WHAT IS AN EVIDENCE-BASED APPROACH TO PRACTICE AND WHY DO WE NEED ONE IN OCCUPATIONAL PSYCHOLOGY?

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ABSTRACT

Evidence-based approaches to practice involve combining individual practitioner expertise with the best available external evidence from published research in order to make decisions about what to do in response to a presenting problem from a client. One area of professional practice, medicine, has recently begun to adopt this approach which involves a number of stages: Asking answerable questions about the problem; gathering and critically appraising evidence required to answer the questions; and applying this evidence to the actions that are then taken. In this paper I argue that the current practice of occupational psychology is not evidence-based and offer ten reasons why it should become so. Some of these are concerned with improving and maintaining the performance of occupational psychology practitioners and others reflect the need to develop the field of practice as a whole. The implications for practitioners, researchers, and training of taking an evidence-based approach are discussed.
1 Introduction

In many areas of professional practice the tools, techniques, and interventions chosen and used by practitioners are not necessarily those which are known to be the most effective or appropriate. There are numerous reasons for this including: custom and practice; the preferences of practitioners and clients; the difficulty of translating research findings into usable information; and, advances in knowledge since initial training.

Occupational psychology (OP) as an area of professional practice is no different in this respect from many others. From informal observation and speaking with OP practitioners and their clients it is clear that when faced with a particular client issue practitioners often do not use the best available evidence about that issue in order to make decisions about what course of action to recommend or take. This is not to suggest that practitioners do not possess and deploy considerable skill and expertise when going about their work but, rather, that the decisions they make about what tools, techniques and interventions to deploy in response to a client issue are not necessarily based on the best available evidence.

Another area of professional practice which has this same limitation is medicine. It has been shown, for example, that medical practitioners spend relatively little time reading about topics relevant to the patients they are currently treating and that knowledge about current techniques progressively declines following graduation from medical school. In the past decade however considerable efforts have been made by both medical practitioners and researchers to address this problem. In 1995, for example, a new journal called *Evidence-Based Medicine* was launched by the American College of Physicians and the British Medical Journal Publications Group which produces structured abstracts of good quality
studies already published in clinical journals which are directly relevant to medical practice. These abstracts are accompanied by commentaries from clinicians to place the results in a clinical context. In addition there is a strong emphasis on teaching, learning and continuing professional development through the provision of workshops on how to practice evidence-based medicine.

In this paper I will argue that occupational psychology practice needs to become evidence-based and that recent developments in evidence-based medicine can be adapted to suggest ways in which occupational psychology can achieve this. Two recent texts about evidence-based medicine by Sackett et al (1997) and Greenhalgh (1997) will be drawn on extensively. The implications of this approach to practice for practitioners, researchers and training will be discussed.

2 What is evidence-based practice?

Sackett et al (1997, p. 2) define the practice of evidence-based medicine as “integrating individual clinical expertise with the best available external clinical evidence from systematic research” in making decisions about patient care. They go on to suggest (pp. 2-3) that evidence-based medicine is “a process of life-long, self-directed learning in which caring for our own patients creates the need for clinically important information about diagnosis, prognosis, therapy and other clinical and health care issues in which we:

1. convert these information needs into answerable questions;
2. track down, with maximum efficiency, the best evidence with which to answer them...;
3. critically appraise that evidence for its validity and usefulness;
4. apply the results of this appraisal in our clinical practice; and
5. evaluate our performance”.

It is important to note that evidence-based practice does not mean acting only on the basis of
good evidence: Rather it is about combining what the practitioner already knows from their previous training, experience and current understanding of the particular context in which they are operating with the best available external evidence about the issues they are dealing with. In some cases the external evidence may simply reinforce or contradict what the practitioner already knows. However, in most cases, the process of evidence-based practice is likely to lead to a different or more elaborate formulation of the issue or problem at hand and to generate new questions and new foci for assessment and intervention. For example, from an evidence-based perspective a ‘presenting problem’ such as high turnover would lead to many other questions for which answers in the form of evidence could then be sought: Is the turnover ‘high’? Compared to what? Exactly who is leaving? What does the available evidence suggest about why it is a problem? What does the best evidence suggest about the causes of turnover? How can that evidence be applied in this situation and this context? What does evidence suggest about interventions to reduce turnover? Do they have costs as well as benefits? How well might these interventions work in this situation? And so on. Evidence-based practice is also therefore not a top-down ‘cook book’ approach; the expertise of the practitioner in the particular situation or context they are dealing with needs to be integrated with external evidence.

What if there is relatively little external evidence for the issue or problem which faces the practitioner? Sackett et al (1997) argue that evidence-based practice concerns finding out about the best available evidence and that where good direct evidence is not available other more indirect sources must be used. For occupational psychology this may involve looking to other areas of psychology such as social or cognitive psychology, or to related disciplines such as sociology and organizational behaviour. At the same time, the knowledge that there is little direct evidence about the issue or problem can, in itself, help to guide practice as knowing that little is known requires a rather different approach.
The evidence-based approach to practice is therefore relevant to any area of practice which is based on and/or can draw on external evidence to help inform decisions about which tools, techniques and interventions to use.

3 Ten possible reasons why we need an evidence-based approach to practice in occupational psychology?

In the case of medicine, Sackett et al (1997) offer five reasons why the practice of medicine should adopt an evidence-based approach. To what extent can these same reasons when adapted to the OP context be used to justify an evidence-based occupational psychology? Following a discussion of these five other reasons which are more OP specific will also be considered.

**Reason 1:** New evidence is constantly being generated which, in many cases could and does change OP practice if and when it is known and understood: In the case of medicine, some kinds of new evidence (e.g., from meta-analyses) reveal that widely-used medical practices appear to be ineffective. Other kinds of evidence may show whether or not newer practices are effective. This also appears to be the case in OP as evidence published in OP or OP-related journals does sometimes and could more frequently influence practice.

**Reason 2:** Although this new evidence is needed to inform day-to-day OP practice, most practitioners do not get this evidence: As indicated earlier, medical clinicians spend relatively little time reading around issues relevant to their patients. This is also likely to be true for many OP practitioners. Although texts may be used, these are often out-of-date and typically do not provide comprehensive reviews of research evidence. Although practitioners do subscribe to journals which publish research and research reviews, it also seems to be the case that they do not necessarily read them or read them in such a way that the information in them is extracted. Journal articles are written for other researchers and therefore practitioners may not have the time or knowledge to get the most out of such
articles (hence the need in medicine for journals like *Evidence-Based Medicine* mentioned above). Some practitioners do make use of ‘tame academics’, such as a lecturer who may have once taught them, to find out about recent published evidence. All of these points, taken together, suggest that OP practitioners do not get the evidence they need to inform day-to-day practice.

**Reason 3: As a consequence of Reason 1 and Reason 2 the performance of OP practitioners is likely to deteriorate over time:** While there is evidence that the performance of medical practitioners can deteriorate over time (Sackett et al, 1997) there is no evidence that this is the case for OP practitioners. However, as both OP and medical practitioners progress through their careers they are subject to many of the same constraints which make access to and use of evidence in practice more difficult. There may, for example, simply be less time for updating knowledge as managerial responsibilities and workloads increase. At the same time, particular techniques may become favoured by practitioners out of habit or familiarity rather than for their effectiveness. Given these similar constraints, it may be that similar changes in performance would also be observed in OP practitioners.

**Reason 4: Traditional forms of continuing professional development do not improve practitioner performance:** Research reported in Sackett et al (1997) suggests that continuing professional development (CPD) in the form of traditional instructional training has little impact on the performance of medical practitioners. For OP practitioners, opportunities for CPD seem to be relatively rare and where they do exist usually do take the form of traditional instructional training often around the use of particular techniques or psychometric tests. While this may improve technical knowledge about specific products it seems unlikely that this contributes to the overall expertise of OP practitioners in making informed decisions.
Reason 5: A different approach to practitioner learning (an evidence-based one) has been shown to keep practitioners up-to-date: Given the known limitations of instructional training, this fifth reason for adopting an evidence-based approach may also hold true within OP if such an approach was adopted.

In addition to the above five reasons for adopting an evidence-based approach which have been adapted from the context of medical practice, there are reasons which are specific to OP. Five of these will be considered now.

Reason 6: An evidence-based approach would help to distinguish OP practitioners from others in similar fields and would consolidate their unique position: What can OP practitioners do in organizations which other practitioners cannot? This question is often debated and usually one of the main conclusions produced is that OP practitioners can draw on a body of theory and evidence. This distinguishes OP practitioners from, say, management consultants or organizational change specialists. Making practice evidence-based would reinforce this claim.

Reason 7: The education and training of OP practitioners sets a firm foundation for taking an evidence-based approach: A central theme of psychology education at both undergraduate and postgraduate levels is how evidence for particular theories and interventions can be obtained. Research methods training should provide occupational psychologists with the skills required to both search for and evaluate available evidence hence the adoption of an evidence-based approach should be considerably easier within OP than within other fields.

Reason 8: Autonomy and opportunity for skill use would be enhanced in the work of OP practitioners: Practitioners often find themselves in the position of having to 'do what
the client wants’ and taking on the role of a skilled technician or support worker rather than someone who can draw on a large body of theory and evidence to make assessments and informed decisions about what course of action to take from a range of options. An evidence-based approach to practice, when communicated to the client, would set a different kind of agenda and help to avoid the situation in which OP practitioners feel they have little control over what they do and have few opportunities to use the range of expertise and knowledge available to them.

**Reason 9: ‘Educating’ clients:** The notion that clients need to be ‘educated’ about the problems or issues they face is common to many areas of professional practice. In the case of OP such an ‘education’ may involve persuading the client about the importance of initial assessment, the use of the best available external evidence, making informed decisions about the tools and techniques which should be used, and the importance of evaluating any intervention. Each of these is fundamental part of an evidence-based approach to practice.

**Reason 10: Influencing the research agenda:** The gulf that exists in some areas between practitioners and researchers is unsatisfactory for both groups. Practitioners may feel that researchers are out of touch with what is happening in organizations and produce evidence which is not particularly useful. Researchers may feel that practitioners are out of touch with research evidence and engage in practices which have little evidence to support their use. However, the more practitioners use research and evidence in their work and make demands on researchers for new kinds of evidence the more they will be able to influence the research which is done. Practitioners are in a unique position to observe new problems and new phenomena in organizations and to place their investigation onto research agendas.

The above ten reasons represent only part of the argument for an evidence-based approach. There are also arguments against taking an evidence-based approach. The main objection
is that practitioners are already take an evidence-based approach to their practice. While, as already stated, we do not have good evidence about the validity of this argument, I would suggest that relatively few OP practitioners take an evidence-based approach of the type defined and described above. Of course OP practitioners do use research evidence and bring considerable expertise to bear on the work they do but this is not the same as taking a comprehensive and systematic evidence-based approach to practice. I will now consider some of the implications for OP of adopting such an approach.

4 Implications of an evidence-based approach for occupational psychology

The implications evidence-based occupational psychology (EBOP) are wide-ranging and potentially profound not only for OP as a discipline but also for organizations that make use of OP. For example, an evidence-based approach to the use of particular selection techniques for which supportive evidence cannot be found could lead to their eventual abandonment within organizations in favour of others for which are supported by evidence. Because of space limitations, however, just three kinds of implications will be considered here.

Implications for practitioners

One of the major implications of EBOP for practitioners is their training. This will be discussed in a separate section below and I will focus here on the implications for practice. Although, as already mentioned, we do not know how OP practitioners carry out their work and therefore some of them may already be practising EBOP or parts of it, the following implications may not apply equally to all practitioners.

How then might an evidence-based OP practitioner go about their work? First, when faced with a problem or issue from a client, there would be considerable focus on asking answerable questions about the problem or issue. Taking an analogy from evidence-based
medicine (Sackett et al, 1997), EBOP would formulate answerable questions within the following kind of framework (the medical equivalents are in italics):

- **Initial examination:** What’s going on here?
- **What are the possible different causes of the problem?** *diagnosis*
- **What kinds of assessment would be needed to establish the cause of the problem?** *diagnostic tests*
- **What is likely to happen over time to this problem?** *prognosis*
- **What interventions could be used?** *treatment*
- **How can such problems be prevented and identified early?** *prevention*

Clearly not each of these tasks will be required in every situation, and in EBOP additional and different tasks may also be required. However, such a framework can help to clarify what questions need to be asked and what kinds of information or evidence are needed to answer them. For example, suppose an organization believed it had identified an ‘interpersonal skills deficit’ in many of its managers. EBOP would start by asking a series of questions around the framework described above: What has caused this problem (the reporting of the skills deficit and/or the skills deficit itself)? How many different causes could there be? How can we find out what the causes are? Is there really a skills deficit? What may happen to this problem over time? Can these skills be improved? What training techniques are available? Are there other interventions which could be used? Do they work? Would they work here? Can such problems be prevented? And so on. *EBOP at almost every stage would make use of the best available external evidence to help answer these questions* as well as the expertise and experience of the practitioner. External evidence would be available for example, on what ‘interpersonal skills’ are considered to be, their impacts on manager-subordinate interactions, the causes of lowered levels of interpersonal skills (and which causes seem to be most important), how they can be assessed (and the relative efficacy of those different assessment techniques), what kinds of
interventions change what aspects of interpersonal skills (and their relative efficacy), and so on. This evidence may come from occupational psychology literature, but it may also come from other areas of psychology such as clinical or educational. The process of obtaining this evidence is likely to lead to the practitioner generating better questions and also a range of possible causes and solutions from which to chose.

In addition to asking questions in different ways, in order to answer those questions EBOP would involve searching for the evidence. This would be from primary sources such as single empirical studies (which could be quantitative or qualitative - see Greenhalgh, 1997) or meta-analyses and secondary sources such as textbooks and literature reviews. As the next stage EBOP would also involve critically appraising and summarizing that evidence and ensuring that it is reliable and valid. Once this has been done, the third stage would be to consider how can this evidence be used to deal with the particular problem at hand.

Such a process could be very time-consuming which is why journals such as *Evidence-Based Medicine* which summarize articles are useful in this context. Equally important, however, is that practitioners have the skills they need in order to search for, critically appraise, and decide how they can use evidence. This will be discussed below.

**Implications for researchers**

There appear to be two main implications of EBOP for researchers. The first of these is that as a consequence of the increasing demand for evidence researchers may find they are more involved in helping to ‘translate’ their research into a more usable form and to take part in activities (e.g., training - see below) which aim to give practitioners the skills they need to select, appraise and use evidence.

A second implication, already mentioned, is that with the increasing demand for evidence in
EBOP, researchers may find they are presented with new research questions and new phenomena to explore by practitioners. As well as being driven by the theoretical relevance researchers may find that what they study becomes more oriented to practical and contemporary problems.

Implications for training and development

The continual development of the skills and expertise of practitioners is the cornerstone of evidence-based approaches to practice and Sackett et al (1997) describe a wide range of techniques which can be used to do this. The training itself is based around the specific problems practitioners encounter in their work and the central aim is to give practitioners the skills they need to apply the results the evidence they have obtained to the problems they encounter. This may be done in small groups over half a day where particular patient problems are presented and then time is spent searching, critically appraising, and discussing how it can be applied. A number of centres also offer five-day evidence-based medicine workshops.

It appears that all or any of these could be useful in developing EBOP and EBOP could and perhaps should also form a key component of Masters’ courses. The central point about training and development for practitioners who practice EBOP is that it never stops: Not only do the skills, for example, of critical appraisal or applying evidence continue to develop but, in the process of looking at the evidence-base for particular client problems, so too does the depth and breadth of knowledge of OP.

5 Conclusions

Evidence-based occupational psychology appears to be the most useful way of combining practitioner expertise with external evidence in order to apply occupational psychology in organizations. While it implies considerable effort on the part of practitioners, the medium-
term to long-term benefits for practitioners and for the discipline as a whole are potentially vast.

6 References
