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Implementation of evidence-based practice: A naturopath perspective

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ABSTRACT

Evidence-based practice (EBP), an approach to clinical practice that places emphasis on the use of best available research evidence for decision-making, has been adopted broadly in clinical practice. As a patient-focused approach, EBP promotes the spirit of inquiry. It can also facilitate consistency of care across professional boundaries, and clarify the directions of research. However, over-emphasis on systematic reviews and randomised control trials as the "gold standard" for evidence is a major limitation of EBP as it is being practised today. There are also objections to EBP based on epistemological grounds. Complementary and alternative medicine (CAM) therapies often fare unfavourably under the scrutiny of EBP due to the lack of research and inherent differences in healing ideology. Naturopathy is a unique form of CAM, based on both traditional and scientific knowledge. We argue that there is no conflict between naturopathy and EBP. EBP can be adopted as a useful approach to assimilate scientific evidence in naturopathic practices. However, naturopaths need to reconcile tensions between traditional and scientific knowledge in their choice of treatment remedies, while adhering to the naturopathic principles of healing, to benefit the patients. They must also maintain their emphasis on clinical expertise, and also patient preferences and values, in clinical decision-making.

1. Introduction

Evidence-based practice (EBP) is considered by many to be imperative in professional practice, especially healthcare [1]. The concept has also received much attention in complementary and alternative medicine (CAM), which consists of a heterogeneous group of alternative schools of medical thought and therapy that are not part of conventional Western medicine [2–4]. As practitioners of CAM, naturopaths are currently facing mounting pressure to move towards evidence-based practice [5]. In this review, we first define what EBP is and analyse its strengths and limitations as it is practised today. We then discuss the reception of EBP by CAM practitioners before focussing on how EBP can be incorporated into naturopathic clinical practice in a way that also leverages traditional knowledge.

2. EBP and its strengths

EBP is an approach to clinical practice that integrates best available research evidence with a practitioner's clinical expertise, while taking into consideration patient preferences and values for clinical decision-making [1,6]. EBP started in the 1970s [7] out of a call by and for medical professionals to use evidence from well-designed randomised controlled trials (RCTs) in order to achieve the best clinical outcomes for their patients. Today, EBP concepts have been adopted, not only by all health professionals in their clinical practices, but also in many other fields such as social care, criminology and education [8]. Drisko and Grady [9] argue that EBP has become a complex social movement that affects all aspects of the healthcare system from funding, policy, administration, research to professional autonomy.

At the core of EBP is the emphasis on the use of quantitative research findings as the basis of clinical decision-making. EBP is a process that involves formulating clinical questions, searching for existing evidence, critically appraising the evidence, integrating the evidence with clinical expertise and patient preferences to derive the best treatment and care, and then evaluating the practice outcomes [6]. It is a rigorous methodology that has many advantages which are shown in Table 1. EBP promotes a spirit of inquiry [6] by asking clinical questions and seeking evidence, and practitioners can stay informed of the latest advances in their field. It is also a patient-focused approach whereby practitioners are constantly asking questions and seeking the best available evidence

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Table 1
Strengths and limitations of EBP.

Strengths	Limitations
• Promotes a spirit of inquiry • Patient-focused approach • Facilitates consistency of care across professional boundaries • Provides clarity on the gaps in current knowledge and helps to target further research • Saves resources and conserves healthcare funding	• Time and extensive training is required • Reduced treatment options • Reduced emphasis on professional judgement • Suppression of creativity • Unable to cater for unique patients with complex needs • Overemphasis on SRs and RCTs for evidence

[10]. In addition, EBP provides a common methodology that can facilitate consistency of care across professional boundaries [10]. For example, in the management of chronic low back pain (CLBP), there is evidence showing that non-pharmacological therapies, including exercise and cognitive behavioural therapy, are more beneficial than analgesics [11–13]. As a result, multidisciplinary treatment for CLBP is now a consistent feature included in evidence-based clinical guidelines for primary care in many countries [14]. Equally important is the actual process of constantly searching and critically assessing the available evidence; this gives greater clarity to what is known and what is not known and so can prompt further research [10]. If any intervention is shown to be harmful or ineffective (through evidence), the expectation is that the intervention should be discontinued. Thus, economically, EBP plays an important role in saving resources and conserving healthcare funding [8].

3. The limitations of EBP

EBP, as it is being practised today, has also received many criticisms. Limitations that have been discussed in the literature include the need for time and extensive training to undertake EBP, reduced treatment options for patients, reduced professional judgement, suppression of creativity, and not able to cater for unique patients with complex needs (Table 1) [10,15].

The over reliance on systematic reviews (SRs) and RCTs as the "gold standard" for evidence is a limitation of EBP that causes the most objections. By placing SRs and RCTs on the apex of the hierarchy of evidence, the perceived value of other forms of evidence is undermined [10]. There are even questions about whether the results from RCTs are applicable at the individual level, since the analysis of results from RCTs is based on the comparison between the mean score of an experimental group and that of a control/placebo group [15]. One might argue that some in the experimental group that are actually worse off than some in the control group, and vice versa [15]. Even if there is evidence that supports the use of a certain intervention for treatment, there is still the question of how it will work for a particular patient [15]. Healing is, after all, a very individual experience.

More fundamentally, the emphasis on scientific research in EBP has been questioned from an epistemological point of view. While an in-depth discussion on the epistemological problems of EBP is beyond the scope of this writing, it is suffice to note that many disagree that scientific research is the only valid claim for knowledge [16–19]. Avis and Freshwater [20] argue that clinical experience derived from critical reflections can provide a sound basis for knowledge claims in EBP, but is often neglected in practice. Other authors also postulate that clinical intuition, which EBP seeks to eliminate from clinical decision-making, is an important aspect of clinical epidemiology that should be preserved [21–23]. According to Riley [24], basing knowledge solely on scientific research is the most damaging aspect of EBP, since it limits the diversity of ways of knowing and constrains the type of knowledge that can be considered as valid. This is the philosophical basis that underpins many of the criticisms of EBP listed in Table 1.

4. Reception of EBP in CAM

The rise of EBP in the field of conventional medicine over the last few decades also coincides with the increasing popularity of CAM in most Western nations, including USA, UK, and Australia [25]. The increasing use of CAM has prompted many EBP advocates to call for CAM to be scrutinised according to the same evidence-based standards as conventional medicine [26]. Such calls serve as a democratising force that can also assist CAM researchers and practitioners to gain a better understanding and further acceptance for their crafts [2]. An alternate view is that CAM cannot be truly or fully evidence-based, due to differences in philosophy and underlying theory of illnesses [3]. Hunter and Grant [4] have even described the call for EBP in CAM as a power struggle; a co-option by conventional medicine to subtly and irrevocably change the CAM profession, as well as to render CAM philosophy superfluous and irrelevant.

The strengths and limitations of EBP as discussed here can also be applied to CAM. The emphasis on RCTs as evidence in EBP is even more problematic for CAM since currently there is a shortage of well-designed RCTs for most CAM therapies. Many also argue that there exist inherent difficulties in study design due to dissimilarity in the healing ideology of CAM [2]. For instance, the study design of RCT attempts to minimise or exclude the impact of patient–practitioner relationship on the outcomes, whereas in many CAM therapies, patient–practitioner relationship is considered crucial to the intervention [27]. Nevertheless, there is an increasing number of high quality CAM RCTs being conducted [28], although many are still being rejected in reputable SRs, such as the Cochrane systematic reviews, due to "lack of evidence" or "insufficient evidence" [29]. In reality, there is simply not enough good quality RCTs conducted to prove their efficacy yet.

In spite of the objections to EBP by some CAM sectors, there is an increased acceptance of EBP by naturopathic practitioners in Australia. A survey of 479 naturopaths and Western herbalists in Australia found that 94% of study participants used results from RCTs to support their practices [30]. A qualitative study of 20 practising naturopaths in Australia also found that the respondents were generally supportive of the need for increased evidence for their therapies, despite having reservations over the perceived dogmatic nature EBP [5]. This is hardly surprising since naturopathy is a healing discipline that incorporates both traditional and scientific knowledge to optimise healing and promote health [31].

5. Naturopathy and scientific evidence

As a unique form of CAM, naturopathy is defined by its underlying holistic principles, rather than any individual modalities or therapies. The six holistic principles of naturopathy are the *healing power of nature, identify and treat the cause, treat the whole person,*