

# Introduction

This third edition of the *Quick Reference to Occupational Therapy* has several changes, while the overall format remains similar to previous editions. One change is the addition of levels of evidence-based practice attached to the end of each journal reference. The levels of evidence are based on those developed by the American Occupational Therapy Association (AOTA; Lieberman & Sheer, 2002). Readers should be aware that there are several different versions of levels of evidence developed for different purposes, which are not interchangeable. Therefore, caution should be taken when comparing the levels of evidence developed by the AOTA with other systems.

The AOTA levels comprise a system of four types of quantitative research design and a fifth category labeled NA, which was changed in this handbook to Roman numeral V. Level I studies are those based on randomized, controlled trials in which subjects are assigned randomly to one or more experimental groups and one or more control groups. Level II studies typically use a cohort design in which at least one experimental and control group are created, but subjects are not randomly assigned. Typically, subjects are matched for certain variables after the experimental group has been selected. Level III studies generally have one group of subjects, wherein the subjects are measured before and after (pre–post design) on some intervention variable. Level IV studies are of a single-subject design in which each subject acts as his/her own control. Typically, the design is called ABA or ABAB design. Level V contains all the publications that do not fit the quantitative designs. Thus, all qualitative designs become Level V as well as publications that are not research based. To provide more information to the reader, all Level V articles provide additional descriptors. The descriptors include a broad spectrum of research designs and presentations. Common research designs are survey questionnaires, interviews, literature reviews, case studies, and case reports. Descriptors added include assessment validation to determine the validity and reliability of assessment instructions, problem identification studies used to clarify diagnostic or characteristic symptoms, program descriptions, program planning, and others. In addition to the levels, there are two more categories, which are not ranked. These are systematic reviews and meta-analyses. Systematic reviews examine Level I research studies to provide a state-of-the-art summary of a specific subject, such as the use of splints to correct hand and wrist deformities in rheumatoid arthritis. Meta-analyses review studies that use statistical measures of central tendency to permit several statistical results to be examined together, which theoretically increases the statistical power by combining the number of subjects.

Another change to this edition is the search strategies used to locate the references themselves. In the previous editions, bibliographic databases were used. Bibliographic databases are searched primarily through controlled vocabulary terms. Unfortunately, many articles written by occupational therapists are not indexed under the controlled vocabulary terms *occupational therapy*, *occupational therapist*, *occupational therapists*, or *occupational therapy assistants* because the content is not specifically about occupational therapy practice or about occupational therapy practitioners. As a result, many articles that could have been useful to the reader were not identified. In recent years, the availability of full-text databases has increased significantly. Full-text databases change the search strategies by permitting the entire document to be searched. Full-document searching greatly increases the identification of occupational therapy authors who were part of an interdisciplinary or multidisciplinary writing team. For example, in a bibliographic database, an article might not be identified because the focus would have been on rehabilitation, not occupational therapy, but in a full-text database, the contribution of occupational therapy might be mentioned in the body of the article. In addition, full-text articles can be viewed and scanned for occupational therapy content as they are prepared for printing. In some articles, the only way to identify an occupational therapy author was by noting the professional initials, the phrase *occupational therapist* or *assistant*, or the affiliation in the department of occupational therapy.

As a result of the expanded search strategies, four general categories of articles were identified: (1) journal articles in which an occupational therapist or assistant is the lead or first author; (2) journal articles in which an occupational therapist or assistant is one of the authors but not the lead; (3) journal articles in which occupational therapists participated in data collection but were not given author status; and (4) journal articles in which data were collected about the use of occupational therapy services, the number of clients seen by occupational therapy personnel, or the number of occupational therapy personnel available to provide services.

In addition to journal articles, books continue to be a major source of content. Of note is the greater availability and access to textbooks written by occupational therapists from other countries. Where information from foreign textbooks was available, that information is reflected in the references or bibliography for each subject. Likewise, the number of occupational therapy journals from other countries has expanded. However, some limitations remain. Only literature written in English or with an abstract written in English was retrieved and reviewed in the literature searches.

Literature searches included many databases. The established databases used to locate literature for the previous editions were also primary resources in this edition. These databases include MEDLINE, CINAHL, PsycINFO, ERIC, AARP AgeLine, NARIC, OT Search, and Sociological Abstracts. New databases include Academic Search Complete, Cochrane Library, Dissertation Abstracts Online, ProQuest Digital Dissertations, FirstSearch, Health Reference Center, HighWire Press (Free Journals), Journals @Ovid Full Text, MasterFILE Premier, ProQuest Nursing Journals, and Psychology & Behavioral Sciences Collection. In addition, many journal publishers have developed databases of the journals published by that vendor. A few include Blackwell, Cambridge, Elsevier, Haworth Press, LWW (Lippincott Williams & Wilkins), Sage, Slack, Springer, Taylor & Francis, and Thieme. Finally, search engines such as Google and Bing retrieved online documents that were not published in journals or textbooks. As a result, many resources were searched that were previously unavailable. Most of the articles themselves were downloaded directly from the database source. Those not available online were obtained from the Texas Woman's University library (Denton, Texas) or from the Houston Academy of Medicine—Texas Medical Center library (Houston, Texas). In addition, some articles and booklets were downloaded directly from the Internet.

As with previous editions, all source materials are from published sources considered to be widely available. With full-text journals online, the availability is greater than ever. However, not all sources were considered. Sources not included are clinical handouts, in-service materials and workshop manuals, or any source with restricted circulation. In addition, very few audiovisual or computer software programs were identified. Therefore, citation to these sources is limited.

Credit in part for the completion of this edition is due to occupational therapy students from the classes of 2007 and 2008, who completed projects with the author at the School of Occupational Therapy, Texas Woman's University—Houston. Students helped identify the levels of evidence in the subjects of stroke, brain injury, arthritis, schizophrenia, falls, cerebral palsy, sensory integration, autism, pain, Parkinson's disease, multiple sclerosis, burns, and hand injuries. The students also identified subthemes within the larger subjects, such as specific intervention strategies. Examples include research on robotics, constraint-induced movement, neurodevelopmental treatment, botulism toxins, and others.

In addition, students reflected on the state of research in occupational therapy. For instance, the students found that much of the literature reviewed is categorized as Level V. In some subject areas, all of the articles located were categorized as Level V. In other words, no articles were located based on quantitative research design. One interpretation is that since 2000, little or no research using quantitative analysis has been done on the subject (diagnosis, disorder, or injury) considering the use of occupational therapy. Another possibility is that the research was not identifiable through the search techniques used. In either case, the lack of identifiable research studies using quantitative analysis does not bode well for the profession. At the other end, Level I studies appeared in quantity only in a few subject areas: stroke, brain injury, falls, arthritis, schizophrenia, and cerebral palsy.

Two categories of Level I studies were identified: those conducted by occupational therapy personnel only and those in which occupational therapy personnel were part of a team approach. More Level I studies are of the second type: interdisciplinary or multidisciplinary. Typically, the topic of research is the effectiveness of rehabilitation as a comprehensive approach rather than the effectiveness of a single discipline, such as occupational therapy. Thus, the effectiveness of rehabilitation as a whole may be easier to identify than the effectiveness of occupational therapy by itself.

Another tentative finding is the comparison of specialty rehabilitation units, such as a stroke unit, versus general rehabilitation units, which see a variety of client diagnoses. Studies suggest that specialty units produce better results in rehabilitation outcomes. In other words, focused practice improves performance, and working closely together with other professionals may produce better results for clients. The “gestalt” of rehabilitation techniques combined may provide better client outcomes than the efforts of any single discipline by itself. If one goal of occupational therapy is to be client-centered, perhaps the goal of seeking to demonstrate the effectiveness of occupational therapy practice may be short-sighted and self-serving.

A third tentative finding is that subject areas with assessments identified and used by several researchers tend to promote research efforts. Established and recognized assessments may facilitate research by permitting better analysis of outcomes. An observation is that subject areas with only a few (three or less) assessments documented in the literature seemed to also have few or no Level I studies. Level I research seems to occur in relation to measurement potential. Assessments seem to facilitate the identification of variables that could be measured.

Finally, in occupational therapy, qualitative research is valued. The current levels of evidence do not rate qualitative studies. The lack of a recognized rating scale for qualitative studies in part skews the results of assigning levels of evidence to occupational therapy literature. Some subject areas may have good research studies based on qualitative methodologies. Unfortunately, level of evidence for qualitative research is not possible through the rating system used in this book. While some types of qualitative studies can be identified, such as interviews or questionnaires, the relative contribution of such studies cannot be illustrated by an existing ranking system.

## REFERENCE

Lieberman, D., & Sheer, J. (2002). AOTA's evidence-based literature review project: An overview. *American Journal of Occupational Therapy*, 56, 344–349.