in class", or "I am no good with girls because I feel shy". As we develop through childhood and adolescence we become more complex and sophisticated in our self-knowledge, and the life domains where we are able to make self-judgments become more numerous and differentiated. For example, by mid-adolescence we might have unique perceptions of our performance in each school subject and our social competence with same-sex as well as opposite-sex friends. Our views of ourselves in the physical domain includes perceptions of sport

competence, physical strength, fitness, and appearance and each of these will be split into perceptions of performance in different kinds of sports, or even different skills in single sports, or different aspects of appearance.

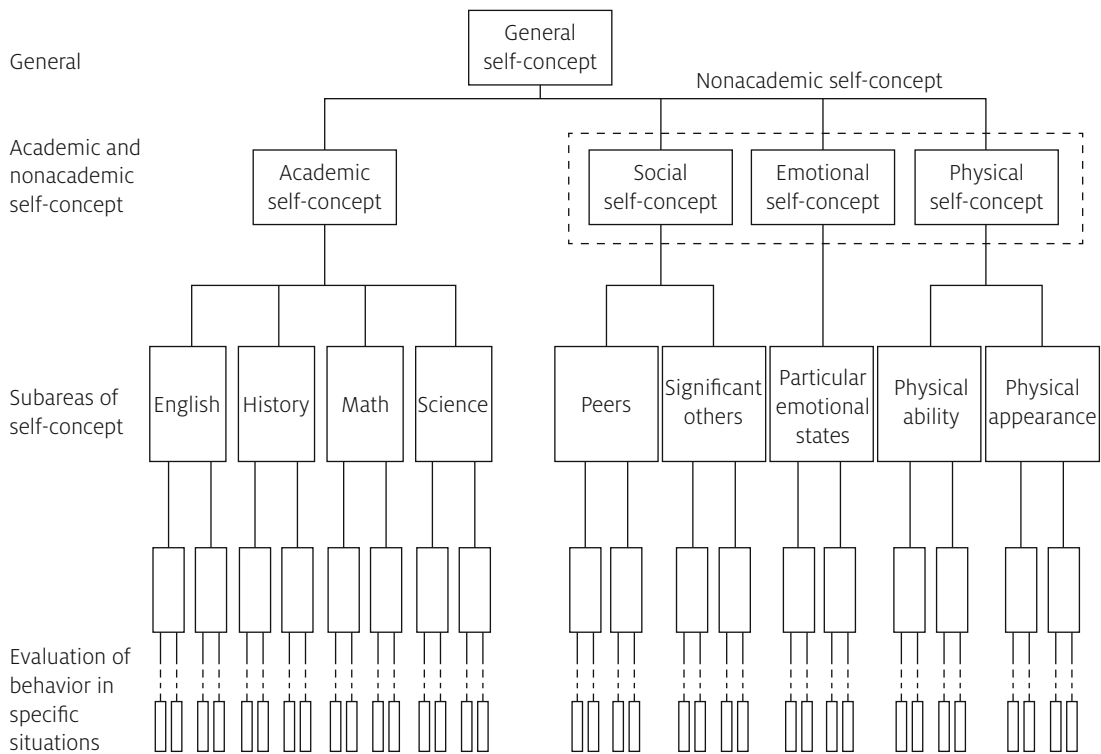
These ratings of competence or adequacy are often gathered to formulate estimates of self-esteem. It appears that these can be organized in a hierarchical way so that very specific competence ratings that are frequently repeated and consistent feed up to more general levels of perceptions and eventually may influence self-

esteem (see Figure 3.1). Very specific self-perceptions such as “I can run a mile in less than seven minutes” tie in with Bandura’s (1986) self-efficacy theory and so are often termed “efficacy statements” or “expectancies”. Repeated success at this level is thought to improve higher, more global levels of self-perceptions. For example, consistent improvements with performance in the football team or success with a weight loss and exercise plan might improve feelings about the physical self and eventually generalize to higher self-esteem.

**OTHER IMPORTANT SELF CONSTRUCTS**

The hierarchical organization of the self depicted in Figure 3.1 provides a useful framework for viewing the diverse elements of the

self complex. Over the years, many important elements have received special attention by researchers. For example, because of Western



**Figure 3.1** Levels of specificity of self-perceptions within the physical domain.

Source Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-concept: Validation of construct interpretations. *Review of Educational Research*, 46, 407–411. Copyright is the American Educational Research Association.

society's emphasis on "looking good", *body image* – and its influence on mental health and behaviours such as eating and exercise – has been widely investigated. Body image has been defined as the internal representation (picture) of our outer appearance (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999), or one's body-related self-perceptions and self-attitudes, including thoughts, beliefs, feelings, and behaviour (Cash, 2004). Another concept closely related to body image and the physical

self is *social physique anxiety*, which has been described as "a subtype of social anxiety that occurs as a result of the prospect or interpersonal evaluation involving one's physique" (Hart, Leary, & Rejeski, 1989, p. 96). Individuals with high social physique anxiety are more likely to avoid situations in which they are forced to reveal their body (for example, at the gym, on beaches, or in swimming facilities) to others and face a potential evaluation of others.

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## SELF-MANAGEMENT STRATEGIES

Establishing and maintaining self-esteem is a complex process. The self is nurtured by an innate drive to explore and develop while simultaneously establishing a coherent base from which to operate. Thus, stability across time and consistency across situations in patterns of behaviour and emotional reactions provide the sense of identity and predictability that ties the self together. This is important in order to make lasting relationships and rational decisions because consistency allows people to understand us or get to know us and thus relate to us more effectively. This consistency of identity in turn nurtures the necessary roots for individuals to seek out challenges that facilitate personal learning and growth. The self is left with a delicate balancing act of establishing a solid and recognizable core or identity while retaining sufficient flexibility to accept the challenges of individual development and not stifle opportunities for personal improvement. If I know who I am and I am reasonably happy with myself, then I have the confidence to take on challenges and I am receptive to changing aspects of myself. Those people who have not developed their core fully tend to be defensive of their selves and more conservative in their behavioural choices. They cannot afford to allow themselves to be challenged, as they are more fearful of failure. These processes become transparent during major transitional periods across the lifespan such as adolescence and retirement. They are all too evident in sport

where players who lack confidence can be too conservative in their play and avoid taking risks because of a fear of failure. "Let someone else shoot" might be the order of the day. Coaches can help by learning whether this lack of confidence is an issue of low-perceived competence at performing the skill or a more generalized lack of esteem. The former requires specific practices while the latter needs some empathy and sensitivity and perhaps some coaching about how to deal with failure and disassociate it from worth as a person. Behaviours that reflect low self-esteem are feature in Table 3.1.

Human nature is designed for survival and this includes looking after psychological well-being. There is good evidence to show that we are programmed to think positively in order to make the best of what happens in our lives. This function can be conceived as a *self-director* who may operate both consciously and subconsciously to manage behaviours and mentally process what happens to the self in a way that maximizes good feelings. The self-director, which is analogous to a company director, determines where to invest time and energy in serving this mission. This involves making choices, commitment and persistence in relevant tasks to produce positive balance sheets, and deployment of public relation strategies to present the company in the best possible light. There is evidence of several strategies that are used with regard to self-esteem and the physical self. Examples are:

**Table 3.1** *Recognizing low self-esteem and confidence in sport*

**Although there are some obvious signs of low confidence such as shyness and slowness to step up to the line, there are also some more hidden signs:**

- There is a need for a great deal of positive and consistent praise and feedback, especially following a failure or a negative comment.
  - There may be a tendency to criticise the performance of other players in order to boost their own standing.
  - There is a tendency to be fearful of taking risks but some will also choose high-risk strategies because the expectation is that failure is inevitable and not their fault.
  - There may be a tendency for some to accept the blame for all failure and feel depressed. However, others may always try to place blame elsewhere because they are not strong enough to take responsibility for failure.
  - They may find it difficult to feel part of the team because they do not feel they are worthy contributors.
  - They may avoid putting in maximum effort. The classic phrase “don’t let them see me sweat” comes into play here and arises because it is only possible to judge a player’s true potential when he/she is stretched to full capacity. These players give the impression they don’t really care but in reality are hiding a lack of confidence.
- 
- Customizing the self complex by attaching importance to those aspects or domains of life that yield success and minimizing the importance of those which provide feelings of inadequacy or low competence. This latter process has been termed *discounting* (Harter, 1999). Many adolescent girls, for example, discount the importance of feeling that they are not very good at sports and are apathetic about taking part. However, some areas that carry a high cultural currency may be too overpowering to allow an individual to discount it. Attractiveness is one such area that is troublesome to discount for females, and increasingly for young males.
  - Using *self-presentation strategies* to convince others that the self is doing well (Leary, 1995). Such external relations strategies could include accentuating the positive dimensions of the self while concealing the troublesome aspects that leave the self vulnerable to negative evaluation. This extends to choices of behaviours. For example, people will tend to gravitate to settings where they feel they will look good and perform well. This might explain why health clubs tend to attract people who are already reasonably fit and slim.
  - *Self-serving bias* is evident in the interpretation of incoming information. Negative information is more likely to be ignored and forgotten while successes are embellished. The self is more likely to ascribe failure to external sources such as luck or an opponent who was too tough while success is attributed to personal ability and effort. Individuals therefore tend to view themselves in a rather optimistic light. They tend to believe they have greater control over events in their environment than they actually have, they tend to accept more than their fair share of successes and sometimes do not fully accept their part in failures, and they tend to view the future in a “rosier” light than might be justified.
- Intuitively it might be seen that having these positive illusions might be bad for the individual. However, what is interesting is that positive illusions seem to be related to positive health, both mentally and physically (Taylor et al., 2003). On the whole, they are therefore seen as healthy mental strategies and should be expected and encouraged rather than stifled. Of course there is potential for the self to overplay these self-serving cards. Excessive reliance produces delusions of grandeur,



over-confidence, boastfulness and a loss of touch with reality that can result in impairment to further learning and social relationships. Not understanding or accepting the true reasons for success and failure will impair learning for the future. Moreover, discounting certain behaviours such as physical activity

that are integrally linked with physical health will impair motivation which is counterproductive to health promotion. In summary, self-serving strategies promote optimism, motivation, confidence and well-being but in excess are dangerous because they can impede learning and progress.

## DEVELOPMENT OF SELF-PERCEPTIONS

The concepts described so far apply to maturing adolescents and adults. Children are different because they have not fully developed the cognitive capacity to accurately assess the self and understand how it functions in performance and social interactions (Harter, 1999). Very young children aged between six and around nine years old have very simple views of their self and are quite unrealistic and optimistic in their views of how they rank in comparison to others in school work and physical skills. They have naturally positive views on life and believe that strong performances are simply a result of trying hard. “Jimmy won the race because he tried hardest”. They rarely have the capacity to understand abstractions such as health or to be stimulated by distant rewards such as improving fitness. They are highly motivated by the “here and now” so that activity, for

example, has to be seen as fun. As children develop, they begin to understand the concept of ability and that it contributes – alongside effort – to level of performance. They realize that other children do not have to try quite so hard to win because they have natural ability. This is important because around ages 10 to 12 years, children become more accurate in their assessment of their own ability levels. If they start to believe that they have low competence, even when they try as hard as they can, and it does not yield success, then they start to look for alternative activities. In severe cases “learned helplessness” can set in where engagement is completely withdrawn. Table 3.2 illustrates this concept in the setting of a fitness test in physical education. Strategies to help such children stay involved are presented later.

**Table 3.2** *An example of learned helplessness in fitness testing*

<b>Learned helplessness: No matter how hard I try it does not seem to make a difference</b>	
Antony is an overweight 12 year old asked to perform the aerobic fitness shuttle run test in physical education class with all his class mates.	
Outcomes:	
<ul style="list-style-type: none"> <li>● Scores low even though he tries hard</li> <li>● Highly public exposure of his poor performance</li> <li>● Makes him feel that he could never be like the others</li> <li>● Convinces him that exercise is to be avoided at all costs</li> </ul>	<ul style="list-style-type: none"> <li>● Starts to use defensive strategies               <ul style="list-style-type: none"> <li>○ Absence</li> <li>○ Disruption</li> <li>○ Never show effort</li> <li>○ Attach low importance – what’s the point in it?</li> </ul> </li> <li>● Avoids similar activities for the rest of his life</li> </ul>

Also, children tend to differ in how they view and evaluate things like intelligence and achievement (Dweck, 2000). For example, some view achievement in sport as a fixed thing that you either have or you don't have. Others, instead, view sport achievement as something more dynamic and malleable, something that can be changed and worked on, primarily through effort and commitment. These two different mindsets will also have a large impact on how children and youths behave in the context of sport and exercise. For example, it will influence how they interpret

success and failure, and how they are motivated to improve or try out new tasks. A person with the fixed mindset will more often choose the easy way, rather than going for challenging tasks, and making sure of success and avoidance of failure in order to maintain a positive self-esteem. To the contrary, a person with the malleable mindset is more likely to seek out and enjoy challenges as this will probably increase their learning, which is one of the key motivational aspects for them, rather than to constantly win and beat others. In other words, they are less likely to be afraid of failing.

## **HOW TO HELP PEOPLE EXPERIENCE POSITIVE SELF-ESTEEM AND SELF-PERCEPTIONS**

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Psychologists have also been drawing upon self-determination theory (SDT) as a framework for building strategies for promoting self-esteem (see Chapter 5). According to this theory, the individual (the self-director) is constantly engaged in a process of integrating appropriate input from the environment into identity (Deci & Ryan, 1985, 2000). In order for the self to develop, flourish and function well, it helps if the individual feels that three fundamental psychological needs are satisfied. These are competence, autonomy or self-determination, and relatedness (for more informa-

tion on these needs, see Chapter 5). Settings and experiences in sport and exercise can either promote the satisfaction of these basic psychological needs, or hinder and thwart them. Therefore, for coaches and teachers in sport and exercise, an important step in the promotion of positive self-esteem and self-perceptions is to establish relationships, communications style, and challenges that help the individual experience competence, autonomy, and relatedness. This sounds simple enough, but how is it achieved?

## **BUILDING COMPETENCE**

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Building perceptions of competence in all people can be difficult as in reality there is a whole spectrum of ability levels for each particular skill. Those interested in helping a whole range of people become active have to work particularly hard as often those least competent are in most need of assistance. It is also not so straightforward for elite performers. Even true objective achievements such as winning a competition may not be enough to make some of them feel competent. The sport and exercise world is full of individuals who, according to league tables and outcomes from competitions, should be viewed

as very competent, but who may not see themselves that way. There may be several reasons for this, but often it is caused by over-reliance on social comparison with others. This is fraught with dangers. For example, the young player who is seen as a brilliant young talent at local level is likely to eventually be selected into a group of elite players, all of whom may be more proficient. A high competence rating when compared to local players becomes a low competence rating in the newly acquired group. This "big fish, little pond" phenomena (Marsh and Parker, 1984) is well documented and often happens when

youngsters move from junior to senior school. Similarly, if Sue has lost ten kilos over six months through great efforts in the gym but resets her aspirations for becoming similarly slimmer and fitter like those around her, she may not experience the enhanced sense of competence that should come from her obvious success. Social comparisons cause particular problems for the physical educator who is faced with a class of children with a wide range of physical abilities. The challenge becomes how to keep all these children equally challenged, interested and feeling positive about the physical abilities? Clearly, not all children can be *excellent* in terms of sports skills by its very definition.

The world of sport and exercise is full of opportunity to make comparisons with others in terms of appearance and skill level. It is difficult to avoid and we have a natural tendency to seek out how we rank against others in a whole range of personal attributes. However, it is dangerous to rely on this as the main source of competence information. This is because the ability of others is beyond our control. The strongest strategy for the coach or teacher is therefore to encourage people from an early age to focus on personal progress and improvement (see Table 3.3). This self-referencing approach, which is often called a mastery or task orientation, has been widely studied in sport under the

framework of achievement orientation theory (see Chapter 4). Ego orientation features a reliance on favourable comparisons against others as the main source of competence. Task orientation, on the other hand, focuses on skill or fitness improvement and task mastery and is the only means by which all people, regardless of actual ability level can experience success. However, it also provides a critical back-up strategy and realistic marker for elite sport performers to interpret win and loss in competition. Feeling that you have played really well but have lost is probably more valuable for self-esteem than winning when playing poorly. An important job for coaches therefore is to create activities and tasks that challenge the individuals skills and abilities in an optimal way while at the same time down-playing the natural tendency to worry about comparisons, rankings and league tables. See Table 3.3 and the case studies in Table 3.4 for some ideas. Working with goal-setting, the coach can help the individual to identify realistic goals. At this point, setting up a plan for how to reach these goals is critical. A general recommendation is to start off gently, in particular with beginners, and make steady progress at each stage or level of difficulty so that individuals have a chance to gradually build confidence in their own ability to succeed. Success breeds further motivation and success.

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## **BUILDING AUTONOMY**

If individuals feel controlled, or that they do not have a part to play in their own progress, or that someone else is the master of their actions, the chances that they will feel autonomous are slim. As coaches and teachers, our own sense of reward often comes from seeing the success of those we work with. There is a danger that we will start to believe and operate in a way that convinces our athletes that *we* are the reason for their success. In order to avoid depriving them of a sense of self-determination or autonomy it is important that they are engaged in decisions and choices about their training and progress and that they are allowed to take full credit for

successes and failures. In this sense, the coach is best advised to adopt a position of a facilitator and take more of an advisory rather than dictatorial or prescriptive role. Sometimes coaches have to work hard to convince athletes of their full role in outcomes as they may be accustomed to many years of being told what to do. Something like: "You were successful because **YOU** put in all that effort to training last month. **YOU** did it. I just advised you on what I thought would lead to that success but **YOU** did it", might reflect the kind of response needed. This situation can also apply to physical education. PE teachers should consider the percentage of time that they

adopt the role of “instructor” and whether or not dominant role of their communication is command style. Although, the practicalities of managing a class of 30 youngsters will always require respect for the teacher as leader, there may be opportunities for youngsters to provide input into choice of activities, designs of exercise circuits, ways of scoring games, and goal

setting. For the coach and teacher to provide an environment that fosters autonomy, it is therefore important to express selflessness, respect and empathy in their daily interactions with those they are working with. As a result, there should be a greater chance for growth, improvement, motivation, and commitment.

**Table 3.3** *Strategies for helping build confidence and self-esteem*

**It is essential to recognize when low self-esteem players need help. Leaders will be more effective if they understand and empathize with their players. Sometimes this does not come naturally to coaches but the following might help:**

- For low self-esteem players, provide three times more positive feedback than you think they need.
- Make sure any critique is aimed at their performance and not at them as individuals and always offer a feasible strategy for them to improve.
- Avoid personal stable descriptors such as “You always get that wrong” and provide strategies that lead to solutions.
- Convince them that failures are inevitable, they happen to everyone, and are a vital part of learning. Encourage them to expect failure as a source of important information about how to improve. Rebranding failure as a “good guy” can reduce anxieties and provide licence to take more risks.
- Help build a sense of patience so that improvement is steady but consistent through small incremental goal-setting.

**Table 3.4** *Examples in practice*

#### **CASE STUDY 1: MOTIVATING YOUNG KIDS**

Billy loves his football. His brother, who is four years older, was selected as a youth player for the town’s professional club so Billy was excited when his friend Kyle suggested they join up with a local Saturday morning under 11s squad. For the first three games, although Kyle got to play as a striker, Billy sat on the bench as sub. Although he was disappointed, his big chance came in the second half of a friendly game when his team were winning 2-0 and he was called on. Unfortunately, the other team quickly drew back to 2-2. Although Billy knew that one of the goals was probably his fault, he thought he had played fairly well for a first attempt, the coach decided he was at least partly at fault and decided to sub him back to the bench. Billy felt humiliated and useless and the action of the coach turned some of the other players against him as his team went on to lose 3-2. Billy felt he had let everyone down and that he was no longer liked by his friends. He never turned up for another football team again, even though he became much quicker and more skilful as he matured.

Lessons to the coach:

- Don’t sacrifice the self-esteem of young kids for the sake of winning the game
- Explain your actions to players so they develop understanding
- Give players help with how to improve and how to deal with failure

Lessons for Billy:

- Don’t give up because you are not the finished product – keep practicing
- Football is not the only important thing in your life
- Find a better coach

**Table 3.4** (continued)**CASE STUDY 2: WORKING WITH AN ELITE ATHLETE FEARFUL OF FAILURE**

Sara is 16 years old and a very talented tennis player. She is the highest ranked player of her age in her country and also ranked top three internationally. As far as she can remember, everybody around her, her parents and coaches, have told her that she has a natural talent for tennis and that she will go all the way to the top. She always won against kids of her own age, and never really had to put any effort to succeed when playing tennis. Come to think of it, she never really experienced any real failure, when playing tennis.

During the last year, however, her coach and parents have decided that it is time to let her take on some tougher opponents, some older girls. However, Sara starts to lose many of her matches. What's more alarming though is the way she loses and her behaviour. She makes many unprovoked errors and plays way below her usual standards. Normally, she is intense and aggressive in her play, but now she looks either mentally absent or bored. To her coach, it actually looks like she doesn't care. When confronted with this, Sara gets angry and replies that she doesn't feel like trying. She has also mentioned a couple of times that she thinks about quitting tennis, and that it's just not fun anymore.

Her coach discusses the issue with a colleague who is a sport psychologist and asks for her advice. They decide they will talk to Sara together. In the first conversations, about why she thinks she is not performing well, Sara is passive and doesn't provide any real answers. However, when they ask her what she thinks about winning and losing, success and failure in general, what those words mean to her, she explains that "Winning is for winners, and I've always been a winner. I still could win if I really wanted to, but I don't feel like it. I'm really good at tennis, I've always been, and if I don't win, its not fun anymore."

A clear pattern emerges. Sara builds a large proportion of her general self-esteem on her tennis performance. Also, for her, performing is winning, beating others, even when she does not play well, nothing else. Social comparison with others is the major driving force of her behaviour. She feels good in general when she wins, particularly when she is sure of winning and doesn't have to try for it, when she feels superior. However, when she met opponents that were as good as her, a sudden fear of losing has entered her mind and this terrifies her. Her response is not to try at all, at least then she has an excuse if she is losing.

The sport psychologist and coach have several meetings with Sara, where they talk about how losing and failure are obstacles that all great athletes have to deal with. The sport psychologist suggests to Sara that failure is necessary for learning and improving rather than a statement of low ability. They also discuss the problem of constantly comparing against others and the value of comparing progress with yourself. Together, they set up a goal-setting plan for Sara, focusing primarily on details of her own game and specific behaviour on court that she has more control over, no matter who she plays. Also, one specific goal, that always is highlighted and evaluated is for Sara to always, in every game, try hard, no matter whether she is winning or losing.

After a bumpy start, Sara gradually gets more into focusing on herself, rather than the opponent. Her coach notices that she now really tries hard, even against better players. After having lost a tough game against a player four years older and with a higher ranking, she says to her coach: "Too bad I lost, good game though, I really enjoyed the challenge out there. After tight matches like this, I really feel that I improve as a tennis-player." She has managed to turn her debilitating fear of failure into an asset and advantage. More importantly, her self-esteem is not dependent on the result of the game but on a broader self-respect arising from her courage and convictions. Maybe this can be applied to other things outside of sport.

Lessons to the coach:

- Performance is not all about winning
- Emphasize effort and hard work, "Hard work beats talent when talent doesn't work hard"
- Meeting challenges and failure (losing) are important steps in developing and building a healthy self-esteem
- Comparing with oneself is often more relevant than comparing with others

**CASE STUDY 3: BUILDING EXERCISE CONFIDENCE IN OVERWEIGHT WOMEN**

Overweight and obese women were signed up to a commercial slimming club. Many chose that particular organization because they wanted to avoid exercise as a way of losing weight. However, the slimming organization had been persuaded, largely because of government pressures, that they should be motivating their members to be more active. They hired a consultant to work with them to develop a programme that would be feasible and acceptable to their class leaders and members. The consultant recognized that the members would have very little recent exercise experience, that their past experiences were often unpleasant, that they knew little about how to exercise safely and effectively, they had very low confidence and perceived competence and negative attitudes. In addition, they had been taught and come to believe that exercise was not effective for weight loss and so had very low value or sense of importance for it. The consultant also realized that because of the burden of weight, more vigorous activity was best avoided. A gradual, softly-softly approach, based on existing behaviour theory and evidence, was required that would build confidence through the successful achievement of goals. These goals were behavioural in nature so the slimming organization set up a recognition system for reaching various targets based on achieving number of sessions per week for at least 15 minutes on each occasion. Intensity of exercise was not emphasized in the early stages. The programme was accompanied by materials aimed at persuading members of the important mental and physical health benefits of exercise. All of this was packaged by the organization in a style that appealed to their clientele.

Evaluations indicate that the class leaders are improving in their willingness and confidence in delivery of the exercise component, and believe that more and more members are taking the materials on board and becoming committed exercisers. Many members report that the exercise has done wonders for their confidence and esteem.

Lessons for the members and consultants:

- Sometimes those things you are most scared of can bring the most gain
- Be patient and make slow but steady progress
- Listen to the experts

Lessons for the organization:

- The customer is not always right – it is possible to change minds and behaviours with the right strategies and materials
- Experts can make successful partners

Lessons for the consultant:

- Commercial partners can access far greater numbers than can be achieved through academia
- Commercial organizations are the experts in marketing materials to their customers

**BUILDING RELATEDNESS**

A consistent finding in research is that a key reason for participation in physical activity is to experience social benefits. People enjoy playing and exercising with others and feeling part of a team or group. For children and young people, playing sport can be a very important way of developing friendships. Settings that foster feelings of social acceptance, being

valued and feeling significant in some way to others may assist in promoting self-esteem. Therefore, an important challenge for coaches and teachers is to create fertile ground for such feelings. From a broader perspective, creating opportunities for individuals to make meaningful connections with others, thereby feeling that they are part of something bigger than

themselves, that they belong to a movement or group, is beneficial for feelings of relatedness. This may include the use of small-group activities where the value of cooperation is naturally built into the reward structure. Working together to solve common problems, and learning to depend on others, helps individuals connect to others and build foundations for development of relatedness. A key prerequisite

for the development of feelings of relatedness is that the individual experiences trust and respect towards their coach, teacher or parent, and their team-mates. Therefore, regular meetings, one to one, where the coach uses an active listening or discussion approach to understand the athlete's/student's perspective, provides an effective base for the long-term development of social relatedness.

## CONCLUSION

We believe that understanding how experiences in sport and exercise affect how children, athletes, adult exercisers see themselves, particularly their physical self is crucial to effective coaching, teaching and leadership. It provides real insight into how each individual feels so that coaches can be more empathetic. This in turn will help build fruitful relationships on the basis of mutual respect. It will

also help the leader to understand the decision making and motivation of those they work with, which in turn can maximize motivation and performance. Self-esteem and self-perception theory are at the heart of many motivational theories that you will read about in this book. We encourage you to read more and explore how you can design your coaching and teaching for best effect.



## LEARNING AIDS

- 1 Define the terms self-concept, self-esteem and self-perceptions.

*Self-concept is the individual as known to the individual. It is a self-description using whatever characteristics seem important to the person and might refer to abilities, aspects of appearance, behavioural habits, personality traits or values.*

*Self-esteem is an overall rating of self-worth. It is important because it carries emotions so that high ratings result in pride and self-confidence whereas low ratings bring shame and feelings of hopelessness.*

*Self-perceptions are any thoughts that you have about aspects of yourself as a person.*

- 2 Provide an example of how self-esteem can be influenced by evaluation in different domains in life, such as sport.

*An 11 year old wants to play football for the team and tries really hard at practices. However, she does not get picked to play in the team. Her coach tells her that she will never be good enough but is welcome to carry on practicing. This reinforces to the young girl that she has little ability and no matter how hard she works at it she will never be good enough. Her perceived competence in football is low and if she considers her success at football to be important enough, it may negatively affect her overall self-esteem.*

- 3 Provide examples of how the way coaches and teachers communicate can have positive or negative influences on self-esteem and self-perceptions.

[Examples should arise out of personal experiences or those of a friend.] *For instance, when a coach merely shows disappointment or anger at a poor performance such as a missed shot or tackle, the end result is likely to be a loss of confidence and raised anxiety in the player. If, alternatively, the coach emphasizes how to learn from the mistake, it provides a basis for improvement. The player can see that it was something that can be corrected and is not a statement of permanently poor ability or uselessness. There is hope and there is a way. Self-perceptions will bounce back.*

- 4 Describe the strategies that coaches can use to help individuals experience positive self-esteem and self-perceptions.

[Examples feature in Table 3.3 but try to produce two or three of your own.]



## REVIEW QUESTIONS

- 1 What are self-concept, self-esteem and self-perceptions?
- 2 What are body image and social physique anxiety?
- 3 How is ability or competence related to self-esteem and self-perceptions?
- 4 What kind of behaviours reflect low self-esteem?
- 5 What kind of strategies are used to maintain a positive self-concept?
- 6 What is learned helplessness and how does it play out in a physical education context?
- 7 What roles do competence, autonomy, and relatedness play for the development of a positive self-esteem?



## EXERCISE

Read the three cases provided in Table 3.4. In groups of four, discuss your past experiences in sport or exercise. Provide examples of how a coach or teacher has created a situation that has had a) a positive effect, and b) a negative effect on self-perceptions and self-esteem that might have had a long-term effect on your motivation or behaviour. Write these up as two extra case studies to add to the class resource.



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# Achievement motivation in sport settings

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## SUMMARY

In this chapter we explain motivation in achievement settings like sport and physical education (PE) classes and what energizes, directs and regulates athletes' behavior in the social context of sport. We focus on the achievement goals pursued by individuals in sport or PE classes, explaining how they are developed and how different goal adoption regulates behavior. We describe sport environments where coaches or PE teachers adopt different definitions of success and emphasize different achievement goals. Importantly, we portray how athletes' goal involvement stems from the interaction of individual and contextual differences in the definition of success and goal adoption. Finally, we summarize the evidence concerning the effects of different goal adoption on athletes' and PE students' cognitions, emotions, performance, persistence, social behavior and well-being in sport and in PE.

## INTRODUCTION

What is motivation? If we take our cues from everyday life, then it may be arousal, such as the "motivational" tirades of coaches in the locker room, some believe it is a measure of confidence, a winning attitude, or it is a personal entity that may, or may not, be genetically endowed. However, the contemporary understanding of motivation is that it is a process through which we become energized to achieve a valued outcome, and the arguments of researchers tend to revolve around the process of how motivation is energized.

Some theories place particular emphasis on the energization of needs, whether the needs are for power, autonomy and/or competence, and so on. Other theories focus on the activation of motivation from socialization to value the demonstration of competence or autonomy, a learned perspective. This book includes chapters that embrace both schools of thought. Which approach is preferable? Well, that is why researchers conduct their research, to improve their theories and to find out if there is one unifying theory of motivation. At the

present time, we have advocates of each school of thought. This chapter treats motivation as a social-cognitive phenomenon. To understand the main implications from research based on

theories that evolved throughout the years, we start this chapter with a brief history of the evolution of the Achievement Motivation concept.



## OBJECTIVES

After reading this chapter, readers will:

- 1 Know the fundamental concepts of achievement motivation theories that have been investigated in sport.
- 2 Understand the links among different personal theories of achievement, definitions of success and definitions of competence in achievement settings.
- 3 Understand how different definitions of success and competence are developed and how they emerge as dispositional differences in sport.
- 4 Understand how different definitions of competence formulate different achievement goals and how the latter energize, direct and regulate behavior in sport.
- 5 Understand the concept of motivational climate and how task-involving and ego-involving climates are constructed by coaches or PE teachers.
- 6 Predict relatively accurately the achievement goal pursuits of athletes or PE students when different achievement goals are emphasized or de-emphasized by coaches or PE teachers.
- 7 Predict quite accurately the motivational outcomes and social behavior of athletes or PE students when task-involving or ego-involving goals are pursued in sport or in PE classes.



**Figure 4.1** Determinants of achievement motivation.

## FROM THE NEED FOR ACHIEVEMENT TO SOCIAL-COGNITIVE APPROACHES OF ACHIEVEMENT MOTIVATION

Initially Achievement Motivation was conceptualized as the need to overcome obstacles and succeed (Murray, 1938). To measure the need for achievement, Murray developed the Thematic Apperception Test (TAT). In this test individuals respond to pictures and write stories which are then analysed to measure one's motive for achievement. The TAT was later improved by McClelland (1961) and Atkinson (1964), who proposed the theory of need for achievement as it is shown in Table 4.1. Accordingly, individuals who have a high need for achievement are likely to approach success when the probabilities are about 50% (e.g., when playing against someone who has equal abilities) and they ascribe high value to success. These individuals pursue the experience of positive emotions that are elicited after success, such as pride. On the other hand, individuals with a low need for achievement, in similar situations, try to avoid failure and the negative emotions that follow.

This theory established that achievement motivation is determined by expectations and value of accomplishment. Accordingly, we know today that athletes are highly motivated when they try to achieve something that they find valuable which is also challenging to them. For an athlete, a challenging task is not the easy one but neither the very difficult one, it is the task which is relatively difficult for them to carry out in particular. Hence, task challenge should be adapted to the needs of each particular person. Moreover, tasks should be also meaningful to athletes, exercise participants or physical education students.

Weiner (1972) proposed an entirely cognitive approach to explain achievement motivation. Weiner and Kukla (1971) found that individuals with a high need for achievement were more likely to ascribe their success to their abilities and effort than individuals with a low need for achievement. These authors proposed that in comparison to people with a low need for achievement, individuals with a high need for achievement:

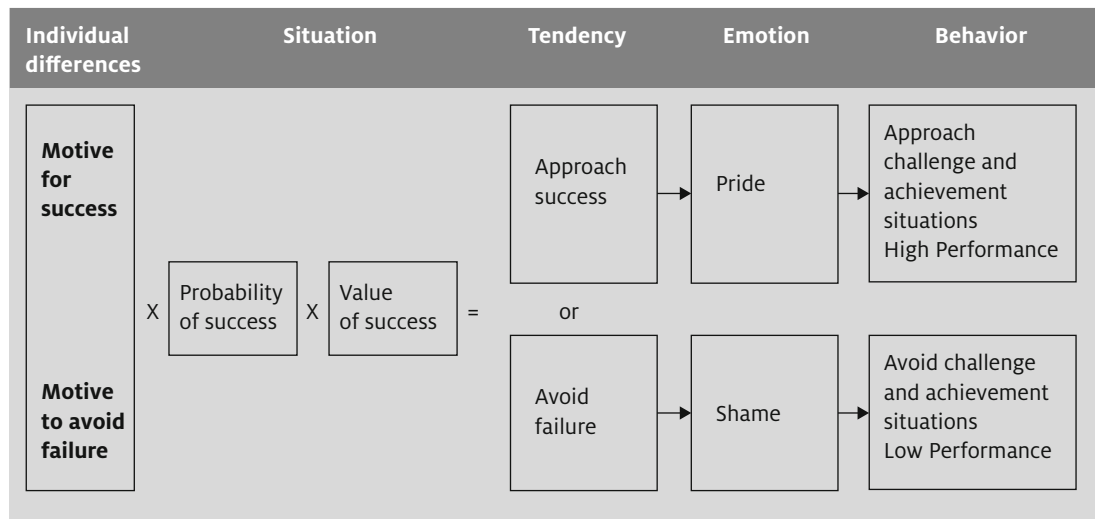
- are more likely to approach achievement situations because they attribute success to themselves and hence they feel pride;
- persist with tasks for longer when they experience failures because they ascribe failure to lack of effort but not to lack of ability;
- prefer more challenging tasks because that way they will get better information about their abilities than if they select easy or very difficult tasks.

Based on Weiner's (1972) model, Roberts and Pascuzzi (1979) found that 45% of athletes' attribution of success and failure can be ascribed to four causes: ability, effort, task difficulty, and luck. These can be classified in the two dimensions which are shown in Table 4.2.

Later, Weiner (1985) suggested that the possibly thousands of causes of success or failure can be ascribed to the three dimensions of Table 4.3. According to this model, attributions of causes of success and failure fall in the dimension of:

- 1 Stability, affect expectations. An athlete ascribing his loss to unstable causes (e.g., hostile referee) is more likely to sustain high expectations to win the same opponent in the future than if he ascribes his loss to stable causes, such as the superior talent of the opponent.
- 2 Locus, affect self-esteem. An athlete ascribing success to internal causes, like her talent, reinforces her self-esteem; a swimmer who ascribes her failure to win to external causes, such as swimming in the wrong lane of the pool, is less likely to harm her self-esteem.
- 3 Controllability, affect emotions. For example, an athlete will feel guilt if he ascribes failure to lack of effort (controllable cause) but he will feel ashamed if he ascribes it to lack of talent.

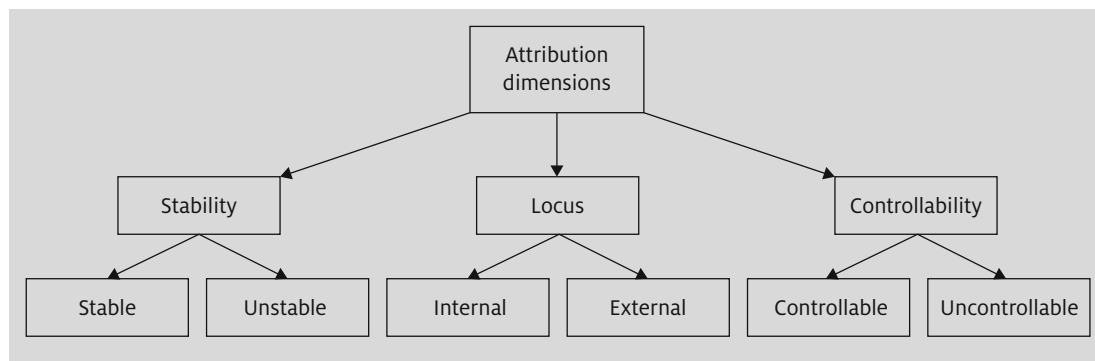
**Table 4.1** *Need for achievement theory*



**Table 4.2** *Two-dimensional attribution theory*

Stability dimension	Causality dimension	
	Internal	External
Stable	Ability	Task difficulty
Unstable	Effort	Luck

**Table 4.3** *Weiner's three-dimensional typology of attributions*



On one hand, coaches can cause athletes, particularly those who lack experience, to ascribe their bad outcomes to relatively unstable causes, such as incorrect strategy, lack of appropriate training, bad luck, etc. On the other hand, they can help them to sustain high self-esteem by ascribing their success to stable

causes, such as their talent. However, it is also important to teach athletes that talent is something that is developed through hard work. This is covered more extensively in the latest approaches of achievement motivation presented below.

## **A SOCIAL COGNITIVE PERSPECTIVE OF ACHIEVEMENT MOTIVATION**

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The most important assumption of the social-cognitive approach is that humans are active in the environment and initiate motivated behavior through subjective interpretation of the achievement context. And one of the most popular of the social-cognitive theories is achievement goal theory (see Roberts, 2012). In fact, it has been stated by some that researchers' and practitioners' interest in achievement goal theory over the past 30 years has been a watershed in our understanding sport achievement behavior that has triggered a penetrating wave of research into the interpersonal and environmental influences on athlete sport behavior. Thus, the social-cognitive approach has been and remains an important theory in understanding sport achievement behavior.

To understand motivation, the social-cognitive approach argues we need to understand the psychological constructs that *energize*, *direct*, and *regulate* achievement behavior: Why do people do what they do? Achievement goal theory assumes that the individual is an intentional, goal-directed organism and that achievement goals govern achievement beliefs and guide subsequent decision making and behavior in sport achievement contexts. It is the function and meaning of the achievement behavior to the individual that must be taken into account. Individuals give meaning to their achievement behavior through the goals they adopt. It is these goals that reflect the purposes of achievement striving. Once adopted, the achievement goal determines the integrated pattern of beliefs that energize approach and avoid strategies, the differing engagement levels, and the

differing responses to achievement outcomes. Thus, an individual's investment of personal resources such as effort, talent, and time in an activity is dependent on the achievement goal of the individual.

The overall goal is assumed to be the desire to develop and demonstrate competence and to avoid demonstrating incompetence. Achievement goal theory assumes that we learn what goals to value, and in our society demonstrating competence is clearly valued. We learn this through our socialization process from our parents, our teachers and coaches, and our peers. When we are young and developing, we are constantly barraged with the value of demonstrating competence. Thus, the demonstration and/or development of competence is the energizing construct of the motivational processes of achievement goal theory. But competence has more than one meaning. It is argued that two conceptions of ability (at least) manifest themselves in achievement contexts. One is ability, which is defined as being more competent than others, specifically our peers in the sport context. We term this as an "other referenced" definition of competence, and a person decides he or she is doing well if he/she is doing better than others. In the research literature this is defined as *ego-involved* ability, or performance. An important aspect of achievement goal theory is how one defines success, so a performance oriented person feels successful when demonstrating superiority and beating others. The second definition of ability is demonstrating competence to oneself, a focus on learning and developing competence over time. We term this as a

“self referenced” definition of competence, and a person decides he/she is doing well when he/she is doing better than he/she did earlier. In the research literature this is defined as *task*

*involved* ability, or mastery. A mastery oriented person feels successful when they are doing well and exerting effort.

## **BEING MASTERY OR PERFORMANCE ORIENTED**

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The extant data shows that children under age 12 are typically mastery oriented and do not differentiate luck, effort, and task difficulty from ability (Nicholls, 1989). Children associate ability with learning through effort, so the more effort a child makes, the more learning (and ability) he/she will achieve. However, by age of 12 children are able to differentiate luck, task difficulty, and effort from ability (Nicholls & Miller, 1983, 1985). This means that children begin to see ability as capacity and that the demonstration of competence involves outperforming others. In other words, they are able to appreciate both orientations. In terms of effort, high ability is inferred when outperforming others and expending equal or less effort or performing equal to others while expending less effort. Therefore for children, when children turn 12 years old it is an important watershed in their cognitive appraisals; they are able to distinguish ability from effort, which they do not when they are younger.

Therefore, by age 12 (or thereabouts) children are able to appreciate both orientations, and the one they employ then becomes a matter of the socialization experiences they are exposed to. For example, when parents use the other referenced criteria of success and failure to evaluate their children and give feedback, then their children are likely to become performance oriented and wish to demonstrate their competence by being better than their peers. In other words, children learn to be mastery or performance oriented after 12 years of age, and this cognitive style stays with them unless it is changed or modified by teachers, coaches, and/or peers.

An individual will approach a task or activity with goals of action reflecting their personal

perceptions and beliefs about the form of ability they wish to demonstrate. These perceptions and beliefs form a *personal theory of achievement* of the activity that reflects the individual's perception of how things work in achievement situations. The adopted personal theory of achievement affects one's beliefs about how to achieve success and avoid failure at the activity. Therefore, based on their personal theory of achievement, people will differ in which of the criteria of success and failure they use.

The two conceptions of ability become the source of the criteria by which individuals assess success and failure (Nicholls, 1989). The goal of action is to meet the criteria by which success and failure are assessed. In achievement goal theory, when individuals are motivated to perform because they want to beat other people, then they are defined as being in a state of ego-involved motivation. The goal of action for an ego-involved individual is to demonstrate ability relative to others, or to outperform others, making ability other-referenced. Success is realized when the performance of others is exceeded, especially when expending less effort than others when individuals are motivated to perform because they want to beat other people, then they are defined as being in a state of ego-involved motivation. When individuals are motivated to perform because they want to demonstrate mastery of the task then they are defined as being in a state of *task involved* motivation. When task involved, the goal of action is to develop mastery, improvement, or learning and the demonstration of ability is self-referenced. Success is realized when mastery or improvement has been attained.

## THE IMPORTANCE OF THE STATE OF INVOLVEMENT

As we stated above, the overall goal of action in achievement goal theory is assumed to be the desire to develop and demonstrate competence and/or to avoid demonstrating incompetence. Thus, individuals have the goal of demonstrating competence as they conceive it. When task involved, then perceived ability becomes less relevant as the individual is trying to demonstrate or develop mastery at the task rather than demonstrate normative ability. As the individual is trying to demonstrate mastery or improvement, the achievement behaviors will be adaptive, as research has demonstrated that the individual is more likely to persist in the face of failure, to exert effort, select challenging tasks, and be intrinsically interested in the task.

On the other hand, when ego is involved, the individual is trying to demonstrate normative ability, or avoid demonstrating inability, and comparing his/her ability with comparative others becomes important. If the individual is ego involved and perceives him or herself as high in ability, then that person is likely to approach the task and engage in adaptive achievement behaviors. These are the people who seek competitive contests and want to demonstrate superiority. When perceived ability is high, demonstrating high normative ability is likely, therefore the individual is motivated to persist and demonstrate their competence to pertinent others. If one can demonstrate ability with little effort, then this is evidence of even higher ability. Thus, the ego-involved person is inclined to use the least amount of effort to realize the goal of action. If the perception of ability is low, then the individual will realize that ability is not likely to be demonstrated, and he/she is likely to manifest maladaptive achievement behaviors because he/she wishes to avoid demonstrating incompetence. Maladaptive behaviors are those where the individual

avoids the task, avoids challenge, reduces persistence in the face of difficulty, exerts little effort, and, in sport, drops out if achievement of desired goals appears difficult. These are the people who avoid competitive contests as their lack of competence is likely to be exposed. While the participant may view these avoidance behaviors as adaptive, because a lack of ability is disguised by these behaviors, they are considered maladaptive in terms of achievement behavior.

The reason the state of involvement is important is because a key tenet of achievement goal theory is that the states of involvement are mutually exclusive: One is either ego or task involved, even though this notion has been questioned in light of parallel processing models of information processing. However, the theory is quite explicit: One's state of motivational involvement may be seen to range on a continuum from task to ego involvement. The goal state is very dynamic, and can change from moment to moment as information is processed (Gernigon, d'Arrippe-Longueville, Delignieres, & Ninnot, 2004). An athlete may begin a task with strong task involved motivation, but contextual events may make the athlete wish to demonstrate superiority to others, and the athlete becomes ego involved in the task. For example, one might be brought out of a state of task involvement by a coach publicly highlighting a mistake, or a competitor or fan making a derogatory comment about one's competence. Similarly, an athlete may begin a competitive event with a strong ego involved state of involvement, but as the event unfolds, the athlete may realize they will win easily (or lose emphatically) and therefore begins to work on mastery criteria instead and become task involved. Thus goal states are dynamic and ebb and flow depending on the perception of the athlete of what it takes to be successful in that particular context.



## GOAL ORIENTATIONS

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How does one get into a state of ego or task involvement? One way is through one's personal theory of what it takes to achieve success in the context. Some individuals are predisposed to act in an ego or task involved manner; these predispositions are called achievement goal orientations. Individual differences in the disposition to be ego or task involved may be the result of socialization through task or ego-involving contexts either in the home or experiences in significant achievement contexts (e.g., classrooms, physical activities).

This is where it is important not to confuse goal orientations with "traits" or needs. Rather, they are cognitive schemas that are dynamic and subject to change as information pertaining to one's performance on the task is processed. But the orientations do have some stability over time too and are assumed to be relatively enduring. Thus, being mastery or performance oriented refers to the inclination of the individual to be task or ego involved respectively, in an achievement task.

The most important attribute of achievement goal orientations is that they are orthogonal. That is, mastery and performance goal orientations are independent, which means that one can be high or low in each or have both orientations at the same time. Based on developmental research with children, it is possible for an individual to be high or low in both mastery and performance goal orientation, or high in one and low in the other. This orthogonality has been supported in the sport and exercise literature (Duda, & Whitehead, 1998).

The implications of the orthogonality of goal orientations are quite profound, and make the theory quite unique. The research evidence

suggests that individuals with both high mastery *and* high performance goal orientation, as well as the high mastery and low performance goal orientations have the most adaptive motivational profiles (Duda & Hall, 2001). As one would expect, when an individual is high in performance and low in mastery orientation, (especially when coupled with low perception of competence) it is generally maladaptive. However, we find that high performance orientation when coupled with high (or moderate) mastery orientation is not maladaptive. Therefore, rather than focusing on whether an individual is mastery or performance goal oriented, it is important to consider the simultaneous combination of mastery and performance goal orientation.

It is interesting that elite athletes are likely to be high in mastery and performance goal orientations. However, the athletes most at risk are the high performance and low mastery oriented. These are the people most likely to exhibit maladaptive motivation, drop out or even be most likely to burn out when they believe they cannot demonstrate competence. The low mastery and performance goal people are the least motivated, and may not even commit to achievement tasks. The important issue in the present discussion is that the orthogonality of the goal orientations has been demonstrated quite conclusively, and the orthogonality of the goals is an important determinant of motivated behavior. The avenue of research related to achievement goals in the context of physical activity has demonstrated that individual differences in goal orientation are associated with different motivational processes and different achievement behaviors.

## THE MOTIVATIONAL CLIMATE

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One of the most powerful aspects of achievement goal theory is that it incorporates not

only the individual difference variables of mastery and performance goal orientations,

but also the situational determinants of task and ego involvement. The situation plays a central role in the motivation process. Research within achievement goal theory has examined how the structure of the environment can make it more or less likely that an individual will become task or ego involved in an achievement environment. The premise of this line of research is that the individual perceives the degree to which task and ego criteria are salient within the context. The individual assesses what criteria of success and failure are extant, and the behaviors necessary to achieve success and/or avoid failure. When mastery criteria are clearly evident, then the situation is seen as task involving. When performance criteria are clearly evident, then the situation is seen as ego involving.

The premise of the research from a situational perspective is that the nature of an individual's experiences and how he/she interprets these experiences influence the degree to which a mastery and/or performance climate is perceived as salient. A performance climate is created when the criteria of success and failure are other referenced and ego involving, and the athlete perceives that the demonstration of normative ability is valued by the significant others in the context; teachers, coaches, parents. A mastery climate is created when the criteria of success and failure are self-referenced and task involving, and the athlete perceives that the demonstration of mastery and learning are valued. The athlete (or any other participant) simply assesses the criteria of success and failure the coach, teacher or parent has set for that situation, and does his/her best to match the criteria. In a situation where mastery criteria are assessed, then an individual is assumed to adopt adaptive achievement strategies such as working hard, seeking challenging tasks, and persisting in the face of difficulty. Certainly, the extant research supports that assumption. In a situation where performance criteria are assessed, then an individual is assumed to adopt maladapt-

ive achievement strategies such as giving up in the face of failure, working hard only when succeeding, seeking tasks that are easily accomplished, and even dropping out. Again, the extant research supports that assumption. However, sometimes ego-involved individuals also adopt adaptive achievement strategies. When these people are ego-involved people with high perceptions of ability, then they enjoy demonstrating superiority to others. As long as the perception of high ability lasts, these people seek challenging tasks and revel in demonstrating their ability. But as soon as the perception of ability wavers, or the perception of ability becomes low for some reason, then these people are likely to adopt maladaptive achievement strategies.

The extant literature in physical education and sport suggest that the creation of a mastery motivational climate is likely to be important in optimizing positive responses (i.e., well-being, sportsmanship, persistence, task perseverance, adaptive achievement strategies) and attenuating negative responses (i.e., overtraining, self-handicapping). The research is quite clear: Perceptions of a mastery motivational climate are associated with more adaptive motivational and affective response patterns than perceptions of a performance climate in the context of sport and physical education.

An important aspect to recognize is that dispositional goal orientations and perceptions of the climate are two dimensions of motivation that interact to affect behavior. And the powerful and parsimonious aspect of achievement goal theory is that both the individual dispositions and the perception of the motivational climate are encompassed by the theory. However, it is true that research to date primarily deals with dispositional goal orientations and perceptions of the motivational climate as separate constructs in isolation to each other. But researchers are more inclined these days to use an interactionist approach that looks to investigate both variables at the same time (Papaioannou, Marsh & Theodorakis, 2004). This promises to provide a more

complete understanding of achievement behaviors in the sport and physical education experience in the future. It is suggested that dispositional goal orientations should be seen as an individual variable that will determine the probability of adopting a certain goal of action, i.e., task or ego state of goal involvement, and a particular behavior pattern in achievement contexts. Perceptions of the motivational climate, however, are suggested to act as moderators of the influence of the individual variables. When the situational criteria are vague or weak, an individual's dispositional goal orientation should hold sway. However, in situations where the situational criteria of success and failure are very strong, then these perceptions of the climate

may override an individual's dispositional goal orientation and be a stronger predictor of behavioral, cognitive and affective outcomes. This is very true for children and young adolescents, who have yet to firm up their personal theories of achievement and may be more susceptible to the influence of situational variables than older adolescents and adults.

The result of the limited research that has examined both individual and situational variables has shown that taking into account both of these variables enhances our understanding of the sport context. The limited evidence to date also provides support that situational variables may moderate the influence of goal orientations.

## **MOTIVATIONAL IMPLICATIONS OF BEING TASK OR EGO INVOLVED**

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The majority of research in achievement goal theory has focused on the antecedents and consequences of being ego or task involved and has looked at goal orientations and the motivational climate in isolation. As stated above, the most important facet of achievement goal theory is that the individual difference variables (self-schemas, personal theory of achievement, valence, dispositions, goal orientations) and the situational variables (motivational climate, emergent schemas) are part of the same theory and are conceptually compatible. The individual difference variables and the situational variables are both determinants of goal involvement. The kernel of the theory is that it is the state of goal involvement that energizes achievement striving. Thus it is rather artificial to look at goals and climate independently (which is what we have done previously). The essential issue is that it is the state of involvement that drives the achievement striving, therefore it is more conceptually coherent to look at the effect of being task and ego involved, however one gets there! We have already alluded to the difficulty of measuring task and ego involvement in situ, therefore we shall be consistent with the vast

majority of the literature and assume that when individuals score high on ego orientation and/or are subjected to a performance climate, then they are more likely to be ego involved. Similarly, when individuals score high in task orientation and/or are subjected to a mastery climate, then they are more likely to be task involved. It makes conceptual sense, therefore, to look at the literature in terms of state of involvement rather than artificially breaking the literature down into orientation and climate, the means to goal involvement. It may be statistically and empirically accurate to relate goal orientations and/or climate to the cognitive, affective, and behavioral variables that we typically study, but it is not strictly conceptually accurate. Accordingly, we shall briefly summarize the findings from research on achievement goal orientations and the motivational climate together, rather than separately as has been the case in reviews in the past.

- **Beliefs about success.** Task-involving goals have been linked with the belief that success stems from high effort, which is beneficial for athletes' motivation, learn-

ing and performance, particularly at the early stages of athletic careers (e.g., Van-Yperen & Duda, 1999). High ego-oriented athletes do not place high value on effort but rather on ability (Biddle, Wang, Kavussanu & Spray, 2003), which has no motivational benefits and is detrimental for those who already are unsure about their competence.

- **Purpose of sport.** Achievement strivings of high ego-oriented individuals reflect their beliefs that through success in sport and physical education one might become a competitive person and achieve high social status in life (e.g., Duda, 1989; Papaioannou & MacDonald, 1993). The achievement goal schema of high task-oriented persons incorporates beliefs that through participation and success in sport and physical education one might learn to value improvement, hard work, cooperation and a physically active lifestyle and advance social responsibility and good citizenship (Biddle et al., 2003).
- **Affect and intrinsic motivation.** Task-involvement helps athletes and physical education students to focus on their own mastery, become absorbed by the activity and experience intrinsic motivation and positive affect (e.g., Ntoumanis & Biddle, 1999). Ego-involvement undermines self-determination during training and learning and blocks experiences of intrinsic motivation and positive affect.
- **Self-regulation and achievement strategies.** Task-involving goals facilitate the activation of locomotion, a self-regulation strategy which is concerned with movement from state to state and with committing the psychological resources that initiate or maintain goal-related movement (Papaioannou, Simou et al., 2009). Task-involved individuals adopt adaptive metacognitive and achievement strategies, such as deep-processing strategies that enable them to develop competence (e.g., Lochbaum & Roberts, 1993; Thill & Brunel, 1995). Ego-involving goals facilitate the activation of assessment self-regulation function and comparisons between oneself and others. Ego-involved individuals adopt the most efficient strategy that enable them to achieve momentary maximum performance at the particular task and sustain self-worth, but these strategies are typically described as “surface” or “superficial”; the easy way to achieve a temporary outcome does not facilitate competence improvement.
- **Effort and performance.** While task-involvement is beneficial for both high and low perceived competence athletes to exert maximum effort in challenging tasks and maximize their performance, ego-involvement is beneficial to performance only for high perceived ability individuals (e.g., Sarrazin, Roberts et al., 2002).
- **Burnout.** Ego-involved athletes are at risk of exhibiting symptoms of burnout, particularly when they also have low perceptions of ability (e.g., Lemyre, Hall & Roberts, 2008).
- **Peer relationships.** Task-involvement facilitates collaboration between peers and mutual support but ego-involvement is linked to egocentric thinking, the perception of others as opponents and interpersonal conflict (e.g., Smith, Balaguer & Duda, 2006).
- **Moral functioning and aggression.** Compared to task-involved athletes, high ego-involved athletes are more likely to adopt any means leading to success, exhibit aggressiveness, lower sports-personship values and immoral behavior (e.g., Sage & Kavussanu, 2007).
- **Well-being.** The socially supportive climate in task-involving teams facilitates subjective well-being but situations promoting ego-involvement have been found to be associated with ill-being (e.g., Reinboth & Duda, 2004).

## OTHER APPROACHES TO ACHIEVEMENT GOALS

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Here, we presented achievement goals theory as it was conceived by Nicholls (1989) and has been extensively studied in sport (Roberts, 2012; Duda & Hall, 2001). Another conceptualization of achievement goals was made by Dweck (1986) who suggested that people adopt different theories of ability. Those who believe that ability is stable and not amenable to change are likely to adopt performance goals trying to demonstrate their competence to others. When they fail to exhibit high competence they exhibit the helpless pattern: attribution of failure to lack of ability, negative affect, low expectations for future success, avoidance of subsequent challenge and decreased persistence and performance. Those who believe that ability is malleable and amenable to change are more likely to adopt learning goals to try to develop their competence. For such individuals, mistakes are considered part of learning and failures as temporary occasions and opportunities to take feedback in order to develop further their ability. Thus, coaches and parents should

teach young athletes that talent is developed through training and hard work because this facilitates mastery goal adoption, positive affect and expectancies, increased persistence and high achievement.

A third conceptualization of achievement goals is the one offered by Elliot and colleagues who suggested that performance goals (Elliot & Church, 1997) or both mastery and performance goals (Elliot & McGregor, 2001) can be split into approach and avoidance goals. Existing research in sport based on this model implies that the adoption of mastery approach goals is the most adaptive achievement pattern, performance approach goals can be both adaptive and maladaptive (e.g., elicit negative affect), while avoidance goals are maladaptive (Papaioannou, Zourbanos, Krommidas & Ampatzoglou, 2012). Further discussion about the underlying conceptual differences between Elliot's and Nicholls models can be found in Duda and Hall (2001), Roberts, Treasure and Conroy (2007), Roberts (2012) and Papaioannou et al. (2012).

## CONCLUSION

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Parents, coaches, physical education teachers and others who interfere with children's development are advised to create task-involving climates in sport, home, school and if possible in other socialization settings, such as peer contexts where youngsters interact with their friends for social reasons. Usually the advice for the creation of mastery or task-involving environments are based on the recommendations of Epstein (1989) which were later adopted by Ames (1992) to suggest how to create a task-involving environment and how to avoid an ego-involving environment. These authors suggested there are six basic dimensions of any motivational climate, which can be briefly described with the anagram TARGET (see Table 4.4).

Extensive discussion about these structures and various examples are offered in

other chapters of this book (e.g., adaptive motivational climate, Chapter 35; family structures, Chapter 12). In addition, various sport psychology strategies which are described in the chapters, such as goal setting, self-talk, imagery and self-regulation, are appropriate to assist athletes to stay focused on task accomplishment and facilitate task-involvement and personal improvement. Readers are advised to read these chapters for applications in sport which aim to promote task-involving goals.

An implication to be remembered from this chapter is that the philosophy of coaches or PE teachers determines the motivational climate of their teams or classes. A grassroots coach who puts priority on the development of young athletes instead of prioritizing immediate outcomes is more likely to create a task-

**Table 4.4** *The TARGET dimensions for task-involving and ego-involving climates*

	<b>Mastery or Task-involving Climate</b>	<b>Performance or Ego-involving Climate</b>
<b>Task</b>	Meaningful, diverse, personally challenging and cooperative tasks	Competitive tasks emphasizing normative outcomes
<b>Authority</b>	The athlete or student participates in decision making	The coach or the PE teacher makes all decisions
<b>Recognition</b>	Based on high effort, progress and task accomplishment	Based on normative performance and normative ability
<b>Grouping</b>	Often changes, mixed ability	Relatively stable and based on normative ability
<b>Evaluation</b>	Personal criteria of evaluation, mistakes are considered as part of learning, low performance is used to provide feedback for improvement	Normative criteria of evaluation, mistakes are considered as indication of low ability, low performance is considered failure
<b>Time</b>	Flexible time for learning and task completion based on athletes' or students' needs	Inflexible time, everyone should accomplish a task within a specific time

involving climate because he can include all athletes in his plans and offer all players the joy of participation in competitions; he can offer the necessary time to all athletes to help them to master a task and apply recently learned techniques in contests, remain confident and not anxious to win, which helps him to provide more constructive feedback to his players; and he can offers choices and opportunities for innovations to his athletes, etc. On the other hand, a coach who prioritizes immediate outcomes is more likely to select the best athletes for competitions, to stay focused on the performance of the best and pay less attention on all athletes' progress, to use more nega-

tive comments when an athlete's performance is below his expectations, to limit the opportunities of athletes' initiatives because they pose higher risk for a good outcome, etc. These different approaches in coaching are linked with coaches' different definitions of success. To the first coach described here success is the development of the athlete while to the second coach success is the exhibition of high coaching ability that leads to high performance. In conclusion, how coaches and athletes define success depends on their philosophy about coaching, sport and life, which determine the long-term and short-terms achievement goals that are pursued in sport.



## LEARNING AIDS

- 1 What is achievement motivation?

*Individuals' efforts to meet realistic goals, receive feedback and experience a sense of accomplishment. Athletes who are motivated by achievement try to pursue challenging goals, to receive feedback from performance evaluations, and they try to accomplish challenging goals in order to feel satisfaction from accomplishment.*

- 2 What is the substantial difference between achievement goals and other intentional concepts?

*The meaning of achievement in goal pursuit! Athletes give meaning to their achievement behavior through the goals they adopt which reflect the purposes of achievement striving. In sport an important purpose is the achievement of success and the demonstration of athletic competence. Other intentional concepts, such as goal setting (Locke & Latham, 1990) or mastery/performance approach and avoidance goals (Elliot & Murayama, 2008) do not incorporate the meaning of achievement in goal construction.*

- 3 Why is it important not to confuse goal orientations with "traits" or needs?

*Because goal orientations are developed and mutate through socialization and are subject to change as achievement-related information is processed. However, they have some stability over time because they are cognitive schemas incorporating goal for achievement and reason for goal striving. Athletes have a reason to exhibit relative consistency in their behavior by pursuing task-involving or ego-involving goals across situations. This reason for relative cross-situational consistency in achievement goal pursuit is connected with the meaning of achievement and the definition of success.*

- 4 What is the meaning of achievement for high task or high ego-oriented athletes?

*The meaning of achievement reflects wider belief systems and purposes in life. Achievement is a social construct, thus the meaning of achievement is always determined by one's answer to the question "who benefits from success?" For ego-oriented athletes, success primarily serves the one who achieves it; when successful, one indicates that he or she is superior to others. By establishing superiority relative to others one benefits from all the extrinsic rewards which are associated with social status. For a task-oriented athlete one's success serves both the person and the teammates or the team as a whole. For task-oriented individuals success has benefits both for the person and the others or the wider society.*

- 5 Why do different definitions of competence reflect different definitions of success?

*For cognitively mature individuals, such as athletes older than 10 to 12 years of age, one's tendency to focus more often on self-referenced (task-involved) or other-referenced (ego-involved) criteria to judge competence is the outcome of socialization process. Several caretakers, such as parents, teach young athletes that sport is a meritocratic context and, therefore, the athlete who deserves more benefits and rewards from successful outcomes should be the one who establishes that she or he has higher abilities than others. However, the one who fails does not deserve equal benefits. This conceptualization of success, which is defined in normative terms, that is, being better than others, leads individuals to*

*focus on comparisons between themselves and the others and to value normative conception of ability. Other caretakers, though, who are very interested in the holistic development of the athletes and their psychological well-being teach athletes that achievement and high ability matters if it is the outcome of maximum effort. High task-oriented individuals also learn that everybody gains from one's success particularly within the team. Even an opponent's high performance is well received because it is seen as a high standard to achieve and not as another's failure. High task-oriented athletes are aspired by high achievement, like a spectacular athletic performance, but what primarily matters is the performance itself and the effort that leads to success. This approach helps athletes to remain unconcerned about failure which minimizes their cognitive and emotional load and helps them to focus on task mastery, task-involvement, and competence improvement.*

6 In which climates do athletes' goal orientations prevail?

*When the coach or the physical education (PE) teacher does not emphasize any particular achievement goal then athletes' goals prevail and determine the climate of the team or the class. For example, in the laissez-faire approach of a PE teacher who consistently abstains from direction or interference during children's play and gaming activities, children set their own goals which are usually competitive and therefore an ego-involving climate is created by children's behaviors. Of course, coaches and PE teachers do not need to interfere when athletes or students pursue clearly defined, personally challenging goals because these situations are task-involving; for example, when students try to improve their technique or performance using task-specific or personal criteria to judge their improvement respectively.*



## REVIEW QUESTIONS

- 1 Summarize the central tenets of early achievement motivation theories including attribution theory and their implications for coaches.
- 2 For task- and ego-involving goals respectively, explain how success is defined, how effort and ability are perceived, what satisfies athletes, what athletes try to achieve.
- 3 Explain the socialization process affecting the development of task and ego orientation.
- 4 Summarize the consequences of achievement goals on athletes' cognitions, self-regulation, affect and behaviors.



## EXERCISES

- 1 Read the learning aids and then find ten other articles that describe the association of achievement goals with beliefs about success in sport or in PE and beliefs or perceptions of the purposes of sport or PE, or life purposes. Describe why these associations emerged. Based on these findings please prepare some implications for coaches or PE teachers regarding the philosophy that they should establish in



their teams or classes in order to promote task-involving goals and climates. Please also prepare some questions that you might use in a workshop involving coaches or PE teachers where you will discuss their coaching or teaching philosophy.

- 2 Find ten articles describing association of athletes' or PE students' self-regulation strategies (achievement, or cognitive/metacognitive, or coping strategies) with achievement goals in sport or PE classes. Then describe these strategies, the findings and explain why these associations were found. Based on these findings please offer suggestions to coaches or PE teachers concerning the strategies that they should use in order to promote task-involving goals and climates.
  - 3 Find ten articles describing association of athletes' achievement goals with social behavior, including moral behavior, aggression, peer relationships etc. Then describe these findings in your own words, explain why these findings emerged and make a 15-minute presentation for parents explaining what achievement goals are, and why task-involving goals are more preferable than ego-involving goals in order to promote appropriate social behavior.
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# Motivation in sport

## A self-determination theory perspective

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### SUMMARY

Self-determination theory (SDT) has been widely applied to the study of motivation in sport settings. In this chapter, we present an overview of some of the constructs proposed by this theory; namely, coaches interpersonal styles, athletes' psychological needs, and motivational regulations. We also explain how coaching behaviors either support or undermine athletes' needs and subsequent motivation, and how the latter result in different levels of engagement, performance, and psychological well-being. Practical suggestions based on this theory are presented for enhancing adaptive athlete motivation. Lastly, potential challenges and solutions for implementing self-determination theory-based instruction and coaching are discussed.

### INTRODUCTION

Let us consider a youth basketball match where coaches from both teams encourage their players to work hard and win the game. Consider how coaches might go about encouraging their players to work harder. For example, one male team coach might speak to his players and advise them that if they do not hold the opposition to less than six points in the next quarter they will be required to perform "suicide runs" (repetitive sprints up and down the court). He also uses another strategy to encourage them to shoot accurately: At half time he advises that those play-

ers who shoot accurately will be rewarded with free tickets to a professional match. The coach uses these two strategies thinking he is motivating his players to work harder. In other words, the intentions of the coach are quite honorable because he believes that these strategies will increase player motivation. Unfortunately, he is unaware of the potential adverse consequences of these strategies on the players' motivation and subsequent engagement. The key question to ask here is: *How might those strategies not foster positive player engagement?*

Motivating athletes is considered an important aspect of coaching practice. Coaches typically encourage athletes to work hard to achieve success and use specific strategies to “motivate” their athletes because they believe that motivated athletes are more likely to succeed. In an attempt to understand how coaches positively or negatively influence athletes’ motivation we might consider some

related key questions: *How do coaches attempt to get the best from their athletes? How might research inform coaches about appropriate coaching practices that promote adaptive player engagement?* In this chapter, the theoretical framework of self-determination theory (Deci & Ryan, 1985) will be used to inform adaptive coaching practices that lead to promoting motivationally adaptive player engagement.



## OBJECTIVES

After reading this chapter, you should be able to:

- 1 Explain the types of motivation and psychological needs proposed by SDT.
- 2 Identify two major interpersonal styles of coaches, as described by SDT.
- 3 Provide recommendations for promoting self-determined motivation and need satisfaction in athletes.
- 4 Identify barriers and solutions for implementing SDT-based coaching.

## PROMOTING MOTIVATIONAL COACHING ENVIRONMENTS: AN OVERVIEW

It is widely acknowledged by athletes, coaches, sport psychologists, and the wider sport community that motivation is a key determinant of success and failure in sport. Often, a coach’s emphasis is solely on increasing the *quantity* of motivation, the assumption being that higher motivation will lead to better performance. However, motivation research (e.g., Vansteenkiste, Sierens, Soenens, Luyckx, & Wills, 2009) has shown that the *quality* of motivation also matters in that higher levels of motivation might not result in desirable outcomes if the quality of motivation is poor (i.e., if the reasons underlying engagement in particular actions are problematic). Unlike other theoretical frameworks of motivation, self-determination theory (Deci & Ryan, 2000) makes the distinction between quality and quantity of motivation.

This chapter will provide a brief overview of the major constructs proposed by this theory and will explain how these constructs have been operationalized in the context of sport. This chapter will also illustrate how coaches can promote adaptive types of motivation for sport participation, optimal performance, and psychological well-being. Lastly, problems and solutions in implementing SDT-based coaching will be discussed. Although in this chapter we focus on sport, the concepts and intervention suggestions we present are to a large extent applicable to any organized exercise contexts (e.g., aerobics classes) in which fitness instructors aim to maximize their clients’ motivation to engage in and adhere to an exercise regime.

## PSYCHOLOGICAL NEEDS AND MOTIVATIONAL REGULATIONS

According to Deci and Ryan (2000), SDT is a theory of human motivation and personality.

In a nutshell, the theory argues that individuals have a natural tendency for personal

growth and development. This tendency necessitates that the social context facilitates the satisfaction of three basic psychological needs. When these needs are satisfied, individuals will experience higher quality of motivation, psychological well-being, and will engage in adaptive behaviors (e.g., increased behavioral investment).

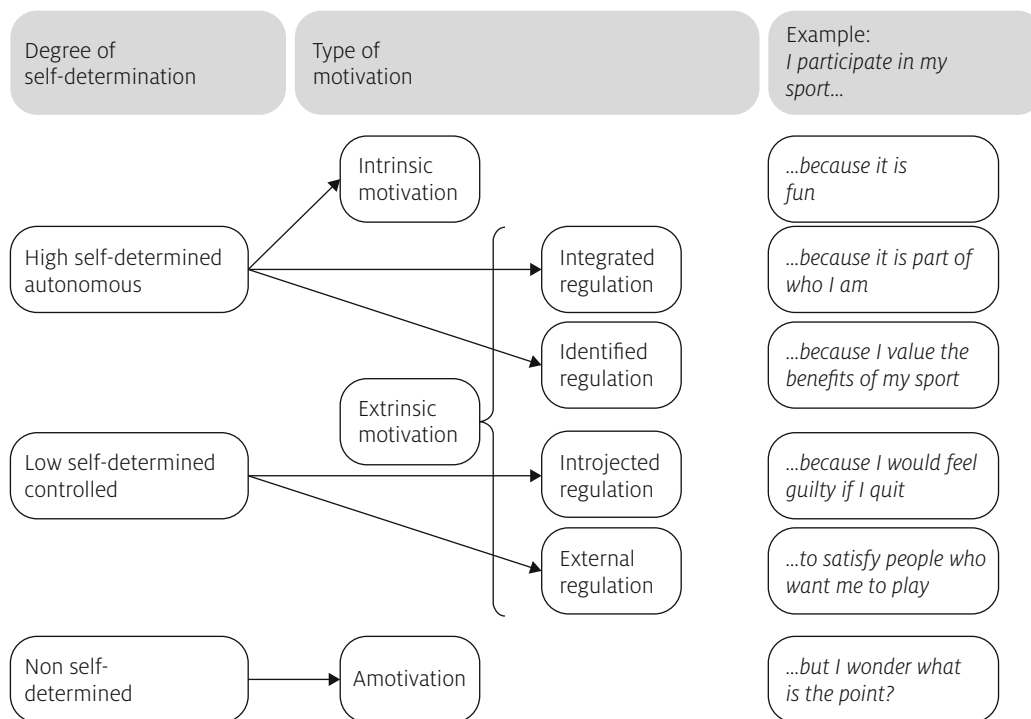
The three psychological needs identified by the theory are those for autonomy, competence, and relatedness. Autonomy refers to desire to feel ownership over one's behavior. Competence refers to the need to feel effective and achieve valued outcomes. Relatedness is the desire to feel accepted and meaningfully connected with others (Deci & Ryan, 2000). For example, in the context of sport, athletes will experience autonomy-need satisfaction when they are positively engaged in their training and personal development plans; competence-need satisfaction when they are given sufficient opportunities and guidance to achieve success; and relatedness-need satisfaction when they feel accepted and valued by their coach and teammates. Deci and Ryan argue that although these three needs might vary in strength from person to person, they are innate, universal, and essential for optimal human development.

A large volume of research evidence exists to show that the satisfaction of one or more of the psychological needs proposed by SDT can be an important predictor of a number of indices of behavioral investment and psychological well-being/ill-being, such as sport engagement, vitality, self-esteem, and physical health (e.g., Hodge, Lonsdale, & Jackson, 2009). Such findings make theoretical sense. When athletes feel in control of their behavior (autonomy), experience success (competence), and feel accepted and valued by their coach and teammates (relatedness), they will display active engagement and persistence in various activities in training and competition, and will report more positive physical and psychological health states. In contrast, when athletes feel that their psychological needs are frustrated,

that is, when they perceive lack of choice or opportunities for personal input, frequent failure in mastery attempts, and feelings of rejection and isolation, they are more likely to report feelings of burnout and negative emotional states (Bartholomew, Ntoumanis, Ryan, Bosch, & Thøgersen-Ntoumani, 2011).

The satisfaction of the three psychological needs is also expected to lead to higher quality of motivation (i.e., more self-determined; Deci & Ryan, 2000). SDT distinguishes three types of motivation with varying degrees of self-determination: intrinsic motivation, extrinsic motivation and amotivation (see Figure 5.1). Intrinsic motivation represents the highest degree of self-determined motivation. In sport, athletes with high intrinsic motivation freely engage in activities they find interesting and enjoyable, and which offer an opportunity for learning and personal development.

Extrinsic motivation is evident when individuals perform an activity because they value its associated outcomes (e.g., public praise, extrinsic rewards) more than the activity itself. There are four types of extrinsic motivation. These are, in decreasing order of self-determination, integrated regulation, identified regulation, introjected regulation and external regulation. Integrated regulation is evident when behaviors are performed because they are fully assimilated within one's self system. For example, integrated regulation is evident when athletes perceive their sport engagement as part of who they are. Individuals with high identified regulation perform activities out of choice but without necessarily enjoying them. For example, some young athletes may participate in sport because they value the importance of sport engagement for their health and performance goals. Both integrated and identified regulations are associated with a personal endorsement of one's sport participation, and thus are high in self-determination. Introjected regulation describes extrinsically motivated behaviors that are performed out of feelings of guilt/shame or in the pursuit of contingent self-worth. For example, some



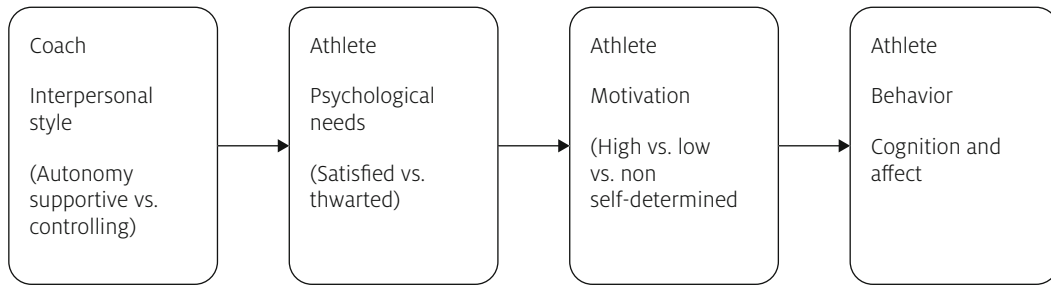
**Figure 5.1** Types of motivation along the self-determination continuum with illustrative examples from sport taken from Lonsdale, Hodge, and Rose (2008).

young athletes may participate in sport because they do not wish to let their parents down. Lastly, external regulation refers to behaviors carried out in order to attain tangible rewards (e.g., trophies), social approval, or to avoid punishment. Both introjected and external regulations are associated with low levels of self-determination.

Amotivation represents the absence of intrinsic and extrinsic motivation. It is evident when athletes lack the intention and willingness to engage in sport. It often results from feelings of incompetence and uncontrollability and is frequently linked to decisions to drop out of sport (e.g., Pelletier, Fortier, Vallerand, & Brière, 2002).

The extensive evidence in the sport literature on the application of SDT in sport demonstrates that autonomous/self-determined forms of regulation (intrinsic motivation, integrated and identified regulations),

compared to controlled forms of regulation (introjected and external regulations) and amotivation, result in more adaptive outcomes such as higher effort, persistence, performance, and various indices of psychological well-being (cf., Vallerand, 2007; see Figure 5.2). High autonomous types of extrinsic motivation (i.e., integrated and identified regulations) in sport are important given that some behaviors might not be inherently enjoyable (e.g., repetitive drills during training), but could have high instrumental value. Introjected regulation can sometimes lead to persistence, but this is relatively short-lived (Pelletier et al., 2002). Tangible rewards are very frequently used in sport (e.g., athletic scholarships) but evidence suggests that when they are used to motivate athletes they result in athletes being motivated by external regulation (Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2009).



**Figure 5.2** A self-determination theory-based motivational sequence adapted from Vallerand (1997).

A coach plays a major role in shaping the psychological experiences his/her athletes derive from their sport participation (Mageau & Vallerand, 2003). Many coach behaviors have a positive influence on athletes' psychological need satisfaction, autonomous motivation, performance, and psychological well-being.

However, maladaptive coaching behaviors are not uncommon. The following section discusses two interpersonal styles that have very different consequences for the quality of athletes' engagement in sport and their psychological well-being.

## COACH INTERPERSONAL STYLES

In an effort to understand the underlying motivational mechanisms associated with the use of different coaching behaviors, SDT-based research in sport has primarily focused on the contrast between an autonomy-supportive and a controlling coach interpersonal style (although coaches can adopt both styles to varying degrees). Short descriptions of these contrasting interpersonal styles are presented in Table 5.1.

Despite the label, autonomy-supportive behaviors are theorized and have often been shown in research to predict the satisfaction of not only autonomy, but all three basic psychological needs, as well as autonomous motivation (Mageau & Vallerand, 2003; Reeve, 2009). It is important to clarify that an autonomy-

supportive coaching style does not encourage an athlete to break off ties and become independent of his/her coach. An autonomy-supportive coach offers emotional support, advice and guidance within specific constraints with the aim of helping athletes develop responsibility and take ownership of their actions. In contrast to autonomy support, a controlling coach interpersonal style can actively undermine the three psychological needs and result in controlled forms of motivation, and perhaps over time lead to amotivation. Controlling behaviors have been theorized and empirically shown to predict the thwarting of the three psychological needs and low or non-self-determined motivation (Bartholomew et al., 2011; Mageau & Vallerand, 2003).

## PROMOTING NEED SATISFACTION AND AUTONOMOUS MOTIVATION IN SPORT

A number of suggestions have been offered (and tested) in the SDT literature with regard to the promotion of need satisfaction and autonomous motivation. These suggestions center

on the development of a coach autonomy support style and the reduction of controlling behaviors. One of the central dimensions of autonomy support is the provision of choice of



**Table 5.1** *Autonomy-supportive and controlling interpersonal style*

Autonomy-supportive	Controlling
<p>An autonomy-supportive coach:</p> <ul style="list-style-type: none"> <li>● Encourages athlete initiative</li> <li>● Allows athlete participation in decision making</li> <li>● Offers choices that are relevant to athletes' goals and values</li> <li>● Provides a rationale for task-engagement</li> <li>● Acknowledges negative feelings associated with task-engagement</li> <li>● Is non-judgmental</li> <li>● Attempts to understand athletes' perspective before offering suggestions (Mageau &amp; Vallerand, 2003).</li> </ul>	<p>A controlling coach:</p> <ul style="list-style-type: none"> <li>● Behaves in a coercive, pressuring, and authoritarian way in order to impose a preconceived way of thinking and behaving upon their athletes</li> <li>● Uses excessive monitoring and surveillance</li> <li>● Marginalizes athletes' input and views</li> <li>● Attempts to influence aspects of the athletes' lives that are not directly relevant to their sport participation</li> <li>● Uses intimidating behaviors (e.g., yelling, physical punishment)</li> <li>● Uses guilt-inducing statements</li> <li>● Withdraws attention, positive regard and support when athletes are not compliant with his/her instructions and expectations (Bartholomew et al., 2009).</li> </ul>



**Figure 5.3** Rugby.

activities. Choices offered by the coach should set specific rules and boundaries, be meaningful to the athletes, and meet the athletes' basic psychological needs. For example, a coach should: a) offer his/her basketball players a choice of drills that will help the development of a particular skill (e.g., defense) that is relevant to the athletes' goals and interests; b) ensure that the offered choices are not too numerous or complex for the players; and c) minimize the potential of subsequent intra-team disputes. In addition to choice, meaningful rationales should be offered, particularly for uninteresting or repetitive behaviors. For instance, a young soccer player will more fully internalize the importance of performing flexibility exercises if his/her coach can clearly demonstrate the direct benefits of agility for soccer performance. Rationales are also useful to explain the purpose of existing restrictions and rules (e.g., why certain types of food should be avoided). Understanding the underlying reasons for the selected activities will foster positive engagement. Moreover, athletes are more likely to be self-determined when they are offered explanations that are clear, truthful, and meaningful, as opposed to when they are treated by their coach with an "it's my way or the highway" attitude (Mageau & Vallerand, 2003). Furthermore, athletes should be encouraged to provide some input in strategies and tactics. In this way, coaches will demonstrate that they value athletes' opinions and encourage initiative and problem solving (Vallerand, 2007).

Coaches should also be empathetic and acknowledge the difficulties, negative feelings, or objections that their athletes might have in relation to particular tasks, goals, or rules. For example, they should be empathetic to their athletes' complaints that certain activities in training are unexciting. Expressions of dissatisfaction by athletes should not be discouraged as allowing them gives athletes the message that their voices are heard and respected, and makes it more likely they will develop a sense of being valued. Further, such

objections can result in better rationales being provided or in structural changes (e.g., more choices) that could address criticisms.

Coaches should also provide feedback that is constructive, detailed, informative in terms of competence development (e.g., "your awareness of your opponents' movements off the ball has really improved because you are now able to..."), and positive where appropriate. Further, coaches should take time to listen first and then respond to athletes' ideas and goals, be patient with their progress, try to develop an understanding of how their athletes think and feel about certain things, and give them sufficient time and encouragement to take initiatives and develop independently (Mageau & Vallerand, 2003; Reeve, 2009). In terms of goal setting, athletes should be encouraged to set and strive for goals that are congruent with their values and interests. To facilitate competence need satisfaction in particular, training regimes should provide optimally challenging opportunities that are matched with athletes' current and varying levels of skill development. Further, in terms of facilitating relatedness need satisfaction, team building exercises, and one-to-one meetings to discuss both individual and team goals should be scheduled. When required, such meetings should also aim to help athletes fully internalize and volitionally engage in team goals and activities that serve the "greater good", sometimes at the expense of individual goals. In brief, a coach who makes an athlete feel valued, appreciated, and respected will facilitate feelings of relatedness in that athlete.

As stated earlier, the facilitation of psychological-need satisfaction and autonomous motivation requires the reduction of controlling coach behaviors. To this end, a coach should not use language that is verbally abusive, that threatens, humiliates or forces (e.g., via fear or guilt inducement statements such as "don't let me down") athletes to accept rules, limits or activities. Coaches should also avoid monopolizing conversations, discouraging questions or alternative opinions from



**Figure 5.4** Football.

their athletes, issuing deadlines, directives and commands, asking controlling questions (e.g., “can you do this the way I want it?”), using praising as a contingent reward (e.g., “you did exactly what I asked you to do”), telling athletes

how they ought to feel, offering only predetermined goals and choices, and using over-intrusive behaviors to influence their athletes’ lives outside sport (Bartholomew et al., 2009; Reeve, 2009).

## **POTENTIAL CHALLENGES IN TRANSLATING THEORY TO PRACTICE**

Research examining challenges and barriers in the translation of self-determination theory to practice when implementing coaching practices such as those discussed in the previous section is scarce. One exception is an autobiographical case study reported by Mallett (2005)

in which he described his own coaching practice as autonomy-supportive. He stated that his general personal orientation was inclined towards autonomy rather than control, which influenced how he coached. Although Mallett reported that his autonomy-supportive coach-

ing developed over many years, he felt that the adoption of an autonomy-supportive pedagogical approach to coaching was somewhat unproblematic. However, for many coaches or educators shifting from a controlling to an autonomy-supportive instructional approach can be complex and challenging (Reeve, 2009). How might a coach shift from controlling to more autonomy-supportive coaching practices? What are the potential barriers to shifting towards an autonomy-supportive approach?

Mageau and Vallerand (2003) proposed that three key factors influence coaches' interpersonal style: their personal orientation, the coaching context, and their perception of athletes' behavior and motivation. These factors probably operate interdependently, so understanding the shift from a controlling to an autonomy-supportive instructional approach should include a consideration of all these individual and social factors.

A coach's personal orientation is influenced by his/her general causality orientation and beliefs about how to motivate athletes (Deci & Ryan, 1985). Socialization factors are likely to shape coaches' personal orientation to be more controlling than autonomy-supportive. Coaches' behaviors, for example, may often reflect parenting styles characteristic of the 1950s and 1960s, in which children's and athletes' compliant behaviors were shaped by reward and punishment. This controlling orientation is unsurprising since coaches typically report that they coach the way they were coached (Lyle, 2002). Coaches are also likely to be socialized into believing that controlling behaviors will increase athletes' motivation, especially in the short term (Reeve, 2009). However, most coaches are probably unaware of the medium to long-term adverse consequences of such controlling behaviors (e.g., amotivation, attrition, psychological ill-being). The shift towards an autonomy-



**Figure 5.5** Beep test.

supportive orientation to coaching requires the coach to endorse such a shift (Mageau & Vallerand, 2003). This shift may present some challenges to the coach; for example, the implementation of an autonomy-supportive coaching approach might be difficult for the coach because it takes him/her out of his/her “comfort zone”. Several coaches have reported significant challenges in becoming more autonomy-supportive, especially if their personal orientation is controlling. Socialization factors combined with years of coaching with a dominant controlling interpersonal style require the coach to change many implicitly learned coaching behaviors and beliefs about how to motivate others, which understandably demand sufficient time, patience, reflection, and practice.

With regard to the coaching context, the second variable discussed by Mageau and

Vallerand (2003) to influence coaches’ interpersonal style, several factors are likely to be influential. In elaborating upon these factors, the work by Reeve (2009) on teachers’ challenges to be autonomy-supportive, considered alongside a program of coach motivation research by Mallett and colleagues (e.g., Ahlberg, Mallett, & Tinning, 2008), can be very informative. First, in the sporting context, coaches typically exercise a controlling interpersonal style because they are the dominant actor in the coach–athlete relationship. Controlling interpersonal styles are characteristic of those with inherent dominance in differential power relations. In the coach–athlete relationship, the coach is assumed to possess greater knowledge and experience, and thus superior social status. Second, external pressures from parents, club officials, and spectators on coaches to produce winning



**Figure 5.6** Tennis.

performances are likely to, consciously or unconsciously, result in coaches transferring those controlling pressures into how they interact with their athletes. Third, the culture of sport supports the use of controlling coaching behaviors. A general perception in coaching is that coaches who use controlling, rather than autonomy-supportive behaviors, are more competent. It is not uncommon to observe controlling coaching behaviors in televised professional sports, which might send a message to viewing coaches and athletes that this approach is the norm. An associated reason is that controlling behaviors also seem to send a message that the coach has a structured coaching practice, which is deemed to be conducive to superior performances. In contrast, an autonomy-supportive approach might send the message that the coach is *laissez-faire* in their approach and perhaps lazy. One example might be the coach's use of questioning to enable players to have some input and to think critically about what strategies to use in what situation. In this example, the players might think that the coach does not know what to do if he/she is asking players questions; coaches usually tell players what to do! Another example might be coaches who provide limited direct input, rather than regularly yelling instructions to players, which might also be perceived as an indication of low coach competence. To some extent these situations reflect players' frames of reference for what is "good" coaching practice; to coach differently might be perceived as inferior coaching.

Anecdotally, sometimes athletes do not want to be in control and prefer their coaches to take that responsibility. In other words, some athletes report that they are happy to be told what to do and when. Perhaps these athletes have been shaped to be passive learners due to socialization experiences or they have impersonal/control orientations, which are the result of need thwarting (Deci & Ryan, 2000). It is also likely that these athletes actually report a preference for a structured coach-

ing environment, where the coach establishes clear expectations, goals and boundaries. However, a structured environment can be autonomy-supportive or controlling, depending on the communication style used by the coach. For example, a coach who pressurizes athletes to meet certain goals and standards is a controlling one, whereas a coach who supports athletes' efforts toward meeting these goals is autonomy-supportive (Reeve, 2009). It is unlikely that many athletes would flourish under a coaching environment where they are shouted at, are put under surveillance, and their opinion/input is never welcome. If coaches are to become more autonomy-supportive, it is also necessary to teach athletes how to deal with increased autonomy (Pelletier, Fortier, Vallerand, & Brière, 2002). For example, coaches might guide athletes in thinking about some options for a particular play in basketball. Part of the discussion with the athletes might consider what the benefits and costs of alternative strategies are before deciding a course of action. Coaches can gradually scaffold these opportunities (in both frequency and complexity) into training and competition contexts.

The third factor considered to influence coach behaviors is the coach's perception of the behavior and motivation of the athlete (Mageau & Vallerand, 2003). Coaches respond to the behaviors of athletes; for example, some athletes are less cooperative than others and in attempting to "motivate" those less cooperative athletes, coaches typically resort to the use of controlling behaviors. Unfortunately, these controlling behaviors will actually undermine self-determined forms of motivation reinforcing further coaches' perceptions about athlete motivation and the need for adopting a controlling interpersonal style (Pelletier & Vallerand, 1996).

There is a significant quantum of research supporting an autonomy-supportive approach to coaching. Autonomy-supportive behaviors could be adopted gradually and tried over time (e.g., choices that athletes might prefer during



**Figure 5.7** Netball team.

a training session) so that they are refined to meet athletes' needs. In guiding the shift towards an autonomy-supportive approach to coaching, coaches should become more aware of how they communicate with their athletes (e.g., via videoing and reviewing their sessions or seeking feedback from athletes and other coaches). Questions that could be asked to these coaches include:

- What are the most common controlling behaviors you use? What is the frequency of those behaviors?
- What are the most common autonomy-supportive behaviors you employ? What is the frequency of those behaviors?
- What do you think might be the short-, medium-, and long-term consequences of any controlling behaviors?
- Are you interested in changing any controlling behaviors? If so, which ones and how?
- How is your interpersonal style contributing to your athletes' psychological need satisfaction – autonomy, competence, and relatedness?

## CONCLUSION

In conclusion, an SDT approach to coaching has much potential in terms of increasing athlete motivation, however, there are some personal, situational and cultural factors that can act as barriers in promoting autonomy-

supportive coaching. Such factors should be identified and tackled when developing SDT-based training programs in order to maximize the efficiency of SDT-based training and coaching.