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Foreword

As President of the International Association for the Scientific Study of Intellectual Disability (IASSMD), it is a pleasure for me to provide brief comments
as a Foreword to this book ‘Physical and Motor Development in Mental Retardation’. As the reader will realize, the contributions to this manuscript are based upon presentations made at the Ninth World Congress of the IASSMD held on the Gold Coast in Australia in 1992. That Congress was a particularly productive meeting with an attendance of over 1,200 persons from 42 countries. There were numerous presentations which exhibited the dramatic progress being made throughout the world in the development of new knowledge about intellectual and related developmental disabilities.

This book is exemplary, in my opinion, from at least three perspectives. First and foremost, it contains new and important information about motor processes and the dramatic role they play in developmental disabilities. It is becoming increasingly clear, both in the biological and behavioral sciences, that developmental disabilities are characterized by atypical and anomalous interactions and interfaces between motor processes and more cognitively and intellectually oriented processes. This atypical interface appears to have significant impact on the nature and quality of intellectual compromises. New information helps characterize these atypical processes and the manner by which they contribute to developmental disabilities.

The book also, most effectively points out the global nature of the research process and the breadth of the geographical effort to understand developmental disabilities. In this book alone, research from seven different countries is described. The material also exhibits the true interdisciplinary nature of our research enterprise, including the biological, behavioral, social and engineering sciences.

Finally, the book contributes to perhaps the most significant problem our respective societies face regarding research on developmental disabilities - lack of sufficient communication. This problem appears to be universal. There is not sufficient communication about progress in research among scientists, there is not sufficient dissemination of information about research outcomes to service providers and educators, and there is a dramatic need for better distribution about research progress to persons with disabilities and their families. Hence, the relationship between research and practice, a relationship that determines the nature and duration of how persons with disabilities and their families benefit from new knowledge developed in our laboratories and research programs, is appallingly slow and obtuse.

I believe the reader will find the information contained in the following pages interesting, stimulating, and beneficial regarding motor processes and the role they play in developmental disabilities.

Terrence R. Dolan
President, IASSMD

Foreword VIII

Introduction
Like our book, Motor Development, Adapted Physical Activity and Mental Retardation, published in this series in 1990, the present volume attempts to capture the main elements of current research and scientific reflections on the motor development of persons with mental retardation, and on some related topics. In this respect, this volume offers - again - a state-of-the-art testimony.

This book was originally planned around the International Association for the Scientific Study of Mental Disability (IASSMD) conference. However, the book has expanded to include some additional invited papers. Thus, a variety of perspectives addressing issues related to motor and physical development of persons with mental disability are included. The international flavor is very evident with several countries in Europe, Asia and North America being represented.

The number of studies in motor and physical development with respect to persons with mental retardation has been increasing in the last few decades. Although this research has not advanced our understanding as far as we all might wish, and in many ways is just beginning, important groundwork has been laid. Thus, the chapters in this volume reflect not only some of the things we know today, but also give an indication of where we might be heading.

Advances have been made in understanding the significance of motor and physical development in the life of persons with developmental disabilities. Parents and caregivers have long since been aware of the significance of movement in the emotional and social communication with their children and are increasingly turning to scientists to push this knowledge base further. Based upon the observations of teachers and caregivers, researchers are finding new ways of documenting the significant changes in the growth and movement occurring across the life span of persons with mental retardation.

It is appropriate then that the first two extended chapters describe what is seen as an emerging perspective on theory and research applicable to the area of mental retardation. This perspective, referred to as ecological task analysis, is related to dynamic systems theory which has recently become a major force in the motor development literature [1]. Ecological task analysis espouses that physical and movement development emerge from the interacting constraints (both limitations and enablements) of the task goal (conscious and unconscious intentions), attributes of the performer, and conditions of both the social and physical environment. The underlying philosophical and theoretical tenants of ecological task analysis are given in the first chapter by Davis and van Emmerik, and related research questions and strategies are given in the second chapter by the same authors.

Whether motor development is simply lagging in persons with mental retardation or is truly different from their age-matched peers has been a major issue in the literature. In the third chapter, Vermeer provides an informed discussion to bring readers up to date on this issue. In the consequence of the insight that the
neurological development of persons with mental retardation 'differs' fundamentally from typical development, it follows that motor development is also 'different' from motor development of typical children.

Down syndrome, as the most significant subgrouping within mental retardation, has rightly attracted much of the attention of researchers and educators alike. Reflecting this trend, several chapters address issues related to motor development of individuals with Down syndrome. Lauteslager discusses motor development of young children with Down syndrome, while Jobling and Gunn examine the motor proficiency of children and adolescents. Early intervention with this population has also received its share of research attention. De Graaf provides a thorough and very careful review of this literature and offers insights of considerable importance to both parents and researchers. As the current Director of the Stichting Down’s Syndroom in The Netherlands, and a father of a child with Down syndrome, de Graaf is well qualified to offer a unique perspective on this topic. Differences in physical growth patterns between individuals with and without Down syndrome but with mental retardation have been shown in some studies [2]. More recent work in this area comes from Kuroki, Kurosawa and Imaizumi in Japan and is reported here.

Mental retardation as a social construct has long been recognized by experts in the field [3], and the social and psychosocial characteristics of persons labelled as mentally retarded are extensively studied. Nevertheless, research concerning the relationship between these social characteristics and motor development has been neglected. Researchers in motor development in general have been somewhat remiss in this endeavor as well. It is significant then that two chapters in this volume focus upon the issue of how social and motor development relate. Neuhauser provides a thorough discussion of many important issues concerning the psychosocial conditions of motor development based upon his recent work in this area. Wenjun of China describes an assessment scale designed to measure the social adaptive behavior of children from 3 to 7 years of age.

The physical side of development in persons with mental retardation is also covered in four important chapters. Croce and Horvat report on their work with individuals with mental retardation related to exercise-induced activation and cognitive processes, while Lavay, McCubbin and Eichstaedt critique field-based physical fitness tests for individuals with mental retardation. Balance as an important factor in physical and motor development is examined by Kokubun and Koike. These chapters require the attention of anyone interested in health and fitness of persons with mental retardation.

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Finally, one of the few discussions of developmental issues related to the Williams-Beuren syndrome is included in this volume written in collaborative effort by Plissart, Curfs, Hellemans and Fryns. Silliman and French from the US focus on
the most recent behavioral technology available to improve the walking posture malalignment of individuals with severe and profound mental retardation. Thus, this volume offers examples of worldwide research regarding the physical and motor development of persons with mental retardation. Furthermore, a range of topics are covered. Nevertheless, there is some common ground through each of the chapters, as well as some contrasting perspectives. This book opens with a foreword by Dr. Terrence R. Dolan, President of the IASSMD. We would like to thank him and the IASSMD for its permission to publish a part of their congress papers in this specialized volume. Finally, we thank the editors of Medicine and Sport Science for including this volume in their series. Last but not least, we thank our fellow contributors for their willingness to contribute and for their patience in waiting for the realization of this book.

Amsterdam, November 1994
Adri Vermeer
Walter E. Davis

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