

The Confluence of Evidence-Based Practice and *Daubert* Within the Fields of Forensic Psychiatry and the Law

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Early in the 1990s, two separate and equally momentous events occurred, both of which would change the connection between forensic psychiatry and the law. *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1993)¹ and evidence-based practice (EBP) both emerged as elements that would stimulate assessment of the best available scientific evidence to be employed in reaching judicial decisions. Both emphasize that research methods supporting evidence should be critically appraised before findings can be extrapolated within the legal (*Daubert*) or the practice (EBP) context. In addition, both created a shift toward transparent procedures for answering scientific questions. Although these similarities seem compelling, both have existed essentially independent of each other. This special issue of the *Journal* will describe the decisive link between *Daubert* and EBP. The articles address the methods, procedures, tests, and interventions commonly used in forensic psychiatry. Experts in their respective fields address the application of EBP by focusing on the “conscientious, explicit and judicious use of current best evidence” (Ref. 2, p 71), to explore topics relevant to forensic psychiatry. The authors report their findings with special emphasis on the potential rate of error, exploration of the variances found in the overall results,

and the limits and boundaries of generalizing their findings.

Although both *Daubert* and EBP are well known within the field of forensic psychiatry, neither is without controversy and both remain largely misunderstood. *Daubert* may be one of the Supreme Court decisions best known by forensic psychiatrists, with numerous articles on the subject, but there are various opinions about the kinds of evidence that are admissible within the *Daubert* standard.^{3–6} Similarly, EBP has been adopted by many as the gold standard for practice, but it has also been criticized as counterintuitive, relying too much on randomized control trials,⁷ being too reductionist, promoting a cookbook approach, and ignoring the complexity and context in which evidence is used.

Daubert

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.*,¹ the U. S. Supreme Court held that the admissibility of scientific evidence depends on its scientific validity. *Daubert* established that courts should assess scientific evidence by evaluating the research methods supporting the evidence and the principles used to extrapolate data or conclusions from the research.⁵ The four factors introduced to assess scientific validity include: whether the theory or technique can be and has been tested; whether the theory or technique has been subjected to peer review and published; specification of the error or potential rate of error or existence of standards; and whether the theory or

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technique has been generally accepted within the scientific community. *Daubert's* validity test greatly expanded on the general acceptance standard of *Frye v. United States* (1923),⁸ which viewed expert testimony as admissible only once it had reached general acceptance in the particular field.

The 1994 Supreme Court of Canada's decision in *R. v. Mohan*⁹ set forth four factors to consider in the admissibility of expert opinion: relevance, necessity in assisting the trier of fact, absence of any exclusionary rule, and a properly qualified expert. In addition, it set out that any novel scientific theories or techniques would be subjected to special scrutiny to determine if they met the basic threshold of reliability. In a later case, *R. v. J.L.-J.* (2000),¹⁰ the Supreme Court of Canada explicitly adopted the reasoning of *Daubert* in addition to the four factors.

Evidence-Based Practice

The international Cochrane Collaboration was launched in 1993 to generate systematic reviews of randomized controlled clinical trials and to disseminate findings based on these results. By 1995, the British Medical Journal Group began publication of *Evidence-Based Medicine for Primary Care and Internal Medicine*.¹¹ However, most credit the term "evidence-based medicine" to Sackett and colleagues² based on their 1996 editorial in *BMJ*, where they suggested that clinical expertise should consider the best available external clinical evidence from systematic research in a "conscientious, explicit and judicious" manner (Ref. 2, p 71). Soon after, practice wisdom and client preferences were added to the EBM model, alongside scientific evidence.

Although it originated in the field of medicine, EBM was quickly adopted in the social sciences and human service disciplines including psychology, nursing, and social work, and it was renamed evidence-based practice to reflect this new context. Similar to EBM, EBP was defined by Gambrill¹² as "integrating individual practice expertise with the best available external evidence from systematic research, as well as considering the values and expectations of clients" (Ref. 12, p 346).

EBP is often confused with evidence-based guidelines, which usually include the production of guidelines, policy, and regulations to guide social work practice. Guidelines provide general overviews of practice, based on the synthesis of scientific evidence on a specific question or problem but then do not

integrate knowledge with practice wisdom, client preferences, and organizational factors, including consideration of environmental strengths and barriers, which may contribute to decision-making.¹³

Scientific research embraces many sources and types of evidence, as the most credible empirical evidence often depends on the type of research question developed at the onset of the evidence-based process. Scientific evidence also includes evidence synthesized from multiple studies to provide more compelling findings than evidence developed from a single study.¹⁴

The critical question concerning EBP is not whether evidence should play a role in forensic decision-making but how to establish this role efficiently and effectively.¹⁵ The most important reason for developing an EBP is to improve the quality of forensic decision-making by identifying and promoting methods and procedures that are efficient and effective, while discarding those that are ineffective and potentially harmful.¹⁶ EBP requires forensic psychiatrists to be balanced and neutral in regard to all methods in general, while being partial toward scientifically rigorous methods and procedures.

Links between EBP and Daubert

Daubert and EBP apply to all types of scientific knowledge and levels of evidence. Scientific knowledge can be derived from systematic reviews, randomized controlled trials (RCTs), qualitative studies, cohort studies, case-control studies, uncontrolled experiments, or a community of experts. Scientific evidence can further be differentiated by its quality, relevance, magnitude, precision, and reproducibility. The challenge in applying EBP within the *Daubert* standard involves determining the most appropriate methods to support particular scientific evidence and whether the selected methods are sufficiently valid and reliable to support the scientific evidence in court.⁵ Furthermore, if judges are to be gatekeepers to determine the relevance, appropriateness, reliability, and validity of scientific testimony, then it is incumbent on forensic psychiatrists in using an EBP approach to provide the evidence in a systematic, transparent, judicious, and ethics-based manner so that it can be weighed appropriately.

With the focus on the best available evidence, the practitioner's experience and expertise may be the best evidence for a particular problem or question, especially in an emerging area with little scientific

evidence to support practice wisdom. Any lack of scientific evidence should be articulated in a clear and transparent process so that others are appropriately informed of the methods used to draw conclusions and their implications for the strengths and limitations of the evidence presented. It is both appropriate and ethical to base conclusions solely on practice wisdom, as long as it is articulated and others are adequately informed of the implications and boundaries of knowledge derived from these experiences.

Within the best available evidence framework, *Daubert* seems to endorse EBP because of its focus on the most valid methods of collecting evidence for a particular problem or question and its emphasis on a clear and transparent appraisal process for assessing the scientific validity of the evidence. EBP promotes the collection, screening, appraisal, interpretation, and integration of valid, important, and applicable evidence generally accepted within the field of practice.¹⁷ EBP includes different types of evidence and integrates scientific research with practice wisdom and client preferences and values. Instead of endorsing a particular method, the individual or group using EBP bears the onus of considering carefully and systematically the various methods, procedures, tests, and interventions common to forensic psychiatry.

A Step Toward Achieving Transparency of Methods

As stated earlier, this special issue of the *Journal* regarding EBP and forensic psychiatry is a step toward making a decisive link between EBP and *Daubert*. The articles focus on providing transparency in the methods of assessing evidence, with careful considerations made to the strengths and limitations of the evidence in the areas common to forensic psychiatry: competency measures, assessment of sex offenders, neuroscience, diversion initiatives, and the treatment of anger and aggression.

Rogers and Johansson-Love¹⁸ address the link between EBP and *Daubert* standards by examining three published competency measures: the MacArthur Competence Assessment Tool-Criminal Adjudication (MacCAT-CA), the Evaluation of Competency to Stand Trial-Revised (ECST-R), and the Competence Assessment for Standing Trial for Defendants with Mental Retardation (CAST-MR). Using the *Daubert* guidelines as a framework, they examined each competency measure for its relevance to the standard set forth in *Dusky v. United States*

(1960),¹⁹ and its error and classification rates. Instead of further polarizing the debate about the scientific merit of these measures, the authors provide a cogent argument for the inclusion of multiple types of evidence to be considered.

Frank Siroich²⁰ reviews the current evidence regarding the efficacy of diversion initiatives, which are used to reduce recidivism and incarceration among adults with serious mental illness who have had justice involvement. Michael Saini²¹ applies the same rigorous academic scrutiny to a meta-analysis of the treatment of anger and aggression and focuses on both absolute and related effects of outcomes to provide a more complete picture of the variances found among the studies.

J. Arturo Silva²² applies his usual erudition to the application of the rapidly evolving field of neuroscience, which is increasingly becoming relevant to forensic psychiatry.

The remaining articles also deal with empirical evidence in various ways. Phenix and Sreenivasan²³ address the limited applicability of actual risk models to mentally retarded sex offenders. Brodsky *et al.*²⁴ report the results of an investigation of the relationship between expert witness likeability and juror judgments of credibility and sentencing. In the editorial, Michael Welner²⁵ provides an interesting example of seeking an evidence-based solution to a forensic dilemma.

Moving Forward

Adopting the principles of EBP within forensic psychiatry has the advantage of encouraging clarity over obscurity and providing the platform to question untested claims by requiring transparency of the methods used to create knowledge. EBP provides a process for effective decision-making to ensure that knowledge creation is guided by the best available evidence and that the reasons for the decisions are explicit. Applying the principles of EBP means conscientiously and judiciously appraising the evidence when coming to conclusions. EBP offers the forensic psychiatrist a philosophy that is compatible with obligations described in professional codes of ethics (e.g., obligations for informed consent) as well as integrating evidentiary, ethical, and practical concerns.²⁶ EBP also provides a framework for the integration and inclusion of the individual patient's input with the practitioner's expertise. By considering scientific knowledge, practice wisdom, and patient

preferences, forensic psychiatrists are better able to inform the courts about the overall validity of evidence, the precision and power of estimates, and the applicability and relevance of the evidence.

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