Principles of Assessment and Outcome Measurement for Occupational Therapists and Physiotherapists

Theory, Skills and Application

by

Alison J. Laver Fawcett PhD, DipCOT, OT(C)

Modernisation Manager (Older People's Mental Health Services)
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This book is printed on acid-free paper responsibly manufactured from sustainable forestry
in which at least two trees are planted for each one used for paper production.

Dedication

This book is dedicated to my husband, Alexander Hamilton Fawcett, and our two wonderful children, Lucas and Beatrix.

It is also dedicated to the talented occupational therapists and physiotherapists who have contributed case examples for the text, in grateful thanks for sharing your practice, expertise and insights.

Contents

Contributors

Gail P. Brooke Dip Phys, Cert in Health Service Management

Gail qualified as a Physiotherapist in 1973 and originally specialised in musculoskeletal work. After working at a number of mental health settings in the north of England, Gail became the Superintendent Physiotherapist at Harrogate District Hospital in 1990. In 1993, she and a colleague piloted several outpatient chronic pain management programmes using a cognitive behavioural approach, which were soon funded by the regional health authority and, in 1995, led to an extended multidisciplinary service, which Gail currently manages. She is also involved in undergraduate recruitment and training at several universities. She manages the Chronic Fatigue Service and the Chronic Pain Service in addition to being Head of Physiotherapy for the Harrogate rural locality of North Yorkshire and York Primary Care Trust.

Rachel Hargreaves BSc (Hons), SROT

Rachel Hargreaves graduated as an Occupational Therapist in 1996 from Coventry University. She initially worked in a large teaching hospital in Leeds, until specialising in Neurology. In 1998/9, she worked in Australia in an Outback Base Hospital, and also worked in inner-city Sydney developing a service in a Nursing Home. On return to the UK, she specialised in Older Adult Mental Health services and currently works as a core member of a Community Mental Health Team, with a special interest in the Memory Clinic Service. At present, she is undertaking a Master's in Professional Health Studies at York St John University College.

Claire Howell BSc OT (Hons)

Claire graduated from Coventry University in 1996 and has worked clinically within the West Midlands since this date. After qualifying, Claire started working in Adult Rehabilitation before moving into the field of Paediatrics in 1998, where she has since specialised. Claire has a varied experience within Paediatrics, both hospital- and community-based, and is currently working for Solihull Primary Care Trust.

Karen Innes BSc OT, Dip in Management Studies, Cert in Counselling

After qualifying as an Occupational Therapist in 1999, Karen completed 18 months' basic grade mixed rotation before gaining Senior II in the physical field as a Hand Therapist working in Rheumatology and Community Services. Karen then worked for six months in Elderly Psychiatry and Acute Assessment before achieving a Senior I post in Ripon Community Mental Health Team. Karen uses the Assessment of Motor and Process Skills to assess clients attending Memory Clinics and has helped set up multidisciplinary community-based groups for people with memory problems and early-diagnosis dementia, for which she presented a poster at the College of Occupational Therapists' annual conference in 2004. She is an Alzheimer's Society

committee member and works with Age Concern on a number of projects. She is currently employed by North Yorkshire and York Primary Care Trust.

David Jelley BA (Hons), BSc (Hons)

David is a Superintendent Physiotherapist and Team Leader of the Fast Response Service. He qualified in Leeds in 1993 and since then has spent much of his career working with the elderly client group. David is currently part way through a Master's in Rehabilitation Studies at Bradford University, where he also teaches a session on applying exercise theory to neurological patients. He is employed by North Yorkshire and York Primary Care Trust.

Alison J. Laver Fawcett PhD, OT(C), DipCOT

Alison graduated as an Occupational Therapist in 1986 and, while working in a number of clinical posts in London, developed a joint physiotherapy and occupational therapy initial assessment process with a physiotherapist colleague in a day hospital for older people. In 1990, she became a full-time research occupational therapist in the Department of Geriatric Medicine at St George's Hospital, London. *The Structured Observational Test of Function* (Laver and Powell, 1995) was based on her PhD research and led to her being commissioned to undertake and publish research on the use of the Chessington Occupational Therapy Neurological and Assessment Battery (COTNAB) with older people. She has held senior academic posts at universities in the UK, Canada and the US including McMaster University and Washington University School of Medicine. Following the birth of her first child, Alison became a part-time Mental Health Project Worker, a jointly funded health and social care post with responsibility for evaluating statutory and non-statutory services for older people with mental health problems. Since 2003, Alison has worked as the Modernisation Manager for Older People's Mental Health Services (North Yorkshire and York Primary Care Trust). As part of her service improvement leadership responsibilities, she is currently Project Manager for the Harrogate and Rural District Dementia Services Collaborative team.

Sally Payne MSc, BSc, DipCOT

Sally graduated from Dorset House School of Occupational Therapy, Oxford in 1989. She has worked in the West Midlands ever since in both clinical and research roles. Between 1997 and 1999, Sally took the lead role in developing an outcome tool for use within an interdisciplinary child development team, the results of which were presented at conferences both nationally and internationally. Clinically, Sally has worked with adults and children, before finally specialising in work with children and families. She obtained an MSc in Occupational Therapy from Coventry University in 2004, where she completed her dissertation, *Being the Parent of a Child with Developmental Coordination Disorder.* Sally is currently Head Paediatric Occupational Therapist for Solihull Primary Care Trust.

Heather G. Shaw DipCOT

Heather graduated as an Occupational Therapist from York School of Occupational Therapy in 1979. Having held posts in two acute mental settings, she took up the post in the specialist area of Pain Management in Harrogate in 1996. At that time, it was a fledgling service and Heather has been involved in the development of the service; extra staff have since been recruited and dedicated accommodation for the service achieved. There are now plans to offer a service in Primary Care and expand to surrounding areas. A primary objective of the service has been to educate others. Heather has a particular interest in education, and completed a City & Guilds Certificate in Teaching. She has presented to undergraduates, graduates, peers and GP groups about the theory and practice of pain management.

Foreword

I was delighted when Alison asked me to write the foreword to what is a very comprehensive text concerning assessment and outcome measurement specifically targeted at occupational therapists and physiotherapists. The key feature of this book lies in the exhaustive information contained in all the elements it addresses. The level of detail is impressive, and therefore will serve to inform not only the undergraduate student in the basic tenets of assessment but also the novice practitioner who is seeking more detailed knowledge to inform their practice and the Master's student who searches for more in-depth information relating to their research, and even the expert practitioner or those embarking upon PhD studies will find it to be a stimulus to new and creative thinking in practice, evaluation and research.

The text takes us through the rationale around the need for comprehensive assessment in health and social care settings, describes the methods and sources of assessment data and then challenges the practitioner to consider to what use the collected assessment data within his/her own practice domain is put. The next section of the book details levels (types) of data, making clear reference to assessment examples used in everyday practice, as well as explaining standardisation of assessments and the concepts of validity and reliability. The third section of the book relates to application in practice, including the practicalities of assessment administration, as well as applying models of practice to assessment and, finally, explores clinical reasoning and reflection as parts of the assessment process. Thus the book brings together the totality of the practice process.

A welcome feature of the book is the focus on, and reference to, very detailed case studies that illustrate the elements of practice that the chapter has concentrated upon. Often students and novice practitioners are frustrated by the mini-vignettes that may appear in textbooks, and they cry out for more explicit and detailed examples of practice. In this textbook they have been provided, and make excellent learning tools for the reader. So too are the worksheets that have been supplied, such that individual, group or departmental CPD exercises could be carried out using these tools. In addition, the reader has the opportunity to review the learning achieved by the use of study questions in each chapter, with outline answers available at the end of the book.

This reference text can be used at various levels and therefore should provide useful information for the individual, the team, the group or the library and be a source of inspiration for practice reflection for many years.

Jenny Butler, PhD
Professor of Occupational Therapy
Oxford Brookes University

Preface

Principles of Assessment and Outcome Measurement for Occupational Therapists and Physiotherapists: Theory, Skills and Application aims to provide a comprehensive text on assessment, evaluation and outcome measurement for occupational therapy and physiotherapy students, therapists, managers and educators. The book explores the core principles that underpin effective and efficient therapy assessment processes across a wide range of diagnoses, age groups and practice settings.

Much of the literature, in therapy journals and health and social care policy, now extols the need for evidence-based practice, including the need for well-defined and measured outcomes, the application of evidence-based standardised tests and the development of rigorous assessment processes. Few therapists will disagree with this in principle, yet many struggle to apply this to their own practice. I continue to be alarmed by the number of clinicians who find it difficult to explain the differences between various types of validity or reliability or to understand why these are so important to their selection of tests. There are still far too few clinicians who can undertake a detailed search for evidence-based measures and rigorously critique those identified. Making this important shift in our professional practice has to occur at many levels: amongst educators, clinicians, managers and researchers. It is a shift I became committed to early in my career and became even more passionate about during my doctoral studies and the development of the Structured Observational Test of Function (Laver and Powell, 1995). This mission was further fuelled when exploring the topic further as an author who was invited to contribute chapters on assessment (Laver Fawcett, 2002; Laver and Unsworth, 1999; Laver, 1996). I have written this book in the hope that the information provided can help in our profession's move towards evidence-based measurement through the education of our students. I also hope that clinicians who wish to develop more knowledge and confidence in this area will find the book informative and practical.

In my role as an occupational therapy educator (1991–1999), I searched on a number of occasions for a definitive text that would introduce my students to the importance of assessment and measurement in their practice. I wanted a text that would help them get to grips with psychometrics, test critique and the principles of test administration and reporting. I also looked for a text that provided detailed case examples that unpackaged the therapist's clinical reasoning during assessment and showed the student, step by step, how to apply the principles of rigorous assessment and measurement to practice. Psychometric texts were usually too detailed and dry as a starting point for students. Many therapy texts had chapters on assessment, but the sections on psychometrics were often limited to a few paragraphs and lacked the depth required. Other texts were focused on assessment and evaluation with a particular population, such as children or people who have had a stroke. As I result, I ended up with an extensive reading list, with chapters and articles taken from a wide range of sources, and sometimes suffered complaints from students about the lack of a key set text. As I have worked on this book, I have held in the back of my mind the requirements I had as an educator and tried to pull these elements together into one text.

Over the years, I developed a number of worksheets that I have used with students and clinicians to help them apply the key principles of assessment and gain the confidence to put this knowledge into practice. Feedback received showed that students and colleagues found these helpful and so I have included them in the text.

The purpose of this book is to enable undergraduate and postgraduate students of occupational therapy and physiotherapy, as well as qualified physiotherapists and occupational therapists (clinicians, managers, educators and researchers), to:

- develop a comprehensive and effective assessment process for their clients; this involves integrating the application and interpretation of a range of data-collection methods to achieve a thorough, meaningful, valid and reliable assessment experience for users of therapy services
- select and implement appropriate standardised measures; this involves understanding the meaning and relevance of psychometric properties and being able to analyse data on psychometric properties in order to select the best evidence-based standardised tests and outcome measures for a client group or research population.

It is hoped that *Principles of Assessment and Outcome Measurement for Occupational Therapists and Physiotherapists: Theory, Skills and Application* will encourage and assist students and therapists to reflect upon and improve the quality of their assessment and measurement approaches.

Alison Laver Fawcett

Acknowledgements

I would like to give my heartfelt thanks to those therapists who have contributed to the case studies and clinical examples in this book. While the therapists who have assisted in the development of chapters in some specific way are acknowledged in the Contents as authors at the start of the chapter to which they contributed, I would also like to acknowledge each of the contributors personally here.

Grateful thanks go to Karen Innes, not only for contributing so much to the case studies in Chapter 3 and Chapter 10 of this book but also for her enthusiasm for this project and the interest and support she has shown during the long writing process.

Many thanks to Gail Brooke and Heather Shaw, who gave up their time so I could interview them in depth for the final case study, 'Carol', which appears in Chapter 12. They also engaged in the writing process by reviewing my drafts, adding details and providing additional data. I feel their contribution of such a detailed description of their multidisciplinary practice is a real gift and inspiration to our professions. Gail also leant me a number of useful texts on physiotherapy, measurement and pain.

Many thanks to David Jelley, who has supported the development of this book in a number of ways. David shared his practice in a detailed interview that became the basis for the case study 'Mary', which appears in Chapter 9. He also engaged in the writing process by reviewing my drafts, adding details and providing additional data. David organised for me to observe and interview several of his physiotherapy colleagues in the outpatient and Fast Response services he manages. He also leant me a number of useful physiotherapy texts.

Many thanks to Claire Howell and Sally Payne, who have provided the case study 'Scott' that appears in Chapter 2. Claire and Sally's case provides an excellent example of the different data-collection methods used for a comprehensive therapy assessment process.

Many thanks are also owed to Rachel Hargreaves, who was a natural choice when I wanted an example of a test report for Chapter 8 because of her enthusiasm for implementing a standardised assessment into a memory assessment service for people with suspected dementia. I am grateful to Rachel for providing an excellent example of a comprehensive report related to standardised test results.

I was delighted when Professor Jenny Butler, Professor in Occupational Therapy at Oxford Brookes University, agreed to contribute the Foreword to this book, and I want to express my grateful thanks to Jenny for giving up her time to review the manuscript and for supporting my endeavour in this way.

I am very grateful to Dr Diane Cox for encouraging me to write this book and for providing practical help with the literature search, in particular raiding her husband's physiotherapy journals. I also want to thank her for reviewing chapters early on in the writing process from her perspective as an educator and for her valuable feedback and encouragement.

I would like to thank Colin Whurr, who originally approached me to write a textbook and believed in my book proposal, and Margaret Gallagher, my editor at Whurr Publishers Limited, for her advice and encouragement in the early stages of writing.

Emma Hatfield became my editor when Whurr was acquired by John Wiley & Sons Limited. I have to admit I was nervous about changing editors halfway through the writing process, but I needn't have been. Emma has been an enthusiastic, supportive and very understanding editor and I am extremely grateful for her contribution, and especially for her patience. I also want to thank Dave Thompson, whose artistic talents have resulted in the great illustrations, and Laura Ferrier, who checked and double-checked we had all the necessary permissions.

I want to say a big thank-you to my copy editor, Tim Bettsworth, whose observant and insightful queries have led to a more polished manuscript. I was delighted to learn what *stet* meant (a publishing term for 'let it stand'), but the fact I could rarely use it in response to Tim's queries is testament to how good he is at his job!

Grateful thanks to David Brown (Director of Mental Health) and Tom Welsh (General Manager) at Craven, Harrogate and Rural District (now North Yorkshire and York) Primary Care Trust, who granted me study leave during the summer of 2004 so that I could get focused on the text and make significant progress on the work. I would also like to thank my current employer, North Yorkshire and York Primary Care Trust, for granting me study leave to proofread and index this text. David, I really appreciate not only your authorising my study leave but also your support and for patiently waiting for the book to finally make it to print – and not losing faith that these two periods of study leave would help contribute to my finally producing a worthwhile book.

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Many thanks to Lesley Munro and Lucy Do at Harcourt Assessment for organising for me to be loaned a number of the tests published by Harcourt for review. A number of these texts proved relevant and have been included as examples in the text.

Annie Turner invited me to write a chapter on assessment for the fifth edition of *Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice* (Laver Fawcett, 2002). I'm grateful to Annie for the opportunity to write this chapter because it sowed the seeds for this present book. Having Annie as an editor back then was a fantastic experience and I learnt a lot from her expertise as an occupational therapy educator, writer and editor. Working on the chapter with her convinced me to take the next step and attempt a book on the subject. Annie also helped me to obtain permission from Churchill Livingstone to reproduce a number of figures I developed for the chapter on assessment in this book.

I would also like to acknowledge some special colleagues who have supported, taught, empowered and inspired me throughout my career – each of you in your own way has helped me reach the place where embarking on this textbook was possible: Dr Carolyn Baum, Dr Mary Law, Dr Barbara Cooper, Jennifer Creek, Dr Carolyn Unsworth, Professor Peter Millard, Beryl Steeden and Julia Gosden.

On a more personal note I would like to thank my father, Philip Laver (aka 'Pops'), for helping me to find my missing or incomplete references and particularly for finding missing issue numbers – it was a tedious labour of love and I really appreciated your help. I also want to thank Pops for dealing with my innumerable emails containing the many various drafts of this book attached and for then archiving and backing up all of them on his computer. He has responded to my emails and attachments with numerous encouraging messages, and his belief in my writing endeavour has been very validating. He has also applied his enthusiasm for computing to solve a number of formatting problems for me, particularly when other authors have given me permission to reproduce figures and I have struggled to edit the files they have sent or to create sharp enough reproductions. Above all, I must apologise to my mother, Diane, for providing my father with an ongoing excuse for spending even more time at his computer!

I must acknowledge that this book would not have been finished without the support of my husband, Alex, who has continued to encourage me in this endeavour (even as the years have ticked by) from the envisaged two, to three, then four and now five years working on this text. He has patiently supported me both by taking our children out on numerous occasions so I could have time and peace to write and by putting up with my spending many late nights shut away in my study. I also wish to thank our two children, Lucas and Beatrix, whose thirst for knowledge and frequent 'Why…?' questions keep me on my toes and who helped me to keep life in perspective when the writing process became challenging. To Alex, Lucas and Beatrix I now promise to put some of my occupational therapy knowledge about life balance into practice and become a more active participant in family activities – it is time to put my computer in its place and have more fun!

Alison Laver Fawcett

Introduction

The purpose of this book is to enable students of occupational therapy and physiotherapy, as well as qualified physiotherapists and occupational therapists, to understand the complex art and science of assessment processes, to be familiar with psychometric terms and to be able to identify the properties of tests in order to select and confidently implement the use of appropriate standardised tests and outcome measures in their clinical practice and research.

This introduction briefly describes, chapter by chapter, what is going to be examined in this book. The introduction also discusses and defines the key terminology to be used in the text (including assessment, evaluation, outcome and measurement). Chapter 1 focuses on the importance of accurate assessment (including the advantages and disadvantages of informal versus standardised methods). Methods of assessment such as self-report, proxy and observational approaches are investigated in Chapter 2. In Chapter 3, the different purposes of assessment (such as descriptive, discriminative, predictive and evaluative) are explored and the timing of assessments (including initial, baseline, monitoring and outcome) are considered. Chapter 4 addresses the question of 'What is measurement?' and provides definitions and examples of four levels of measurement (nominal, ordinal, interval and ratio). Test development, standardisation, norm-referenced and criterion-referenced tests are then examined in Chapter 5. Chapter 6 focuses on the topic of validity and concludes with an exploration of face validity and clinical utility. Reliability is then examined in Chapter 7, and this includes an explanation of the different types of reliability statistics used to examine levels of reliability and concepts such as test specificity, sensitivity, error of measurement and floor and ceiling effects. Chapter 8 explains the process of test administration and makes suggestions for reporting and recording test results. The application of models of function to therapy assessment and measurement is explored in Chapter 9 and illustrated with a number of examples, including the World Health Organization's International Classification of Functioning, Disability and Health. Chapter 10 explains the importance of clinical reasoning and reflective practice in effective assessment and discusses different types of clinical reasoning (including diagnostic, interactive, pragmatic, procedural, narrative and ethical reasoning). Advice on implementing the optimum assessment and measurement approach is provided in Chapter 11, along with a detailed example of a test critique and suggestions for examining your current assessment practice and planning improvements to your assessment process. The book ends with a very detailed case study in Chapter 12; this case describes the role of an occupational therapist and a physiotherapist working with a person who is being supported by a Chronic Pain Service and illustrates many of the principles, skills and issues discussed in previous chapters.

Throughout the book, examples of standardised tests along with clinical examples, case vignettes and case histories are used to help the reader see how to apply the principles and skills described to their practice. Worksheets have also been developed to facilitate the reader to start to apply the principles and skills to their own practice. Study questions and brief answers

are provided to help the reader check whether they have grasped the key concepts from each chapter.

This introduction will consider the role of occupational therapy and physiotherapy. It provides a review of definitions for key terms used in everyday therapy practice: assessment, evaluation, scale, outcome and measurement. It concludes by presenting the definitions of these key terms that have been developed or selected as a foundation for this text.

OCCUPATIONAL THERAPY AND PHYSIOTHERAPY

This book is written for both occupational therapists and physiotherapists. In exploring assessment and measurement within these professions, it is critical to understand what these two groups of therapists are trying to achieve. In North America, the term *physical therapists* (as opposed to physiotherapists) is used, and these two terms will be used interchangeably in this book depending upon the source of any quoted material. Physiotherapy/physical therapy can be defined as the treatment of physical dysfunction or injury by the use of therapeutic exercises and the application of modalities intended to restore or facilitate normal function or development. The World Confederation for Physical Therapy (WCPT) states:

> The aim of physical therapists is to identify and maximise human movement potential within the spheres of promotion, prevention, treatment and rehabilitation, in partnership with their clients. (World Confederation for Physical Therapy, 2006b)

Occupational therapy is defined by the College of Occupational Therapists (COT) as:

> Occupational therapists work in partnership with people of all ages to find ways of helping them to carry out activities they need or choose to do in order to achieve satisfaction in their daily lives. Occupational therapy assists people to participate in the occupations they need or choose to do through the therapeutic use of activities that are analysed, chosen and adapted to suit the needs and preferences of individuals. (College of Occupational Therapists, 2005a, Appendix 7)

The World Federation of Occupational Therapists (WFOT) provides a definition of occupational therapy that was agreed at a WFOT council meeting in 2004, and can be found on its website supplied with its reference. This definition begins by stating:

> Occupational therapy is a profession concerned with promoting health and wellbeing through occupation. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. Occupational therapists achieve this outcome by enabling people to do things that will enhance their ability to participate or by modifying the environment to better support participation. (World Federation of Occupational Therapists, 2005)

The major goal of both physiotherapy and occupational therapy is to help people to maximise their potential by reducing the impact of any impairments and limiting the resulting disability and/or handicap. Therapists work with people to help them to obtain their highest levels of activity and participation in order to enhance their quality of life. When a person has a progressive or terminal illness, the goal may be to maintain function for as long as possible and reduce the negative impact of pathology on their quality of life. Therefore, the major objective of both occupational therapy and physiotherapy assessment is to gain a clear picture of the individual in order to develop an intervention plan that will result in improved, or maintained, function and enhanced quality of life. Therapists strive to ensure that these interventions are effective, efficient and economical in order to provide quality services to clients and their carers. Therapists need to use outcome measures to evaluate the effects of their interventions.

Occupational therapists and physiotherapists work in a wide range of settings, including hospitals, health centres, service users' own homes, schools, supported housing and work environments. The vast majority of therapists work within health care services. Health care services are provided in order to prevent, diagnose and treat illness and include services to promote and protect public health (Department of Health, 2004).

LABELS USED FOR PROVIDERS AND RECIPIENTS OF THERAPY SERVICES

Throughout this text, the term *therapist* will be used to include both occupational therapists and physiotherapists. The terms *clinician* and *health care professional* are also used as per the Department of Health's (DoH; 2004) definitions:

- A clinician is defined as a 'professionally qualified staff providing clinical care to patients' (p. 30).
- A health care professional is defined as 'a person who is a member of a profession regulated body' (p. 31).

The terms *patient* (a person receiving health care), *client*, *service user* and *person* will be used interchangeably throughout the text to indicate a recipient of occupational therapy and/or physiotherapy services.

- The word patient stems from the Latin word *pati*, which means 'to suffer' and is still used in medical settings, such as in-patient hospital care (Turner, 2002, p. 355).
- In community settings, the term client is more frequently used, but, like Turner, I feel the derivation of this word from the Latin *cluere*, which means 'to obey' or 'hear', does not reflect concepts of person-centred working, which are becoming more prominent amongst therapy literature.
- Over the past decade, an emphasis on the rights of people receiving health care, and the move away from viewing patients as passive recipients of care, has led to the use of the term service user (Turner, 2002). The DoH defines a service user as 'an individual who uses a health care service, including those who are not in need of treatment, such as blood donors, carers or those using screening services' (Department of Health, 2004, p. 34).

Turner (2002) recommends that as proponents of partnership and person-centred working we should use the terms people and person, as opposed to client or patient. Where the context allows and the meaning is clear, the term person will be used in this book to denote the recipient of therapy services.

The term *carer* is used by the DoH to describe a friend/relative who helps out with the care of another person; for the purposes of this book a carer is defined as 'a person, usually a relative or friend, who provides care on a voluntary basis implicit in relationships between family members' (Department of Health, 2001a, p. 153). It should be noted that in some instances within health and social care settings the term carer can be used to describe a paid staff member delivering care.

To improve the flow of the text, the therapist will be referred to as female and the service user as male in the majority of this book (certain case studies reverse this general rule).

THE IMPORTANCE OF THE SELECTION AND APPLICATION OF TERMINOLOGY IN PRACTICE

It is important to begin a book on assessment and outcome measurement with clear definitions of the key terminology to be used within the text. However, this is far from being a simple exercise. Assessment, evaluation, scales, outcome, measurement and outcome measurement mean

different things to different people (Stokes and O'Neill, 1999), and there is some discrepancy in the use of these terms within the physiotherapy and occupational therapy literature. Therapists do not necessarily have a common vocabulary to describe some of their key concepts; for example, Mosey (1991) states that a 'lack of common vocabulary – the result of marked inattention to concept-definition-label consistency – is a serious problem in occupational therapy' (p. 67). More recently, Denshire and Mullavey-O'Byrne (2003) report that 'finding a congruent language to give meaning to practice remains a contentious issue in the literature' (p. 519). To add to the confusion, both everyday and professional vocabulary can have very different meanings on opposite sides of the Atlantic. (As a British therapist working in the USA and Canada for several years, I had personal experience of this – sometimes with embarrassing or amusing consequences!)

The selection and application of terms to describe therapy practices is important because the language we use gives our practice a public face and enables us to share ideas and information. In the area of assessment and measurement, therapists need to obtain a clear understanding of what is meant by frequently used terms in order to communicate effectively about the assessment process and its results with service users and their carers, other health care professionals, referral sources, discharge destinations, managers and policy developers.

The College of Occupational Therapists (2005a) commissioned the *Standard Terminology Project* to represent the understanding of key terms of the majority of members of the occupational therapy profession in the UK. An earlier piece of work was undertaken by the American Occupational Therapy Association (AOTA), who produced the *Uniform Terminology for Reporting Occupational Therapy Services* (American Occupational Therapy Association, 1979). The WCPT and the Chartered Society of Physiotherapy (CSP) provide some definitions and descriptions on their websites. As we find competing and overlapping definitions of terms related to assessment and measurement in the therapy, it is helpful to start with dictionary definitions and see how these terms are used in everyday language. I shall begin with dictionary definitions of key terms. I have used my dependable *Concise Oxford Dictionary* (Sykes, 1983), which I was given when I started my occupational therapy training (now that ages me!) and, as definitions can change over time, I shall also use a much more up-to-date resource: the range of excellent free dictionary and encyclopaedia services that are available on the World Wide Web. I will then explore the use of these words (assessment, evaluation, scale, measurement, outcome and outcome measure) within the therapy and health care literature nationally and internationally in order to gain a deeper understanding of the meanings ascribed to these terms by therapists and in an attempt to give a definitive definition.

DEFINITIONS OF KEY TERMS

ASSESSMENT

Sykes (1983) defines *assess* as 'fix amount of and impose (on person or community); . . . estimate magnitude or quality of'. In the health care literature it has been defined as 'to identify, describe, evaluate and validate information' (Centre for Advanced Palliative Care, 2005). An online dictionary definition for *assessment* calls it 'the act or result of judging the worth or value of something or someone' and gives related words, including *evaluation* and *judgment* (http://www.answers.com/library/Dictionary, accessed 26.10.05).

There are numerous definitions of assessment in the rehabilitation literature. The DoH defines assessment as 'a process whereby the needs of an individual are identified and quality of life is evaluated' (Department of Health, 2001a, p. 151). The AOTA (1979) also calls it a process; in this case it describes assessment as the process of determining the need for, nature of and estimated time of treatment, as well as coordinating with other professionals involved. In the UK, the COT also defines assessment as a process and says it is 'the process of collecting accurate and relevant information about the client in order to set baselines and to monitor and measure the outcomes of therapy or intervention' (College of Occupational Therapists, 2003a, p. 50).

The WCPT describes assessment as the first stage of the physiotherapy process.

> Assessment includes both the examination of individuals or groups with actual or potential impairments, functional limitations, disabilities, or other conditions of health by history taking, screening and the use of specific tests and measures and evaluation of the results of the examination through analysis and synthesis within a process of clinical reasoning. (http://www.fisionline.org/WCPT.html#Iniziale2, accessed 27.10.05)

Two American authors define assessment simply as 'a process by which data are gathered, hypotheses formulated, and decisions made for further action' (Christiansen and Baum, 1991, p. 848). Two other American occupational therapy authors describe assessment as 'the planned collection, interpretation, and documentation of the functional status of an individual related to the individual's capacity to perform valued or required self-care, work or leisure tasks' (Rogers and Holm, 1989, p. 6). The Royal College of Physicians (RCP) also perceives assessment as including 'both the collection of data and the interpretation of those data in order to inform decision' (Royal College of Physicians, 2002, section 4.1). Law and Letts (1989) describe it as an essential component of the therapy process and say assessment is used to describe the person's strengths and problems, formulate a prognosis and evaluate the effects of therapy interventions.

Another description of physiotherapy assessment refers to a range of methods and embeds measurement as part of the process.

> A physiotherapist will initially conduct a subjective examination (interview) of a patient's medical history, and then go on to the objective assessment (physical examination). The subjective examination is guided by the presenting system and complaint, and the objective assessment is in turn guided by the history. This semistructured process is used to rule out serious pathology (so-called red flags), establish functional limitations, refine the diagnosis, guide therapy, and establish a baseline for monitoring progress. As such, the objective exam will then use certain quantifiable measurements to both guide diagnosis and for progress monitoring. These depend upon the system (and area) being managed. (http://en.wikipedia.org/wiki/Physical_therapy#Assessment, accessed 27.10.05)

Some themes about the nature of assessment that emerge from these definitions are:

- assessment is a process
- assessment involves multiple methods of obtaining and interpreting information/data
- information obtained through assessment enables therapists to decide whether therapy is required, to set a baseline for treatment and to evaluate the results of that treatment
- assessment is a process that encompasses the evaluation and measurement of outcomes.

For the purposes of this book, *assessment* will be defined as:

Definition of assessment

Assessment is the overall process of selecting and using multiple data-collection tools and various sources of information to inform decisions required for guiding therapeutic intervention during the whole therapy process. It involves interpreting information collected to make clinical decisions related to the needs of the person and the appropriateness and nature of their therapy. Assessment involves the evaluation of the outcomes of therapeutic interventions.

EVALUATION

Jacobs (1993) notes that 'often, the term assessment is incorrectly thought to be synonymous with evaluation' and goes on to say that 'assessment encompasses evaluation as one of its . . . phases' (p. 228). The word *evaluation* is a noun; related words used by therapists include *to evaluate* (verb) and *evaluative* (adjective). Evaluation is 'the act or result of evaluating' (from CancerWeb at: http://cancerweb.ncl.ac.uk/cgi-bin/omd?query=evaluation, accessed 27.10.05). Sykes (1983) defines evaluate as 'ascertain amount of; find numerical expression for; appraise; assess'. An online dictionary (http://dictionary.reference.com/search?q=evaluate, accessed 27.10.05) provides three definitions for the word evaluate:

- to ascertain or fix the value or worth of
- to examine and judge carefully; appraise
- mathematics: to calculate the numerical value of; express numerically.

The COT defines evaluation as 'the process of using clinical reasoning, problem-analysis, self-appraisal and review to interpret the results of assessment in order to make judgements about the situation or needs of an individual, the success of occupational therapy or the therapist's own performance' (College of Occupational Therapists, 2003a, p. 53). So evaluation is also applied to service review as well as to individual client work. Corr (2003) states that 'a service might be very good, but without evaluation its value diminishes because there is no objective measure of it being "very good"' (p. 235).

The WCPT states that the stage of evaluation in the physical therapy process 'necessitates re-examination for the purpose of evaluating outcomes' (http://www.fisionline.org/WCPT.html#Iniziale2, accessed 27.10.05).

Some ideas about evaluation that appear in these definitions are:

- evaluation involves examining or judging the amount or value of something
- evaluation can be viewed as a subcomponent of a broader assessment process
- evaluation is undertaken to enable a therapist to make a clinical judgement about her client or a judgement about the value of her service
- evaluation of outcomes requires re-examination, and so a therapist has to obtain the same information/data on two occasions to evaluate any change in the outcome of interest
- evaluation can involve expressing something numerically.

For the purposes of this book, *evaluation* will be defined as:

Definition of evaluation

Evaluation is a component of a broader assessment process. It involves the collection of data to enable the therapist to make a judgement about the amount of a specific construct of interest (such as degree of range of movement or level of independence in an activity of daily living) or to make a judgement about the value of an intervention for delivering the desired outcome for a person or the value of a service for delivering outcomes of relevance to the client population. Evaluation often involves data being collected at two time points in order to measure effect and also can involve the translation of observations to numerical scores.

SCALE

Within therapy and rehabilitation literature, we also see the terms *scale*, *rating scales* and *measurement scales*. The word scale appears in quite a lot of standardised health and therapy

tests, for example the Beck Scale for Suicide Ideation (Beck and Steer, 1991). So what do therapists mean by scale? Sykes (1983) defines it as a 'series of degrees, ladder-like arrangement or classification, graded system' and notes that in the context of arithmetic a scale is the 'basis of numerical system as shown by ratio between units in adjacent places of number'. So a scale provides a means of recording something that might be defined in terms of levels, amounts or degrees, and it may also involve numbers.

An online dictionary defines scale in the following way: 'a *scale* is either a weighing scale used for measurement of weight (mass or force), or a series of ratios against which different measurements can be compared. The latter need not always be a linear ratio, and is often logarithmic. *Scaling* is the measurement of a variable in such a way that it can be expressed on a continuum. Rating your preference for a product from 1 to 10 is an example of a scale' (http://www.answers.com/library/Dictionary, accessed 26.10.05).

This dictionary further differentiates between comparative and non-comparative scaling. With *comparative* scaling, the items are directly compared with each other (for example: 'Do you prefer the colour blue or red?'). In *non-comparative* scaling, each item is scaled independently of the others (for example: 'How do you feel about the colour red?') (http://www.answers.com/library/Dictionary, accessed 26.10.05).

The DoH states that 'a scale is a means of identifying the presence and/or severity of a particular problem, such as depression or difficulties with personal care. It is important that scales are used in support of professional judgement, and are valid, reliable and culturally sensitive. A scale is valid if it actually measures what it is supposed to measure. It is reliable if trust can be placed on it when used by different assessors or over time. A scale is culturally sensitive, if questions and the interpretation of responses are not prejudiced against people from specific cultures and backgrounds' (Department of Health, 2006b).

Stevens (1946) describes a well-accepted and well-used model of four levels of measurement scales that differ in the extent to which their scale values retain the properties of the real number line. The four levels are called nominal, ordinal, interval and ratio scales (see Chapter 4 for details).

Ideas about scales that appear in these definitions are:

- a scale provides a means of recording something that might be defined in terms of levels, amounts or degrees
- in health care settings, scales are often used to rate the presence or severity of a problem, for example a symptom or the level of independence in a daily activity, such as personal care
- scales may also involve the use of numbers assigned as scores
- there is an accepted categorisation of scales into four levels of measurement.

For the purposes of this book, *scale* will be defined as:

Definition of scale

A scale provides a means of recording something that can be rated in terms of levels, amounts or degrees. Therapists use scales to rate the presence or severity of a problem, such as a symptom, or to rate the person's level of independence in a needed or chosen occupation, activity or task. Scales can be categorised into one of four levels of measurement: nominal, ordinal, interval or ratio. Numbers are frequently assigned as scores in scales. How these numerical scores can be used and interpreted depends upon the level of measurement used in the scale.

For the purposes of this book, *comparative* and *non-comparative* scaling will be defined as:

Definition of comparative scaling

With comparative scaling, items being rated are directly compared with each other in some way. They may be rated in terms of which are the best, or the most difficult, or the most frequently occurring, or the preferred option (for example: 'Do you prefer coffee or tea?').

Definition of non-comparative scaling

With non-comparative scaling, each item in the scale is rated/scored independently of all the other items. This might be in terms of how well the item can be performed, how frequently the item occurs or how the person feels about that item (for example: 'How well can you get dressed?' 'How often to you go out with friends?' 'How do you feel about caring for your loved one?').

ALTERNATIVE TERMS FOR SCALE

Other terms that are sometimes used in a similar context are *instrument*, *index*, *indexes*, *indices*, *typology* and *profile*. These terms appear in the literature and are also used in the titles of some standardised health and therapy tests, for example the Barthel Index (Mahoney and Barthel, 1965), the Caregiver Strain Index (Robinson, 1983), the Capabilities of Upper Extremity Instrument (Marino, Shea and Stineman, 1998), the Functional Assessment of Multiple Sclerosis Quality of Life Instrument (FAMS; Cella *et al*., 1996), the Physiotherapy Functional Mobility Profile (Platt, Bell and Kozak, 1998) and the Abbreviated Functional Limitations Profile (UK) SIP-68 (de Bruin *et al*., 1994).

An *instrument* is 'a device for recording or measuring' (Hopkins and Smith, 1993a, p. 914). The term *index* is used when multiple indicators of a variable are combined into a single measure. For example, the Barthel Index (Mahoney and Barthel, 1965) uses a series of measures of aspects of a person's level of independence in activities of daily living (ADL) to form a combined measure of ADL function. The plural of index is sometimes given as *indexes* and sometimes as *indices*. A *typology* is similar to an index except the variable is measured at the nominal level (any numbers used in a nominal scale are merely labels and express no mathematical properties – see Chapter 4). The word *profile* has many definitions, but in relation to measurement it is defined as 'a graphical representation of an individual's standing, or level, in a series of tests. If it is a psychological or mental profile these tests would be "measuring various aspects of his mentality"' (Drever, 1973, p. 225). Therapists are often interested in interpreting the *score profile* of a person on a standardised test, for example to compare, contrast and understand the range of scores obtained on a measure that has subtests across a range of constructs (a *construct* is an unobservable, internal process such as short-term memory, figure ground discrimination, colour recognition). To aid interpretation, subtest scores may be plotted on a graph; an example is the Rivermead Perceptual Assessment Battery (RPAB; Whiting *et al*., 1985). With normative tests, the results may be graphed using percentiles or standard deviations from the mean to provide a score profile that can be used to help the therapist decide whether the person's scores represent abnormal performance or signs of pathology (see Chapter 5 for more information about normative tests, percentiles and standard deviation).

TESTS

Measurement tools developed for use by therapists are given a wide range of names and may include terms like instrument, scale, profile, index and indices in their titles. As so many different terms abound, throughout this book the term *test* will be used to refer to standardised measurement tools, expect in cases where a particular published test is being discussed, in which case the term used by the test developers in the test's name will be used. Test is a useful umbrella term that includes in its meaning 'critical examination . . . of a person's or thing's qualities', a 'means of examining, standard for comparison' and 'ground of admission or rejection' (Sykes, 1983). In measurement a test is defined as:

> A standardized type of examination; given to a group or individual; it may be qualitative or quantitative, i.e. determine presence or absence of a particular capacity, knowledge or skill, or determine the degree in which such is present; in the latter case, the degree may be determined by the relative position of an individual in the group or whole population, or by assigning a definite numerical value in terms of some selected unit. (Drever, 1973, p. 296)

OUTCOME

The term *outcome* is being used more and more frequently in health, social care, therapy and rehabilitation literature; so it is a very important term to understand. Sykes (1983) defines it as a 'result, visible effect', and this definition is supported by an online dictionary's, which is 'an end result; a consequence' and also provides a synonym, *effect* (http://www.answers.com/outcome, accessed 26.10.05). In the health care literature, outcome has been defined as 'a measurable end result or consequence of a specific action or essential step' (Centre for Advanced Palliative Care, 2005).

Physiotherapy and occupational therapy services can only be considered valuable if they provide demonstrable benefits. In rehabilitation, an outcome is perceived as the end result of the therapeutic process; for example, Stokes and O'Neill state, 'with respect to physiotherapy, outcome is the end result of intervention' (1999, p. 562). In both occupational therapy and physiotherapy, the therapist works with the client to achieve agreed goals, and these are the desired outcomes of the intervention. The COT states, 'outcomes should relate closely to the client's social, psychological, emotional and cultural needs in relation to occupational performance' (College of Occupational Therapists, 2003a, p. 25). The desired outcome of therapy could be improved occupational performance, function or successful adaptation (Henderson, 1991, p. 13). The WCPT highlights the importance of 'including measurable outcome goals negotiated in collaboration with the patient/client, family or care giver' as part of the 'development of a plan of intervention' (http://www.fisionline.org/WCPT.html#Iniziale2, accessed 27.10.05).

Outcome and process assessment have been defined as 'evaluation procedures that focus on both the outcome or status (outcome assessment) of the patient at the end of an episode of care – presence of symptoms, level of activity, and mortality; and the process (process assessment) – what is done for the patient diagnostically and therapeutically' (taken from CancerWeb at: http://cancerweb.ncl.ac.uk/cgi-bin/omd?query=outcome, accessed 27.10.05).

Some ideas about what an outcome is, which are found in these definitions, are:

- an outcome is the consequence of some sort of action or occurrence
- in therapy, an outcome is the end result of intervention
- the therapist should agree with the service user at the start of therapy what the desired outcome(s) of therapy should be
- outcomes are visible effects, and so are things that can be observed and/or measured.

For the purposes of this book, *outcome* will be defined as:

Definition of outcome

An outcome is the observed or measured consequence of an action or occurrence. In a therapeutic process, the outcome is the end result of the therapeutic intervention.

MEASUREMENT

In the *Concise Oxford Dictionary* (Sykes, 1983) the verb *to measure* is listed as having a number of different meanings, including:

- 'ascertain extent or quantity of (thing) by comparison with fixed unit or with object of known size
- ascertain size and proportions of (person) for clothes
- estimate (quality, person's character, etc.) by some standard or rule
- take measurements
- be of specified size
- have necessary qualification for'.

The dictionary goes on to define *measurement* as the 'act or result of measuring; detailed dimensions'. An online dictionary also provides several definitions, including:

- the act of measuring or the process of being measured
- a system of measuring: *measurement in miles*
- the dimension, quantity or capacity determined by measuring: the measurements of a room (http://www.answers.com/measurement, accessed 26.10.05).

Another online search yielded the following explanation: '*Measurement* of some attribute of a set of things is the process of assigning numbers or other symbols to the things in such a way that relationships of the numbers or symbols reflect relationships of the attributes of the things being measured. A particular way of assigning numbers or symbols to measure something is called a scale of measurement' (Sarle, 1997).

In the *National Clinical Guidelines for Stroke* (Royal College of Physicians, 2002) measurement is defined as 'the comparison of some of the obtained data against some standard or "metric", in order to give the data an absolute relative meaning'.

McDowell and Newell (1996, cited in Stokes and O'Neill, 1999) describe measurement as 'the application of standard scales to variables, giving a numerical score which may be combined for each variable to give an overall score. In the measurement of functional ability, the overall score gives an indication of the level of ability of the individual' (p. 560). (*Note:* the ability to combine individual item scores to form a total score depends on the level of measurement used in the scale – see Chapter 4.) Nunnally and Bernstein (1995, cited in Polgar, 1998, p. 169) also talk about measurement relating to the production of a numerical score and define it as the process of assigning numbers to represent quantities of a trait, attribute or characteristic or to classify objects.

According to the RCP, 'measurement and assessment are linked but not synonymous' (Royal College of Physicians, 2002, section 4.1). Stokes and O'Neill (1999) clarify that 'assessment is the process of understanding the measurement within a specific context' (p. 560).

Concepts about measurement that are found in these definitions are:

- measurement is a component of a wider assessment process
- the assessment provides a context for understanding the relevance of measures obtained
- measuring is used to ascertain the dimensions (size), quantity (amount) or capacity of an aspect of the person of interest to the therapist
- a measurement is the data obtained by measuring
- measurement involves assigning numbers to represent quantities of a trait, attribute or characteristic, or to classify objects
- a measurement is obtained by applying a standard scale to variables to provide a numerical score.

For the purposes of this book, *measurement* will be defined as:

Definition of measurement

A measurement is the data obtained by measuring. Measuring is undertaken by therapists to ascertain the dimensions (size), quantity (amount) or capacity of a trait, attribute or characteristic of a person that is required by the therapist to develop an accurate picture of the person's needs and problems to form a baseline for therapeutic intervention and/or to provide a measure of outcome. A measurement is obtained by applying a standard scale to variables, thus translating direct observations or client/proxy reports to a numerical scoring system.

OUTCOME MEASURE/MEASURES OF OUTCOME

The CSP (2005), on its website section on 'Outcome measures', cites the definition of *outcome measure* used by Mayo *et al*., (1994): 'a physical therapy outcome measure is a test or scale administered and interpreted by physical therapists that has been shown to measure accurately a particular attribute of interest to patients and therapists and is expected to be influenced by intervention'. Cole *et al*. (1995) state that an outcome measure is 'a measurement tool (instrument, questionnaire, rating form etc.) used to document change in one or more patient characteristic over time' (p. 22) and say that outcome measures are used to evaluate therapy services. It is also defined as 'an instrument designed to gather information on the efficacy of service programs; a means for determining if goals or objectives have been met' (Christiansen and Baum, 1991, p. 855). While the term is defined by the CAPC as: 'the tabulation, calculation, or recording of activity or effort that can be expressed in a quantitative or qualitative manner (when attempting to measure shifts or progress toward desired levels of quality)' (Centre for Advanced Palliative Care, 2005).

Change is not always the object of intervention and 'outcome measures need to be sensitive to protective and preventive effects as well as to improvements' (Heaton and Bamford, 2001, p. 347). It is important to note that 'clinical outcome measures in general document change over time but do not explain why the change has occurred' (Cole *et al*., 1995, p. vi). So outcome measures are not the be-all-and-end-all solution; we also need to include in our overall assessment process methods for exploring the mechanisms underlying a desired or observed change.

We saw in the discussion on the term outcome that the therapist should agree with the service user at the start of therapy what the desired outcome(s) of therapy should be and should take measurements at the beginning and end of therapy in order to establish whether this desired outcome was indeed achieved. A robust outcome measure is required to take these pre- and post-intervention measurements in a standardised, valid and reliable way.

Some themes that emerge from these definitions of outcome measures are:

- outcome measures are used to document change in one or more client trait, attribute or characteristic over time
- outcome measures are applied to establish whether the desired outcome (the therapy goals or objectives agreed prior to therapeutic intervention) have been achieved
- the desired outcome might be an improvement or the maintenance of some area of function, and the outcome measure needs to be sensitive to the type and degree of anticipated change.

For the purposes of this book, *outcome measure* and *outcome measurement* will be defined as:

Definition of outcome measure

An outcome measure is a standardised instrument used by therapists to establish whether their desired therapeutic outcomes have been achieved.

Definition of outcome measurement

Outcome measurement is a process undertaken to establish the effects of an intervention on an individual or the effectiveness of a service on a defined aspect of the health or well-being of a specified population. Outcome measurement is achieved by administering an outcome measure on at least two occasions to document change over time in one or more trait, attribute or characteristic to establish whether that trait/attribute/characteristic has been influenced by the intervention to the anticipated degree to achieve the desired outcome.

SUMMARY OF DEFINITIONS

This concluding section draws together some of the key definitions in order to show the interrelationship between assessment, evaluation, measurement and outcome measurement.

In occupational therapy and physiotherapy *assessment* is the overall process of selecting and using multiple data-collection tools and various sources of information. The therapist interprets the collected data/information to guide clinical decisions related to the needs of the person and the appropriateness and nature of therapy. The assessment process is often broad in nature, particularly at the onset of the therapeutic process. Information collected as part of a broad assessment process provides a *context* for understanding the relevance of any specific measures obtained. As the person's needs are defined, the therapist may focus the assessment on specific areas of function. At this stage, the therapist makes a judgement about a specific construct of interest or one concerning the value of an intervention for delivering the desired outcome. This is termed *evaluation*.

Measurement helps the therapist to record the presence or degree of something. In particular, robust measurement techniques help the therapist to ascertain the dimensions (size), quantity (amount) or capacity of a trait, attribute or characteristic. Therapists undertake *outcome measurement* as part of a wider assessment process when they need to establish the effects of an intervention on an individual. They may also undertake outcome measurement to examine the effectiveness of their therapy service. The therapist should agree with the person at the start of therapy what the *desired outcome(s)* of therapy should be. To establish whether this desired outcome was indeed achieved, the outcome measure has to be administered on at least two occasions; usually this is at the beginning and end of the therapeutic intervention. Therapists must carefully define the outcome they have been working towards and ensure the outcome measure selected really does measure the desired outcome (this is a question of validity – see Chapter 6). They also need to check the measure will be sensitive to the degree of change expected (this is a question of sensitivity – see Chapter 7).

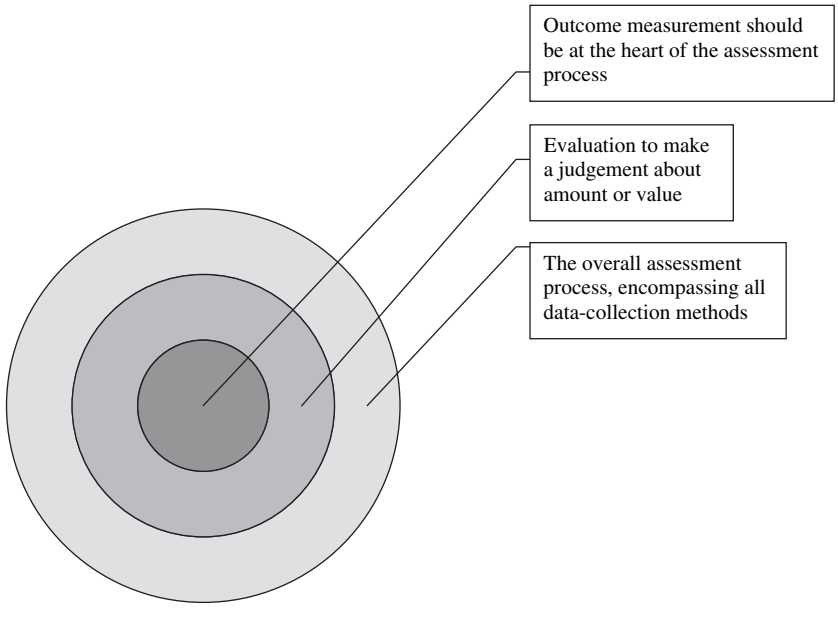
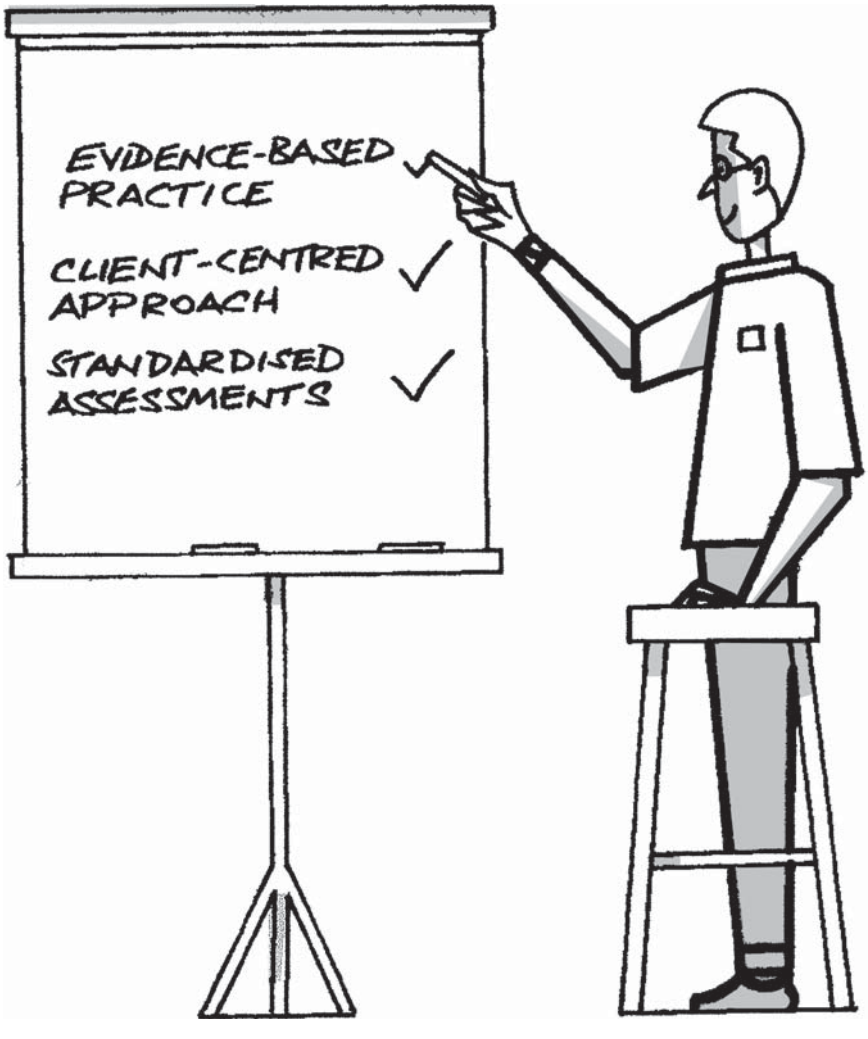


Figure A The relationship between assessment, evaluation and outcome measurement.

Figure A illustrates how assessment is the whole data-gathering and data-interpreting process, within which evaluation and outcome measurement nest. Assessment should be understood as a broad, holistic analysis using multiple types of data (some of which are qualitative and arise from informal observations), whereas evaluation prompts a need for greater specificity and so the focus narrows – and for outcome measurement it becomes clearly defined and requires a robust standardised measure.

1

The Importance of Accurate Assessment and Outcome Measurement



CHAPTER SUMMARY

This chapter focuses on the requirement of therapists to undertake thorough and accurate assessment and measurement. The chapter will describe some developments and policy directions in health and social care practice that have affected occupational therapy and physiotherapy assessment, including:

- a demand for evidence-based practice
- a shift towards the use of standardised assessments
- a requirement to measure outcomes and demonstrate effectiveness
- a focus on client-centred practice
- a demand for robust clinical governance and clinical audit activities
- the use of standards, care pathways, protocols and guidelines.

It also examines the impact of such developments on physiotherapy and occupational therapy assessment, for example the emphasis on demonstrating that intervention is effective leads to a need for reliable, valid and sensitive outcome measures that enable therapists to measure clinically relevant change. In light of a call for standardised measurement, the chapter will discuss some of the advantages and limitations of standardised versus non-standardised tests. This introductory chapter will also explore the complexity of assessment, including the challenges of measuring human behaviour and the impact of the environment, and reflect upon how such complexities influence what can be measured by therapists and the adequacy of these measurements. The chapter concludes by presenting a series of questions about assessment and measurement, which will then be addressed in detail in the following chapters.

ASSESSMENT AS A CORE PART OF THE THERAPY PROCESS

Assessment was defined in the Introduction as the overall process of selecting and using multiple data-collection tools and various sources of information to inform decisions required for guiding therapeutic intervention during the whole therapy process. Assessment involves interpreting information collected to make clinical decisions related to the needs of the person and the appropriateness and nature of their therapy. Assessment involves the evaluation of the outcomes of therapeutic interventions.

Assessment is a core component of health care and therapy processes. It is recognised by health care professionals that assessment is an essential part of a quality service, for example the Royal College of Physicians (RCP; 2002) states that ‘assessment is central to the management of any disability’. Assessment is embedded as an essential component of the health care process. The health care process can be simply described as the (Austin and Clark, 1993):

- needs analysis of the client
- identification of what service needs to be provided
- identification of the provider of the service
- provision of the service
- evaluation of the service provided.

Assessment is the first step in the health care process and provides the foundation for effective treatment. Assessment occurs again at the end of the health care process in the form of evaluation. It is also necessary to undertake a re-assessment at several stages during stage four of the process, service provision, because without thorough and accurate assessment the intervention selected may prove inappropriate and/or ineffective.