**EVIDENCE-BASED PRACTICE FORUM**

Challenges and Strategic Solutions for a Research Emergent Profession

Irene Ilott

This paper explores some of the truisms associated with evidence-based practice. The intention is to remind the reader that evidence-based practice is a decision-making tool and not a rule; and to propose a strategic approach to overcoming the challenges we face as a research emergent profession.


Research emergent profession is a phrase that is in common usage in the United Kingdom (White, 2003). I like the term because it epitomizes the current stage of research development and the aspirations for the future. Research emergent means that a profession lacks a solid tradition of research and thus the infrastructure—research centers and researchers—to provide the evidence for evidence-based practice. So, when the literature is searched, little of clinical relevance is found. This is because the research questions have been neither asked nor answered in a sufficiently robust way to satisfy the traditional hierarchy of empirical evidence (Holm, 2000).

Occupational therapy, alongside nursing and other allied health professions such as physiotherapy and podiatry, is recognized as an emerging research subject area in the United Kingdom. This was the outcome of three complementary studies conducted between 2000–2002. One study was a review undertaken in England by a time-limited policy group known as Task Group 3 (Health Education Funding Council for England [HEFCE], 2001). The Task Group commissioned a research study to inform their deliberations (Center for Policy in Nursing Research [CPNR] et al., 2001). Both studies were funded by the Higher Education Funding Council for England and the Department of Health. These are two national organizations that fund over £1 billion of research each year. The final study was a smaller, profession-specific investigation into occupational therapy research and development activity in Scotland, Northern Ireland, and Wales. This was undertaken by the professional body, the British Association/College of Occupational Therapists (Creek & Ilott, 2002). If you are interested in the history of research, the methodologies used and the solutions proposed to enhance research and development, then refer to these documents. All three reports are available via the Internet. (The Web site addresses are in the reference list.)

These studies confirmed three important messages: the relatively early stage of research development; the demand for research due to the evidence-based movement and the cost constraints on health care organizations; and the increasing number of professionals committed to a career in research and therefore able to supply the demand. The Task Group 3 Report contained powerful figures about the "historic lack of research funding...[that] has had a debilitating effect" and stated that there was a "compelling case for research relevant to the nursing and allied health professions" (HEFCE, 2001, p. 2). The funding problems included:
• Underfunding in comparison with other, academic practice-based professions such as education and social work. For example, in the early 2000s, education was treated as a special case receiving £23 million from the Economic and Social Research Council Teaching and Learning Fund to increase the research capacity and productivity of the teaching profession.

• Underfunding relative to the size of the nursing and allied health professions who provide three quarters of direct patient care in the National Health Service in England. For example, there are over 137,000 allied health professionals licensed with the Health Professions Council (CPSM, 2002). The United Kingdom invests almost £3.5 billion ($5.5 billion) in medical research from public and private sources (Wellcome Trust & NHSE, 2001). Yet the income for the research in nursing and allied health professions was only £9.7 million in 1999–2000 (CPNR et al., 2001).

• Funding skewed towards short-term, local projects rather than coordinated programs, which tackle national health-care priorities.

The third study concentrated upon occupational therapy research and development in Scotland, Northern Ireland, and Wales. The authors of the study concluded, “The profession is at a transition phase in terms of its stage of research. During the last decade it has changed from a well established, diploma educated, vocational profession, to a degree entry, rapidly expanding career” (Creek & Ilott, 2002, p. 7). One of the most noteworthy changes was the move from small scale, self funded research undertaken as part of postgraduate education programs to the development of a cadre of career researchers, based in multi disciplinary research centers who successfully compete for substantial project funding.

Understanding the stage of research is not just an academic exercise. The findings from such studies provide an economic argument that can be used when lobbying funding bodies to redress inequalities. The results also give a benchmark against which to monitor and audit future performance. Another equally important reason for investigating the stage of research development is that “the public, policy makers, and all members of the health care team are…poorly served by the undernourished research base in nursing, midwifery, and allied health professions. Without targeted investment the service will fail to deliver the benefits of evidence-based practice” (Rafferty, Traynor, Thompson, Illott, & White, 2003, p. 833).

The Task Group 3 reports were pivotal for advancing research development in the United Kingdom because they provided independent confirmation of the range of problems that impede the progress of research emergent professions. More significantly, they stimulated new income streams for nursing and allied health professions’ research. In December 2001 the Department of Health announced £4.8 million over the next 5 years for doctoral and postdoctoral research fellowships for the nursing and allied health professions. In 2003 the Higher Education Funding Council for England “ear marked £20 million for research emerging subject areas” (Newby, 2003, p. 14). Both these initiatives demonstrate the value of leadership, combined with a concerted campaign of lobbying and political action, by the professional bodies for the allied health professions (Ilott & Bury, 2002).

Research Enhanced or Informed Practice Is Just One Approach to Evidence

The demands of evidence-based practice and policy making means that it is imperative to take a strategic approach to the challenges of being a research emergent profession, and not just in the United Kingdom. This is because sound research, especially that based on a tradition of controlled studies, is the bedrock of the evidence-based movement. The scientific, positivistic approach is manifest in many ways, but perhaps most prominently in the linear hierarchy of evidence graded according to the perceived strength of the research methods. However, even this is changing. For example, more credibility is given to the quality of the research and the relevance of the findings—rather than the research methods used—in grading systems for clinical guidelines in Scotland (Harbour & Miller, 2001).

While it is a truism to state that research is central to evidence-based practice, it is important to remember that empirical research is just one of three distinctive approaches. The other two are experiential evidence and theoretical knowledge. All three approaches strive to deepen understanding of what works and why. Each has a different purpose, uses different methods and has different limitations. Theoretical knowledge comprises the scientific base: the theories and models that underpin practice. Research can generate knowledge so as to build, support or test theory. Experiential evidence is embedded in the context (McMack, et al., 2002) and the people. It consists of the tacit knowledge and experience-guided working of the practitioner (Herbig, Bussing, & Ewert, 2001) as they draw upon their creative, as well as critical thinking (Seymour, Kinn, & Sutherland, 2003); plus their knowledge of, and relationship with the patient. The perspective of the patient, and their carers, is a critical component of experiential evidence, especially their views about what constitute desirable or successful outcomes. It is important to respect these differences and remember that all sources of evidence—whether from theory, experience or research—are equally valid.

It is also necessary to keep abreast of the changes to the concept and terminology of evidence-based practice. Research enhanced or research informed decision-making (Haynes, Devereaux, & Guyatt, 2002) are becoming more accepted terms in the United Kingdom. This term places the best available research evidence within the context of individual patient care with all the myriad complexity of the disease process, patient choice, their lifestyle and environment, and the health care resources available. In this way, “genuine evidence-based practice actually presupposes an interpretative paradigm in which the patient experiences illness in a unique and contextual way” (Greenhalgh, 1999, p. 325). This is why evidence-based practice is a decision making tool, rather than a rule that requires rigid adherence. The best available evidence from a variety of sources need to be integrated within the clinical reasoning processes, especially when operating in the gray zones of uncertainty (Naylor, 1995) so
characteristic of occupational therapy. We work with people with enduring health and social care needs. It means that there are not any recipe solutions. This is especially so when creating individualized packages of care that require practitioners to act as gatekeepers to services and control costs while respecting the priorities of the patient and their family. Research informed decision making also acknowledges the limitations of the current evidence base. It reflects the synthesis of theoretical, empirical, and experiential knowledge that underpins professional judgment and makes each therapeutic encounter unique.

Taking the Next Steps: From Research Emerging to Established

In the next section I deliberately overemphasize the importance of empirical research. This is because the literature from different countries and over time, seems to show that research and researchers are marginalized, rather than being central to our profession.

In my opinion there are two key steps that need to be taken to support progress from being a research emergent profession to one where research is an accepted and acceptable part of occupational therapy. These are, first, to acknowledge and tackle the shared and profession specific challenges and second, to adopt strategic solutions to research and development at both a national and international level. The ubiquity of the evidence-based movement around the world, and in other health care professions, means that such steps would be timely and therefore more likely to succeed.

Shared and Profession Specific Challenges

Evidence-based occupational therapy presents a significant challenge for all of us. Many of the difficulties are shared with other health and social care professions. Four of the most common problems are summarized below:

1. The paucity and patchiness of large-scale studies into the process or outcomes of occupational therapy means that there are no unequivocal answers to the question "what works?" in many areas of everyday practice. The lack of "real research," meaning that it is high quality, rigorous, and peer-reviewed (Cusick, 2001) has been noted by many, whether in relation to the profession as a whole (Holm, 2000); for specific client groups such as mental health (Mairs, 2003); or for routine interventions such as reminiscence therapy for people with dementia (Spector, Orrell, Davies, & Woods, 2000). The absence of primary research has implications for secondary research. It means that there is little information available for inclusion in secondary research and available from online resources such as the Cochrane Library and OT Seeker. The latter is a new database that contains abstracts of systematic reviews and randomized controlled trials (RCTs) relevant to occupational therapy. The Internet address is www.otseeker.com.

2. A polarity of opinions about qualitative and quantitative methodologies. Such esoteric arguments distract from the need to find the best methods to explore the research question. An inadvertent consequence of the criticism of RCTs is the apparent devaluation of intervention studies. This is even more disheartening when occupational therapy RCTs are published in high-impact biomedical journals (such as Walker, Gladman, Lincoln, Siemonsma, & Whitely, 1999, in The Lancet) as these studies raise the profile of the profession. Fortunately, there is increasing recognition of the need for a mixed approach that "incorporates the phenomenological data of qualitative research and the objective date of quantitative research" (Stein & Soderback, 2000, p. 215).

3. The quality and therefore transferability (or generalizability) of "our best available evidence" on the hierarchy of empirical evidence. Much practice is derived from expert opinion or custom and practice, rather than robust outcome studies that reduce the risk of bias in the results. There are few large-scale studies with sufficient subjects or informants to give statistically significant results. There are even fewer replication studies and cross-cultural, comparative studies. These are essential, not just for systematic reviews, but also to test the applicability of outcomes and interventions in different countries.

4. There are many practical problems associated with evidence-based practice. These include lack of time, access to resources, and critical appraisal skills. However, it is salutary to remember that identifying the barriers to evidence-based practice will not resolve the real problem—the lack of research.

In addition to these four problems that are shared with other professions, there are two extra challenges that are peculiar to occupational therapy. These are:

1. The breadth and depth of our domain of concern for humans as occupational beings. This translates into all human beings whether in relation to the theoretical base emerging from occupational science or the range of interventions that encompasses health promotion, diagnosis, assessment, treatment, habilitation, rehabilitation, and palliative care. So, where should researchers start? What are the priority topics and questions?

2. The focus upon “doing.” Occupational therapy is a practical discipline. Action is at the core of our professional values and modalities. We aim to enhance activity and participation by being life coaches, change agents, and advocates for the people we work with. Activity targets are set by the organizations that purchase our services. There is extra pressure to meet activity targets when the profession is in demand to deliver government policy such as equal employment for people with disabilities; or when the service is short staffed; or where the profession is becoming established such as in the sub-Saharan continent of Africa. This dilemma was summarized by Crouch: “Because of the desperate need for occupational therapy services in Africa, research is likely to be the last priority. It should actually be the first, but we know from experience that this is seldom so” (2001, p. 143). There is a lack of research culture even in countries where occupational therapy has been long established. Bonder & Christiansen comment in their editorial marking 20 years of the Occupational Therapy Journal of Research, that “We need to create a culture more
strongly steeped in research traditions. Occupational therapy personnel must learn to value the research enterprise and appreciate its vital role in developing theory for practice” (2001, p. 10).

In my opinion, these are the six key challenges that we must acknowledge and address if we are to progress evidence-based occupational therapy. I am sure the reader will be able to identify more problems and solutions. However, the fundamental one is the lack of primary, and therefore secondary, research.

The Proposal: Let’s Adopt a Strategic Approach to Research and Development

My proposal is based upon the premise that the time is right to be ambitious, to think strategically, and to act audaciously to confront the six challenges. A strategic approach means developing an infrastructure and sustainable community of researchers able to investigate priority topics that support an evaluative culture in practice. This is not a new message. Over 50 years ago Hombersley noted that the United Kingdom was “a long way behind our American colleagues both in original research and publication of results” and that the Association “could initiate…a scheme of research” (1944, p. 10). However, there is now an unprecedented demand upon professions and individual practitioners to generate and incorporate research findings into everyday practice.

This requirement places extraordinary demands upon research emergent professions. This is why I believe that we must collaborate and concentrate our resources, to achieve a critical mass of expertise so that the limited resources can be targeted at “large strategically designed, significant research projects” (Hayes, 2000, p. 188) that are part of coherent research programs addressing priority topics. This strategic approach is happening in some countries. For example, the first 20-year program of research funding by the American Occupational Therapy Foundation and the American Occupational Therapy Association was celebrated in the July/August 2000 issue of this journal. The Foundation has invested $2,460,179 in supporting the development of the profession’s knowledge base since it was established in 1978. Mary Manojlovich, in her presidential address, reported that the Canadian Association of Occupational Therapists had commenced work on a national strategy to advance occupational therapy research (2002, p. 194). In the United Kingdom, the College of Occupational Therapists published a Research and Development Strategic Vision and Action Plan in 2001 (Ilott & White, 2001). This marked a change of emphasis from promoting research and development to setting targets in relation to six objectives (see Figure 1). The six objectives reflect a whole-system approach. Each objective contains action points for individual members and the professional body, thus spreading ownership and accountability.

International collaboration is an essential part of any solution so that the most is made of finite human and financial resources. Mutual support means assisting research emergent countries to tailor a strategy to their political context and stage of research development. This may be achieved via international networks such as the World Federation of Occupational Therapists or the Council of Occupational Therapists in Europe. Collaborative arrangements also provide the opportunity for comparative studies that could illuminate the impact of cultural diversity and health beliefs upon occupation and the effectiveness of interventions.

The Prize: Becoming a Research Established Profession

Overcoming the challenges to become a research active profession, with practitioners using research enhanced decision making, is the prize that becomes possible with the adoption of strategic approach to research and development. Such a strategy offers risks and benefits and requires action at all levels.

Evidence-based occupational therapy is not a panacea for professional self-doubt

![Figure 1. An example of a whole system, strategic framework](adapted from Ilott & White (2001, p. 273)]
and identity crises. Research findings may contradict our beliefs and practice, indicating that our interventions are less effective when compared with those offered by other professions or expert patients. However, a more immediate threat is from administrators declining to purchase our services because the absence of research has been misinterpreted as evidence of ineffectiveness. A spin-off benefit from an evaluative approach is that it will counter our tendency to follow gurus and the fads and fashions of interventions.

So, how will we know if we have managed the transition from research emergent to research established profession, and what will be the implications for individual members? Four areas related to policy, people, places, and products are offered as tentative standards. The parameters are derived from two sources: one that focuses upon a whole-system, profession-specific approach (Ilott & White, 2001) while the other source specifies details about the quality of research in universities (HERO [Higher Education & Research Opportunities in the UK], n.d.a, n.d.b; Roberts, 2003). Some examples are included under each area to indicate the scope and scale of developmental change.

Policy and Profile

- Research leaders influence policy formulation and contribute to the evaluation of research and development policies at a local, regional, and national level.
- Research and development has a comparable profile and status within the professional body as practice and education.
- There is a “properly embedded research culture, the research capabilities to realize this culture, and (as part of this) there are adequate opportunities for research skills training” (UKCGE, 2003, p. 10).

Places

- Research environments, with sufficient infrastructure resources and a critical mass of multidisciplinary expertise, compete for substantial grants for multicenter studies.
- There are an adequate number of research centers to cover the range of specialties.

The research environments (whether actual and virtual) have collaborative networks that support an evaluative culture in practice and the incorporation of evidence into education programs.

People

- There is a sustainable community of researchers with new graduates and experienced practitioners using flexible career pathways so as to optimize experiential knowledge.
- All members are informed consumers of research, routinely searching for the best available evidence to guide their choice of assessments, interventions, and service developments.

Products

- High quality outputs that add value to professional practice are disseminated widely and freely across first- and third-world nations.
- Coherent programs of research address priority topics and also contribute to the advancement of theory and methodology. Expansion in the above areas will impact upon individuals. For example, researchers will need to be resilient as the rigor of their methods will be scrutinized by those compiling systematic reviews for resources such as the Database of Abstracts of Reviews of Effectiveness that is available from the NHS Center for Reviews and Dissemination at www.York.ac.uk/inst/crd/. A focus upon large-scale, high-quality studies will relieve the majority of practitioners of the expectation of being researchers in addition to all their other roles. This is because their primary responsibility is to use secondary research as an “essential and explicit component of decision making in clinical reasoning” (Cusick & McCluskey, 2000, p. 162) so that the best choices are made with the recipients of our services.

I will end by offering three tests for judging whether occupational therapy has become a research established profession. First, we no longer require the special measures that are designed to assist research emergent subject areas. Second, the research outputs withstand the scrutiny of international expert peer review (Roberts, 2003) and other ways of assessing payback from the investment in research and development (Buxton et al., 2000). Finally and most importantly, patients, administrators, and practitioners can find robust, empirical evidence, whether from primary or secondary research, when they need it.

Acknowledgment

An earlier version of this paper titled “Evidence-Based Practice: Poison or Panacea?” was presented at the 13th World Congress of the World Federation of Occupational Therapists in Stockholm in June 2002.

References


