

International Handbook of Occupational Therapy Interventions

Ingrid Söderback
Editor

International Handbook of Occupational Therapy Interventions

 Springer

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To be occupied is a fundamental right in every human being's life.

The occupational therapists' main professional role is to encourage the clients' occupational performances.

To occupational therapy students, occupational therapists, and members of rehabilitation and health care teams, who are professionally working to improve their clients' health and wellness, and to stakeholders responsible for the administration of occupational therapy, worldwide.

Foreword

The World Federation of Occupational Therapists (WFOT) estimates that there are over 300,000 practicing occupational therapists (OTs) in 66 countries. The growth of the profession of occupational therapy in the last 50 years is extraordinary. When I first practiced occupational therapy in the Brooklyn Day Hospital in New York City in 1958, there were about 4000 OTs in the United States and a few more thousand in the rest of the world. The countries of the former British Commonwealth, Scandinavia, and the United States dominated practice. Most OTs worked in hospitals either in psychiatric or long-term chronic care facilities. Occupational therapy was primarily paired with physical and speech therapies as rehabilitation professions. The modalities used in practice were mainly arts and crafts and creative media. Now, in 2009, the profession of occupational therapy has expanded its concepts, intervention modalities, and scope of practice.

This handbook represents the coming of age in global occupational therapy. The authors are distinguished experts in the diverse practice of occupational therapy from around the world. They describe practice from three perspectives: the healer working directly with the patient in preventing, treating, and restoring function; the teacher training the patient in activities of daily living (ADL) skills, assisting the caregiver and informing individuals at risk about how to prevent illness and disease; and the ergonomist in adapting the home, work, and school environments to increase function and prevent injuries. This handbook is comprehensive, and includes a wide range of occupational therapy modalities such as orthotics, universal design, assistive devices, biofeedback, driver education, sensory integration, horticulture, and music. The authors describe interventions for a wide range of individuals with physical as well as psychological disabilities. The emphasis in the book is pragmatic, keeping with the core values of occupational therapy, to help the individual to maintain or increase functional activities through occupation. Evidence-based practice is the guiding principle in deciding what is the best practice. There are many case examples to help the student or clinician understand in a realistic manner how the interventions work and the precautions in therapy.

This is a book for the 21st century that integrates the global practice of occupational therapy with research evidence. It should serve as a ready reference for the student and OT to apply interventions in a holistic framework.

Franklin Stein, PhD, OTR, FAOTA
Founding Editor, *Occupational Therapy International*

Preface

The *International Handbook of Occupational Therapy Interventions* contains an encyclopedic overview of the theoretical core content of occupational therapy and the occupational therapy interventions that are common and used worldwide. The main theme of the handbook is the occupational therapist's role in *managing, teaching, enabling, and promoting* the clients' potential to be occupied with desired and meaningful occupations, daily activities, and tasks. The purposes of the occupational therapy services are as follows: *adaptation*, in that the clients' internal, temporal, and environmental adaptations are expected to improve; *teaching*, in that the clients learn or relearn to perform daily activities; *recovery*, in that the clients experience themselves as being occupied through participation in meaningful activities and tasks that influence their physiologic and psychological healing; and *health and wellness*, in that motor vehicle accidents and accidents at home and at work are prevented, so as to promote the clients' health. The principles for performing quality assurance and the prerequisites for judging the scientific evidence of the effectiveness of the occupational therapy interventions are presented. The reader is informed about the extensive literature review that constitutes the genesis of this handbook.

Based on 90 authors' expert knowledge, scientific methodology, and my 40 years of professional work outlined in several case studies, this handbook will be a helpful tool for students, occupational therapists, clinicians on rehabilitation and health care teams, stakeholders, and readers who want a survey of the occupational therapy core content and practice.

Åkersberga, Sweden
September 2008

Ingrid Söderback

Acknowledgments

I want to express my sincere gratitude to the chapter authors, without whose efforts this handbook would not have become a reality. Your expert knowledge has enriched this handbook by demonstrating how occupational therapy is practiced worldwide and how our knowledge contributes to rehabilitation and medical services. My hope is that this handbook is the beginning of a continuing process of documenting our profession's clinical work.

I am grateful to the clients and patients whose cases are discussed in this handbook. I also thank all the other clients I have worked with in my 40-year career. They have shared their experience of living with disabilities and therefore in an invaluable way have enriched my professional experiences and my life.

I also want to express my gratitude to my former colleagues at the Rehabilitation Clinic of Danderyd Hospital in Stockholm, Sweden: to Gunilla Myrin, for your boundless support through the years and for your contribution of your research about the case of Marie-Louise Huss; to Anette Erikson, Elisabeth Hultman, Lena Krumlinde Sundholm, and Kerstin Wikell, for your interest in my work; and to Marianne Söderström, in memorium.

My sincere appreciation is offered to Professor Franklin Stein, Madison, Wisconsin, for your foreword to this handbook, for your advice and friendship in our work on the journal *Occupational Therapy International* and for introducing me to the world of publishing; and to Professor Karen Jacobs, Boston, Massachusetts, for your sponsorship, your friendship, and our work on the journal *Work: A Journal of Prevention, Assessment, and Rehabilitation*.

I thank my colleagues in the clinical, education, and research areas, for supporting my work aimed at developing our profession. Special thanks are due to Marina Härtull for your comments based on your wide clinical OT experience. I thank my students through the years, whose critical questions and debates have helped me reflect on the core content of occupational therapy.

My thanks are due to the occupational therapists and pioneers of Swedish occupational therapy who introduced me to the profession, especially Gunnel Nelson and Inga-Britt Bränholm in memorium.

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My deepest gratitude is due to my friends and family: Maria Söderback and Peter, Klara, Anton Disbo, Mårten Söderback, and Sandra Alevärn. Your encouragement, support, and love helped me complete this two-year endeavor. I also express my gratitude to Per Söderback in memorium.

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Åkersberga
October 6, 2008

Ingrid Söderback

Contents

Part I Introduction

- 1 The Genesis of the Handbook: Material and Methods** 3
Ingrid Söderback
- 2 Occupational Therapy: Emphasis on Clinical Practice** 13
Ingrid Söderback

Part II Interventions: The Occupational Therapist Manages and Facilitates the Client's Adaptation

Introduction

- 3 Adaptive Interventions: Overview** 39
Ingrid Söderback

Environmental Adaptations

- 4 Environmental Adaptations for Older Adults and Their Families in the Home and Community** 53
Laura N. Gitlin
- 5 Housing Adaptations: Current Practices and Future Challenges** 63
Susanne Iwarsson

Accessibility

- 6 Ergonomic Interventions for Computer Users with Cumulative Trauma Disorders** 71
Glenn Goodman, Sharon Flinn, and Susan M. Maloney

Accommodation

- 7 Optimal Positioning: Wheelchair Seating Comfort and Pressure Mapping**..... 83
May Stinson and Shelley Crawford
- 8 Wheelchair Intervention: Principles and Practice**..... 91
Åse Brandt and Kersti Samuelsson

Electric Prostheses, Orthotics, and Splints

- 9 Functional Electrical Stimulation Therapy: Individualized Neuroprosthesis for Grasping and Reaching**..... 99
Milos R. Popovic and B. Cathy Craven
- 10 Splints: Mobilization, Corrective Splintage, and Pressure Therapy for the Acutely Injured Hand**..... 109
Josephine Man Wah Wong
- 11 Splinting: Positioning, Edema, and Scar Management Due to Burn Injury** 127
Megan Simons

Assistive Devices

- 12 Assistive Devices for Children with Disabilities** 141
Sigrid Østensjø
- 13 Low Vision Intervention: Decision-Making for Acquiring and Integrating Assistive Technology**..... 147
Al Copolillo

Universal Design

- 14 Universal Design: Principles and Practice for People with Disabilities**..... 159
Nancy Rickerson
- 15 The Design of Artisans’ Hand Tools: Users’ Perceived Comfort and Discomfort**..... 167
Lottie F.M. Kuijt-Evers

Temporal Adaptation

- 16 Temporal Adaptation for Individuals Living with Serious Mental Illness in the Community** 179
Terry Krupa, Megan Edgelow, and Debbie Radloff-Gabriel

Part III Interventions: The Occupational Therapist Teaches and the Client Learns

Introduction

17 Teaching Interventions: Overview..... 189
 Ingrid Söderback

18 Problem Solving: A Teaching and Therapeutic Tool for Older Adults and Their Families..... 205
 Laura N. Gitlin

19 Teaching and Supporting Clients with Dementia and Their Caregivers in Daily Functioning 217
 Maud J.L. Graff

Cognitive Teaching Approaches: The Dialogue Technique Approach

20 Metacognitive Occupation-Based Training in Traumatic Brain Injury 225
 Jennifer Fleming

21 Metacognitive Mental Imagery Strategies for Training of Daily Living Skills for People with Brain Damage: The Self-Regulation and Mental Imagery Program..... 233
 Karen P.Y. Liu and Chetwyn C.H. Chan

22 Strategies to Compensate for Apraxia Among Stroke Clients - The Cognitive Strategy Training 241
 Caroline van Heugten and Chantal Geusgens

Programs for Active Learning – Energy Conservation

23 Delivering Energy Conservation Education by Teleconference to People with Multiple Sclerosis 249
 Marcia Finlayson

Programs for Active Learning – Psychoeducation

24 Psychoeducational Groups 255
 Sandra Hale and Jocelyn Cows

25 Illness Management Training: Transforming Relapse and Instilling Prosperity in an Acute Psychiatric Ward..... 261
 Sunny Ho-Wan Chan

26 Psychosocial Intervention in Schizophrenia 269
 Adriana D.B. Vizzotto, Patricia C. Buchain, Jorge Henna Netto, and Hélio Elkis

27 Behavioral Approach to Rehabilitation of Patients with Substance-Use Disorders 277
 Natalia Punanova and Tatiana Petrova

28 Intervention in Panic and Anxiety Disorders Through Lifestyle Modification 287
 Rodney A. Lambert

Neuromusculoskeletal and Movement-Related Learning

29 Trunk Restraint: Physical Intervention for Improvement of Upper-Limb Motor Impairment and Function 295
 Mindy F. Levin

30 Constraint-Induced Movement Therapy for Restoration of Upper-Limb Function: Introduction 301
 Mary H. Bowman, Victor W. Mark, and Edward Taub

31 Constraint-Induced Movement Therapy for Restoration of Upper-Limb Function: Hemiparesis Application 309
 Annette Sterr, Katherine Herron, and Jennifer Sanders

32 Strategies for Curing with Self-Speech in People Living with Parkinson’s Disease 317
 Kinsuk Maitra

33 Joint Protection: Enabling Change in Musculoskeletal Conditions 325
 Alison Hammond

34 Neurodevelopmental Therapy: Sensory Integration and Vestibular Stimulation Intervention in Mentally Retarded Children..... 333
 Mine Uyanik, Hulya Kayihan, Gonca Bumin, and Gul Sener

35 Upper-Limb Movement Training in Children Following Injection of Botulinum Neurotoxin A 343
 Brian Hoare and Remo N. Russo

36 Pain Management: Multidisciplinary Back Schools and Future E-Health Interventions for Chronic Pain Sufferers 353
 Miriam M.R. Vollenbroek-Hutten, Hermine J. Hermens, and Daniel Wever

- 37 Pain Management: Functional Restoration for Chronic Low-Back-Pain Clients** 363
 Laura Stana, Anne Bouchez, Serge Fanello, and Isabelle Richard

Occupational Rehabilitation Programmes

- 38 The Principles and Practice of Work and Ergonomics**..... 369
 Barbara A. Larson and Melaine T. Ellexson
- 39 Reintegration to Work of People Suffering from Depression** 375
 Gabe de Vries and Aart H. Schene
- 40 Supported Employment for Individuals with Severe Mental Illness**..... 383
 Cynthia Z. Burton, Lea Vella, and Elizabeth W. Twamley
- 41 Individual Placement and Support: Helping People with Severe Mental Illness Get Real Jobs**..... 389
 Jonathan Garabette and Tom Burns
- 42 Conducting Transitional Strategies that Support Children with Special Needs in Assuming Adult Roles** 395
 Leonora Nel and Colette van der Westhuyzen

Part IV Interventions: The Occupational Therapist Enables for Recovery

Introduction

- 43 Interventions: The Occupational Therapist Enables Recovery**..... 403
Recovery Interventions: Overview
 Ingrid Söderback
- 44 Creating Opportunities for Participation Within and Beyond Mental Health Day Services**..... 413
 Wendy Bryant
- 45 Conducting an Intervention Program Mediated by Recreational Activities and Socialization in Groups for Clients with Alzheimer’s Disease**..... 423
 Elisabetta Farina and Fabiana Villanelli
- 46 Horticultural Therapy for the Cognitive Functioning of Elderly People with Dementia** 431
 Midori Yasukawa

47 Medical Music Therapy: Evidence-Based Principles and Practices 445
 Cheryl Dileo and Joke Bradt

48 Music as a Resource for Health and Well-Being 453
 Norma Daykin and Leslie Bunt

Part V Interventions: The Occupational Therapist Promotes Health and Wellness

49 Introduction..... 459
 Ingrid Söderback

50 Preventive Interventions: Overview..... 461
 Kirsten Avlund and Mikkel Vass

Preventing Accidents in the Home

**51 Preventing Falls in the Elderly Using “Stepping On”:
 A Group-Based Education Program** 465
 Lindy Clemson

**52 Preventive Home Visits to the Elderly
 and Education of Home Visitors**..... 473
 Kirsten Avlund and Mikkel Vass

Preventing Traffic Accidents

**53 Issues Related to the Use of In-Vehicle Intelligent
 Transport Systems by Drivers
 with Functional Impairments** 481
 Marilyn Di Stefano and Wendy Macdonald

Preventing Occupational Accidents at Work and Workplaces

**54 Work-Related Health: Organizational
 Factors and Well-Being** 489
 Gudbjörg Linda Rafnsdottir and Thamar Melanie Heijstra

**55 Functional Capacity Evaluation:An Integrated
 Approach to Assessing Work Activity Limitations** 497
 Libby Gibson

**56 Prevention of Workers’ Musculoskeletal Disorders:
 A Four-Stage Model**..... 507
 Navah Z. Ratzon and Tal Jarus

Consultation in the Prevention of Illness

57 Motivational Interviewing: Enhancing Patient Motivation for Behavior Change..... 515
Robert J. Shannon

Part VI Evaluation of Occupational Therapy Interventions

58 Basic Elements for Conducting Evidence-Based Occupational Therapy 527
Ingrid Söderback

Index..... 549

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Part I
Introduction

Chapter 1

The Genesis of the Handbook: Material and Methods

Ingrid Söderback*

Abstract The *International Handbook of Occupational Therapy Interventions* came about through extensive literature searches on occupational therapy and medical rehabilitation. These searches also helped in selecting the authors of the chapters in this book, who are experts on clinical interventions in occupational therapy. The searches also identified four major roles for the occupational therapist (OT¹): (1) to manage adaptations applied to the clients' environment; (2) to teach clients how, through occupation, to regain functioning and daily living skills; (3) to enable clients to perform purposeful and meaningful occupations that may help their recovery; and (4) to promote health and well-being in preventive interventions. These four roles overlap, as is illustrated in the case study of a woman with a femur fracture.

Keywords Femur fracture • Scientific methods • Origin • The occupational therapist's • role

Core Content of Occupational Therapy

The interventions presented in this book elucidate the professional core content of occupational therapy. These occupational therapy interventions are commonly used in clinical practice and are documented by research. My purpose in compiling this handbook was to increase our understanding of how the occupational therapy contributes to clients' health and well-being.

In the late 1960s, the occupational therapy profession was relatively sparsely represented at acute hospitals in my country—Sweden. I was in my first professional job on neurologic and orthopedic wards, and in those days physicians made patient referrals verbally, not in writing. I was responsible for a referral case from a respected physician, an expert in orthopedics. The record contained the descriptive phrase: “Sixty-eight-year-old woman with right femur fracture, at present

*Söderback is the Swedish spelling and Soderback is the English spelling of the author's family name.

¹Occupational Therapist is shortened as OT or OTs throughout the Handbook.

having her leg in traction for at least 2 weeks.” The prescription was: “A teddy bear—thank you.” What did this mean? After interviewing the patient it became clear that she wanted something to do while waiting for her femur fracture to heal. She wanted to make a teddy bear, which was to be a gift to her newborn grandchild. Thus, the occupational therapist (OT¹) was able to offer the patient the opportunity to do something that was meaningful and useful for her. This type of recovery intervention is the primary origin of occupational therapy.

Finding a useful project for this patient also provided me with the incentive to explain and disseminate knowledge about occupational therapy, as there are now many other cost-effective measures that would have been appropriate for this patient. Today, the physicians’ prescription would have included a postoperative occupational training program. During the hospital stay, the interventions would have comprised an individualized learning process to improve the patient’s ability to ambulate indoors, to perform light housework, and get into and out of an automobile.

As for environmental adaptations, the OT would have prescribed assistive devices, such as a reacher, a raised toilet seat, a raised bed, and stocking pullers. These devices would make the patient independent in self-care, such as personal hygiene, bathing, and toileting. There is now considerable evidence to support such interventions for people suffering from hip fractures (Hagsten et al., 2004, 2006; Hagsten and Söderback, 1994).

To assess health promotion and risk, a home visit aimed at preventing further accidental falls (Avlund et al., 2007) would have taken place after the patient’s discharge from the hospital (Söderback, 2008).

The four major factors exemplified above—adaptive interventions, recovery interventions, interventions using the teaching–learning process, and measures of health promotion and risk assessment—constitute the core content of the occupational therapy interventions presented in this handbook.

Method and Material

Study Design

An extensive review of the literature (Stein and Cutler, 2000) determined which occupational therapy interventions should be included and which scientists and clinicians should be invited to contribute chapters to this handbook.

The inclusion criteria for occupational therapy interventions were as follows:

- Keywords: occupational therapy.
- Articles containing in the title or suggesting in the text an identifiable occupational therapy intervention.
- Articles published in referee-examined scientific journals.
- Publications describing types of case reports, clinical trials, consensus, developmental conference reports, comparative studies, evaluation studies, literature reviews, meta-analyses, randomized control trials, research reports, and research supports according to the PubMed database classification (National Library of Medicine and Health, 2006).

- Publications based on studies of clients or literature.
- The selected intervention is described in more than one published study.
- The publications contain a complete abstract in English.
- The author names and email addresses or postal addresses are identifiable through an Internet search.
- Recent articles were chosen over older ones.
- An international distribution of the publications was desirable.

Exclusion Criteria

- Publications concerning psychometric investigations and validation of occupational therapy assessment instrument and of occupational therapy theories and models.
- Publications concerning interventions known from textbooks, such as the Bobath neurodevelopment reflex inhibition therapy (Bobath and Bobath, 1950), are not represented in this handbook, since no study thereof was found connected with occupational therapy, or no author was available, or the method had no proved evidence of its efficacy for patients (e.g., stroke patients) (Kappelle et al., 2007).

Selection of Interventions and Authors

To obtain an overview of the occupational therapy interventions presented in textbooks, I reviewed the 27 textbooks (Table 1.1) that I have used during my 40-year career, searching for occupational therapy interventions. This overview and the inclusion criteria listed above served to validate the choice of interventions for this handbook. The overview also demonstrated the four major occupational therapy intervention factors that characterize the interventions as illustrated in Fig. 1.1: the therapist manages the patient's adaptation (Chapter 2), the therapist teaches and the patient learns (Chapter 3), the therapist enables the patient's recovery (Chapter 4), and the therapist promotes health and wellness (Chapter 5).

Data searches of scientific publications were performed with the PubMed database as the primary source. Additional sources were the OT seeker (<http://www.otseeker.com/>), and the following *Journal of Occupational Therapy*, *Occupational Therapy International*, and *Work, A Journal of Prevention, Assessment, and Rehabilitation* (Shawn, 2007).

The primary PubMed search with the keywords "occupational therapy" and the inclusion and exclusion criteria generated 4456 items (about 50% of the available items) published from 1960 to July 2006, and 225 items published from August 2006 to December 2007. The abstracts of these publications were saved on the EndNote database (EndNote, 1998–2000). Publications before 2002 were saved for possible future documentation of the history of the interventions if they were to be

Table 1.1 Textbooks used for identification and an overview of occupational therapy interventions

1. Allen, C. (1985). *Occupational Therapy for Psychiatric Diseases: Measurement and Management of Cognitive Disabilities*. Boston, MA: Little, Brown.
2. Christiansen, C. (1994). *Ways of Living. Self-Care Strategies for Special Needs*. Bethesda, MD: AOTA Director of Nonperiodical Publications.
3. Christiansen, C., and Baum, C. (1991). *Occupational Therapy. Overcoming Human Performance Deficits*. Thorofare, NJ: Slack.
4. Christiansen, C., and Baum, C. (1997). *Occupational Therapy. Enabling Function and Well-Being*. Thorofare, NJ: Slack.
5. Cynkin, S., and Robinson, A. M. (1990). *Occupational Therapy and Activities Health: Toward Health Through Activities*. Boston, MA: Little, Brown.
6. Ellergård, K., and Nordell, K. (1997). *Att bryta vanmakt mot egenmakt (To Break Powerlessness Against Arbitrariness) (In Swedish)*. Borås: Johnsson & Skyttes Förlag.
7. Fleming Cottrell, R.P. (1993). *Psychosocial Occupational Therapy*. Bethesda, MD: AOTA
8. Hagedorn, R. (1995). *Occupational Therapy. Perspectives and Process*. Edinburgh: Churchill Livingstone.
9. Hopkins, H.L., and Smith, H.D. (1993). *Willard and Spackman's Occupational Therapy*, 8th ed. Philadelphia: J.B. Lippincott.
10. Jacobs Gold, K. (1993). *The nature and quality of optimal flow experience. A form of job satisfaction, in a selected occupation. The case of occupational therapy practitioner*. Doctoral Dissertation. Faculty of the college of education, University of Massachusetts, Lowell.
11. Johnson, J.A., and Yerxa, E.J. (1989). *Occupational Science: The Foundation for a New Model of Practice*. London: Haworth.
12. Katz, N. (1992). *Cognitive Rehabilitation. Models for Intervention in Occupational Therapy*, 1st ed. Boston: Andover Medical Publishers.
13. Kielhofner, G. (1985). *A Model of Human Occupation. Theory and Application*. London: Williams & Wilkins.
14. Kielhofner, G. (1992). *Conceptual Foundations of Occupational Therapy*. Philadelphia: F.A. Davis.
15. Kielhofner, G. (1995). *A Model of Human Occupation: Theory and Application*, 2nd ed. Baltimore, MD: Williams & Wilkins.
16. Lamport, N.K., Coffey, M.S., and Hersch, G.I. (1989). *Activity Analysis. Handbook*. Thorofare, NJ: Slack.
17. Macdonald, E.M. (1964). *Occupational Therapy in Rehabilitation. A Handbook for OTs, Students and Others Interested in This Aspect of Reablement*. London: Ballière, Tindall and Cox.
18. Mann, W.C., and Lane, J.P. (1991). *Assistive Technology for Persons with Disabilities. The Role of Occupational Therapy*. Bethesda, MD: AOTA.
19. Miller, R.J., Sieg, K.W., Ludwig, F.M., Denegan Shortridge, S., and van Deusen, J. (1988). *Six Perspectives on Theories for the Practice of Occupational Therapy*. Rockville, MD: Aspen.
20. Miller, R.J., and Walker, K.F. (1993). *Perspectives on Theory for Practice of Occupational Therapy*, Vol. 1. Gaithersburg, MD: Aspen.
21. Mosey, A.C. (1973). *Activities Therapy*. New York: Raven.
22. Mosey, A. C. (1986). *Psychosocial Components of Occupational Therapy*. New York: Raven.
23. Neistadt, M.E., and Crepeau, E. B. (1998). *Willard & Spackman's Occupational Therapy*, 9th ed. Philadelphia: Lippincott Raven.
24. Pedretti, L.W., and Early, M. B. (2001). *Occupational Therapy. Practice Skill for Physical Dysfunction*, 5th ed. London: Mosby.
25. Read, C., and Sanderson, S. R. (1980). *Concepts of Occupational Therapy*. Baltimore, MD: Williams & Wilkins.
26. Stein, F., and Roose, B. (2000). *Pocket Guide to Treatment in Occupational Therapy*. San Diego, CA: Singular Publishing Group.
27. Stein, F., Söderback, I., Cutler, S.K., and Larson, B. (2006). *Occupational Therapy and Ergonomics. Applying Ergonomic Principles to Everyday Occupation in the Home and at Work*, 1st ed. London/Philadelphia: Whurr/Wiley.



Fig. 1.1 Four major occupational therapy intervention factors.

included. Publications from 2002 to 2007 ($n = 959$) were chosen for primary categorization.

The abstracts of the articles were carefully reviewed. The articles that did not fulfill the inclusion/exclusion criteria were discarded, leaving 352 in the original file. These articles were critically evaluated and classified by (1) the intervention factor, (2) the subjects of the interventions (children, adolescents, adults, frail elderly), (3) the diagnoses, and (4) the titles and database references (authors’ names, addresses, and publication facts). Four copies of the original file, one for each intervention factor, were used for further identification of the interventions.

Many of the interventions identified had no author name, title, or other designation. However, the authors had explained their aims in terms of body function, body structure, activity and participation, environmental factors, or diagnoses. I therefore could use the concepts of the International Classification of Functioning, Disability, and Health (ICD) (World Health Organization, 2007) for further classification. With the ICD definitions in mind, the articles in each of the four files were again carefully reviewed and categorized.

The definitions of the interventions were validated by a comparison according to the *Thesaurus of Occupational Therapy* subject headings (American Occupational Therapy Foundation, 2004) and the PubMed MeSH database (National Library of Medicine and Health, 2006). The content of each intervention was reviewed based on the definitions, and the intervention was labeled according to the authors’ suggestions.

For interventions represented by more than one published study, a scale was constructed, giving priority to randomized studies, to the newest publications, to authors with OT qualifications, and to wide geographic distribution. Identification continued until a saturation point was reached; that is, the same articles or authors turned up irrespective of the search method. A descriptive meta-analysis and an annotated bibliography showing the interventions presented in the handbook are given for each of the four major intervention factors.

Authors were suggested for each identified intervention, and they were contacted by email, letter, or telephone call. Fourteen of those contacted declined, and addresses for another 14 were not found.

Results

By July 2008, the handbook contained 61 chapters by 90 authors from around the world (Fig. 1.2 and Table 1.2), who are affiliated with 59 universities or hospitals or in private practice. The chapters discuss the selected occupational therapy interventions (Fig. 1.1).

Discussion

The chapters of the handbook may be viewed as a sample of the available occupational therapy interventions.

The selection of the chapters presented in this handbook is the result of an attempt to apply scientific methodology. However, this process of identification of authors was somewhat restricted by language barriers, as we strived to select mainly English-speaking authors. In addition, there are doubtless more occupational therapy interventions in clinical use that are not presented in published studies and therefore are not represented in this handbook.



Fig. 1.2 An approximate map of where the authors of the chapters in this book live.