

An Introduction to
PHYSIOTHERAPY and
REHABILITATION: CONDITION SPECIFIC
FUNCTIONAL PHYSIOTHERAPY and
REHABILITATION APPROACHES and
APPLICATIONS

Edited by
Prof. Dr. Hülya Harutoğlu
Dr. Ayfer Kahraman

Editorial Assistants
Assoc. Prof. Dr. Ender Angın
Assoc. Prof. Dr. Gözde İyigün

Redactors
Claire Emery
Gizdem Akdur

Hipokrat
Yayıncılık

© 2023 An Introduction to
**PHYSIOTHERAPY and REHABILITATION: CONDITION SPECIFIC FUNCTIONAL
PHYSIOTHERAPY and REHABILITATION APPROACHES and APPLICATIONS**

ISBN: 978-605-72312-5-3

All rights reserved. Pursuant to Law No. 5846 and 2936 on Intellectual and Artistic Works; The printing, publishing and sales rights of this book belong to Hippocrates Publishing House. All or parts of the book may not be reproduced, printed or distributed by mechanical, electronic, photocopying, magnetic paper and/or other methods without the permission of the said institution. Tables, Figures and graphics cannot be used for commercial purposes without permission. The responsibility of the pictures and information used in the sections belongs to the author(s) of that section.

Edited by

Prof. Dr. Hülya Harutoğlu

Dr. Ayfer Kahraman

Editorial Assistants

Assoc. Prof. Dr. Ender Angın

Assoc. Prof. Dr. Gözde İyigün

Redactors

Claire Emery

Gizdem Akdur

Publisher

Hipokrat Yayınevi

Graphic design

Hipokrat Grafik Tasarım

Print

Vadi Grafik Tasarım ve Reklamcılık Ltd. Şti.

İvedik Org. San. 1420. Cad. No: 58/1 Yenimahalle/Ankara, Turkey

Phone: 0312 395 85 71 • Sertifika No: 47479

Hipokrat
Yayıncılık

Süleyman Sırrı Cad. No:16/2 Sıhhiye
Phone: +90 312 433 03 05 Ankara/TURKEY
www.hipokratkitabevi.com



To Mustafa Kemal Atatürk

19.05.2022

London

Foreword

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
With my love and regards,

Prof. Dr. Hülya Harutoğlu

Contributors

Editors

Hülya HARUTOĞLU, Prof., PhD, PT

Member of Higher Education Planning, Evaluation, Accreditation and Coordination Council in North Cyprus

Ayfer KAHRAMAN, PhD, MSc, BSc (Hons), MCSP, HCPC, PT

Division of Physiotherapy, Sport Rehabilitation and Chiropractic, School of Allied and Community Health, Institute of Health and Social Care, London South Bank University, United Kingdom

Contributors

Agnieszka LEWKO, Asst. Prof., PhD, PT

School of Health, Faculty of Health and Life Sciences, Coventry University, United Kingdom

Anna PYSZORA, PT, PhD

Department of Palliative Care, Nicolaus Copernicus University in Toruń, Poland

Ayfer KAHRAMAN, PhD, MSc, BSc (Hons), MCSP, HCPC, PT

Division of Physiotherapy, Sport Rehabilitation and Chiropractic, School of Allied and Community Health, Institute of Health and Social Care, London South Bank University, United Kingdom

Aytül ÖZDİL, MSc, PT

Eastern Mediterranean University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation Famagusta, Northern Cyprus (T.R.N.C)

Batuhan İ. DERİCİOĞLU, MSc, PT

Cyprus International University, Department of Physiotherapy and Rehabilitation, Faculty of Health Sciences, North Cyprus, TRNC

Pelvic Floor Physiotherapy Unit, Physioart Physical Therapy, Rehabilitation and Health Clinic, North Cyprus, TRNC

Beliz Belgen KAYGISIZ, Assoc. Prof., PhD, PT

European University of Lefke, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, T.R.N.C

Buket BÜYÜKTURAN, Asst. Prof., PhD, PT

Ahi Evran University, School of Physical Therapy and Rehabilitation, Kırşehir, Turkey

Edibe ÜNAL, Prof., PhD, PT

Hacettepe University Faculty of Physical Therapy and Rehabilitation, Ankara, Turkey

Eren TİMURTAŞ, Asst. Prof., PhD, PT

Marmara University Department of Physiotherapy and Rehabilitation Faculty of Health Science, Istanbul, Turkey

Esra PEHLİVAN, Assoc. Prof., PhD, PT

University of Health Sciences Turkey, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul, Turkey

Fahriye ÇOBAN, MSc, PT

European University of Lefke, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Northern Cyprus, TRNC

Ferruh TAŞPINAR, Assoc. Prof., PhD, PT

İzmir Demokrasi University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Turkey

Gamze EKİCİ, Prof., PhD, PT

Hacettepe University, Faculty of Health Sciences,
Ankara, Turkey

Gözde İYİĞÜN, Assoc.Prof., PhD, PT

Eastern Mediterranean University, Faculty of Health
Sciences, Department of Physiotherapy and Rehabilitation
Famagusta, Northern Cyprus, TRNC

Gül BALTACI, Prof., PhD, PT

Department of Physiotherapy and Rehabilitation,
Private Guven Hospital, Ankara, Turkey

Havva GÖZGEN, MSc, PT

Cyprus Science University, Faculty of Health Sciences,
Department of Physiotherapy and Rehabilitation,
Northern Cyprus, TRNC

Hülya HARUTOĞLU, Prof., PhD, PT

Member of Higher Education Planning,
Evaluation, Accreditation and Coordination Council in
North Cyprus, TRNC

İlksen DEMİRBÜKEN, Assoc. Prof., PhD, PT

Department of Physiotherapy and Rehabilitation,
Faculty of Health Science, Marmara University,
Istanbul, Turkey

Kutay KAŞLI, MSc, PT

Çankırı Karatekin University, Eldivan Vocational School
of Health Services, Department of Health Care Services,
Turkey

Kübra ÖZONAY, MSc, PT

Izmir Democracy University, Faculty of Health Sciences,
Department of Physiotherapy and Rehabilitation, Turkey

Nur BANU KARACA, MSc, PT

Hacettepe University Faculty of Physical Therapy and
Rehabilitation, Ankara, Turkey

Özlem ÇINAR ÖZDEMİR, Assoc. Prof., PhD, PT

Izmir Democracy University, Faculty of Health Sciences,
Department of Physiotherapy and Rehabilitation, Turkey

Seda YILDIZ, MSc, PT

Biomechanics, Institute of Biomedical Engineering,
Bogazici University, Ankara, Turkey

Seher ÖZYÜREK, Assoc Prof., PhD, PT

School of Physical Therapy and Rehabilitation,
Dokuz Eylül University, Izmir, Turkey

Zehra GÜÇHAN TOPCU, Asst. Prof., PhD, PT

Eastern Mediterranean University, Faculty of Health
Sciences, Department of Physiotherapy and Rehabilitation,
Famagusta, North Cyprus (T.R.N.C)

Contents

Chapter 1

Musculoskeletal Physiotherapy and Rehabilitation..... 1

KÜBRA ÖZONAY • ÖZLEM ÇINAR ÖZDEMİR

Chapter 2

Orthopedic Rehabilitation..... 15

FERRUH TAŞPINAR

Chapter 3

Sports Physiotherapy and Ethics 25

SEDA YILDIZ • SEHER ÖZYÜREK • GÜL BALTACI

Chapter 4

Physical Therapy and Rehabilitation in Spinal Disorders 37

BUKET BÜYÜKTURAN

Chapter 5

Physiotherapy and Rehabilitation in Rheumatic Diseases 51

NUR BANU KARACA • KUTAY KAŞLI • EDİBE ÜNAL

Chapter 6

Physiotherapy and Rehabilitation in Neurological Disorders 61

GÖZDE İYİGÜN • AYTÜL ÖZDİL

Chapter 7

Geriatric Rehabilitation 81

BELİZ BELGEN KAYGISIZ • HAWVA GÖZGEN • FAHRİYE ÇOBAN

Chapter 8**Physiotherapy and Rehabilitation in Pediatrics 91**

ZEHRİ GÜÇHAN TOPCU

Chapter 9**Oncological Rehabilitation 105**

ANNA PYSZORA

Chapter 10**Cardiac Rehabilitation 111**

ESRA PEHLİVAN • AYFER KAHRAMAN • HÜLYA HARUTOĞLU

Chapter 11**Pulmonary Rehabilitation 119**

AGNIESZKA LEWKO

Chapter 12**Community-Based Physiotherapy and Rehabilitation in Public Health 127**

İLKŞAN DEMİRBÜKEN • EREN TİMURTAŞ

Chapter 13**Physiotherapy and Rehabilitation in Women's and Men's Health 135**

BATUHAN İ. DERİCİOĞLU

Chapter 14**Physiotherapy in Mental Disorders 145**

GAMZE EKİCİ