# An Introduction to PHYSIOTHERAPY and REHABILITATION

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Redactors
Claire Emery
Gizdem Akdur



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To Mustafa Kemal Atatürk

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The history of the physiotherapy profession, which has existed in the world for more than a hundred years, dates to ancient times. It is known that in ancient times people used a wide variety of empirical methods such as religious, superstitious, and philosophical approaches to cope with pain. Although, the history of the physiotherapy profession does not go back to very old years, it is a professional health field that is accepted and developing all over the world.

Since the early 19th century physiotherapy education developed rapidly. With the diversity of evidence-based physiotherapy practices, the definition of physiotherapist and the working areas of physiotherapists have also expanded. In the 1980s, the World Confederation of Physical Therapy (WCPT) established physiotherapy undergraduate training and it has approved that the program be given at universities or schools at this level in all countries. The foundations of the physiotherapist profession in Turkey, was founded by Prof. Dr. İhsan Doğramacı in 1961 in Ankara. In the Turkish Republic of Northern Cyprus (TRNC), the first Physiotherapy and Rehabilitation Department was established in 2010 during my deanship at the Faculty of Health Sciences, at the Eastern Mediterranean University.

Due to the interest and demand for the physiotherapy profession, the number of universities providing physiotherapy and rehabilitation education is increasing rapidly in Turkey and the TRNC, as in many countries. The aim of Physiotherapy and Rehabilitation departments in higher education is to train graduates who are; equipped with the knowledge, skills and competences related to physiotherapy and rehabilitation to identify, prevent, and treat movement and functional disorders, to maintain a healthy life and to increase the quality of life; considering the benefit of society, investigative, inquisitive, questioning, lifelong learning, and evidence-based practice skills.

The main purpose of our book is to provide an English source with up-to-date information, which is currently lacking in the field of physiotherapy literature in Turkey, for academics, physiotherapists, and physiotherapy students. The four sections of this book introduce physiotherapy profession and its history, physiotherapy treatment modalities and physical therapy and rehabilitation approaches and health terminology and concepts. This book provides a guide for physiotherapy students with its chapters containing fundamental information on measurement and evaluation methods, treatment approaches, physical principles of manual and physiotherapy modalities, physiological effects, application methods, indications, contraindications, and risks.

Our book is a useful source of information for students new to Physiotherapy and Rehabilitation. The chapters were written in a plain language that is easy to understand, plenty of visuals were used, and it has been prepared as a summary without going into details.

The authors of the book Introduction to Physiotherapy and Rehabilitation consists of our valuable clinical and academic colleagues, who are experts in their fields, from various national and international universities. We would like to express our gratitude to our esteemed academic and clinical friends, who accepted to be a chapter writer in this book without expecting anything in return, despite their heavy workloads, for their devoted work and contributions.

We would like to thank all the valuable members of the Hippocrates publishing family especially, Ali Çelik and Hüseyin Çağlıkasap who contributed to this book by working with devotion and meticulousness at every stage of the book, fast and perfect printing of the book and by striving to reach every corner the country.

We tried to create an evidence-based resource for our students, colleagues, and clinical scientists by summarizing the wide scope of Physiotherapy and Rehabilitation as much as possible. We hope that this book will be a reliable guide and useful source of information that sheds light on science.

With my love and regards,



## **About the Editors**

#### Prof. Dr. Hülya Harutoğlu

After her high school education in Cyprus, she received her Bachelor's degree from Hacettepe University "Physical Therapy and Rehabilitation School" in 1984, Master's degree from Istanbul University "Institute of Cardiology" in 1988, and Doctorate (Ph.D.) degree from Istanbul University Faculty of Medicine "Medical Ecology and Hydro-climatology Department" in 1994. She received the titles of Assistant Professor in 2000 and Professor in 2009 from Istanbul University.

She participated in the establishment of the Cardio-pulmonary Rehabilitation units of the Institute of Cardiology between 1985-1999 and in the establishment of Florence Nightingale Hospital between 1990-1993. Between 1999 and 2005, she worked as the Head of the Department, department chair, and vice-chair of the Istanbul University School of Physical Education and Sports.

Between 2010 and 2015, she served as the Founding Dean of the Eastern Mediterranean University Faculty of Health Sciences and the Founding Director of the School of Health Services. She established the first Physiotherapy and Rehabilitation Department in TRNC.

In 2015, she served as the Dean of the Faculty of Health Sciences, the deputy Rector, and the CEO of the University at the "British University of Nicosia".

In 2016, she served as the Founding Rector of "Ada Kent University" and the Founding Dean of the Faculty of Health Sciences. She became the first founding rector as a physiotherapist.

She was elected as a member of the Higher Education Planning, Evaluation, Accreditation, and Coordination Council (YÖDAK) by the TRNC Republic Assembly in 2017 and she continues her duty.

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#### Dr. Ayfer Kahraman

Ayfer Kahraman qualified from the Manchester University with a BSc (Hons) in Physiotherapy in 2005 and subsequently completed an MSc in Musculoskeletal Physiotherapy at Manchester Metropolitan University in 2007 and a PhD in Health Care Sciences and Neurology at Kingston University and St George's, the University of London in 2014. Ayfer Kahraman has several professional affiliations. She is a registered member of the Health and Care Professions Council (HCPC) and the Chartered Society of Physiotherapy (MCSP) in the United Kingdom. She has been a board member of non-governmental organizations in the UK and Europe, including the Anglo-Turkish Healthcare Professional Association (ATHPA) (Secretary-General); the European Federation of Turkish Healthcare Professionals (Vice-president) and the Council of Turkish Cypriot Associations (CTCA-UK)- (Public Relations Officer).

Ayfer Kahraman has been a Senior Lecturer in Physiotherapy at London South Bank University, since 2019 within the Institute of Health and Social Care, contributing to the undergraduate (BSc) and postgraduate (MSc-pre-reg) Physiotherapy Programmes. She has previously taught on the Physiotherapy programmes at King's College London, Kingston University and the St George's University of London, as well as in the Medicine programme at St George's Hospital Medical School. She has previously worked as a Clinical Specialist Physiotherapist in Neuromuscular Diseases at the National Hospital for Neurology and Neurosurgery. She was also Visiting Assistant Professor at the International Final University in North Cyprus in the 2018-2019 academic year.

Ayfer Kahraman's research interests are focused on the management of long term conditions, physiotherapy education and mixed methodologies. She has experience in supervising dissertations and research projects. She has several international and national scientific publications and many scientific activities and awards.

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#### **Assoc. Prof. Dr. Ender Angin**

She was born at Nicosia on September 19, 1984. In the year 2001, she graduated from the Türk Maarif College with a high school diploma. Then, she graduated from Baskent University, Department of Physical Therapy and Rehabilitation at Ankara in 2005. She received her master's degree in Physiotherapy and Rehabilitation at Hacettepe University in 2007 and her doctorate in 2012.

Between 2005-2012, she worked as a physiotherapist at the Mehmet Reis Physical Therapy and Rehabilitation Center affiliated with Cyprus Turkish Orthopedic Disabled Association. In the same years, she established the Marmara Physiotherapy and Rehabilitation Center and worked there as a physiotherapist. In 2012, she started to work as a full-time assistant professor at the Eastern Mediterranean University, Faculty of Health Sciences, Physiotherapy and Rehabilitation Department. In 2020, she was awarded the title of Associate Professor in the Physiotherapy and Rehabilitation Department. She has published many national and international articles and theses in the field of orthopedic rehabilitation. She is a member of the Turkish Physiotherapists Association, TRNC Physiotherapists Association, and International Association of Physical Therapists working with Older People (IPTOP).

#### Assoc. Prof. Dr. Gözde İyigün

She was born in Nicosia on September 20, 1983. In the year 2000, she graduated from the Türk Maarif College with a high school diploma. In 2005, she received her bachelor's degree in physical therapy and rehabilitation from Hacettepe University. In 2007 after attending Sheffield Hallam University's Department of Physical Therapy, Faculty of Health and Wellbeing's Neurological Rehabilitation program, she was awarded a Master of Science degree. She graduated with a doctorate in Physiotherapy and Rehabilitation from Hacettepe University's Faculty of Health Sciences in 2012.

As an Assistant Professor at the Eastern Mediterranean University Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation from 2013 to 2020, she contributed to her field of study. She received her Associate Professor degree in 2020 and continues to serve as an Associate Professor. She has also served as the English Department Coordinator for the Physiotherapy and Rehabilitation Department since 2017.

She has conducted numerous research in people with various neurological disorders and the elderly on balance, mobility, walking, dual-task activities, fear of falling, response time, and virtual reality. She is a member of the Turkish Physiotherapists Association, Neurological Physiotherapy Subgroup, TRNC Physiotherapists Association, and International Association of Physical Therapists working with Older People (IPTOP).

### **About the Redactors**

#### Claire Emery, MA, BA, FHEA

Claire has been a senior lecturer in academic skills at Kingston University, the St George's University of London since 2007 in the Faculty of Health Social Care and Education. Prior to this she was a lecturer in English for Academic purposes for over ten years and managed the pre-sessional English language programme at Kingston University.

Undertaking a degree in languages, economics and politics allowed Claire to study in the UK and abroad. With the experience of learning the conventions of academia in other countries, she is well-placed to support and teach international students in the UK. She has been a visiting professor at Lyon University since 2013

Claire's main research interest is supporting non-traditional learners in Higher Education. She has designed a MOOC (massive open online courses) for Futurelearn to support healthcare students in the early stages of their academic careers.

In her free time, Claire practices and teaches yoga is an open water swimmer and enjoys Latin and ball-room dancing.

#### Gizdem Akdur, PhD, MSc, BEng (Hons)

Gizdem has been working as a research fellow at the Centre for Research in Public Health and Community Care (CRIPACC) - University of Hertfordshire since 2019. She currently works on the DACHA (Developing research resources and minimum data set for care homes' adoption and use) study, funded by the National Institute for Health Research (NIHR). Prior to that, she worked as a teaching fellow in the Department of Digital Humanities at King's College London for a year. Gizdem completed her MSc (2012) and PhD (2018) at the London School of Economics, under the Information Systems and Innovation Faculty Research Group, Department of Management. She was awarded her BEng (Hons) in Software Engineering from the University of Sheffield in 2010. Her research interests include health and social care information systems, technology in care, care home research, policy research, and ageing studies.



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