

Meeting the needs of evidence-based practice in family therapy: developing the scientist-practitioner model

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Effective models of clinical training have been and continue to be a primary topic of discussion in the field of family therapy, particularly given the needs of evidence-based practice. This article outlines the major historical and contemporary struggles of one such model of clinical training and practice: the scientist-practitioner model. Throughout the article, the principles of the scientist-practitioner model and evidence-based practices are compared and contrasted. Suggestions for overcoming the contemporary challenges faced by the scientist-practitioner in a family therapy practice or in an educational environment are discussed.

Introduction: the needs of evidence-based practice

A central development in the evolution of practice training and of psychotherapy has been the development of evidence-based treatments. Major changes in healthcare funding, as well as legal and political factors, have been influencing the mental health field towards the adoption of empirically validated treatments. These empirically supported treatments have become increasingly important in managed care in the United States and the National Health Service in the United Kingdom (Lask, 2001).

One major impetus in the drive towards the adoption of these types of treatments has been the sky-rocketing costs of providing all forms of healthcare, and mental healthcare in particular (Crane, 1995). The hope is that these forms of treatment, that have been shown to be effective with specific problems, in specific populations and in specific settings, will decrease the cost of care, and increase its speed and effectiveness.

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Increasingly evidence-based treatments are advocated by professionals within the healthcare fields. From family therapy (Carr, 2000b), to psychiatry (Lindqvist and Skipwork, 2000), to insurance companies (Jacobson and Gurman, 1995), to nursing (McPheeters and Lohr, 1998), there are representatives within each field who request and even require that practitioners utilize evidence-based treatments.

Similar to the appeals from healthcare professionals, governments in numerous countries such as the United Kingdom (Carr, 2000a, 2000b), Canada (Cameron *et al.*, 1999), Australia (Mayer and Piterman, 1999) and the United States are promoting utilization of evidence-based practice and treatments. Further, some of the most influential family therapy journals such as *Journal of Family Therapy*, *Journal of Marital and Family Therapy*, and the *Australian and New Zealand Journal of Family Therapy* have published articles supporting evidence-based practice and treatment.

In the United States, conferences of the American Association for Marriage and Family Therapy have begun to emphasize evidence-based systemic treatments. In fact, the theme for the AAMFT conference in 2001 was 'Scientific art: evidence based therapy'. Likewise, evidence-based treatments have been the focus of a number of conferences in the United Kingdom (Lask, 2001).

The idea of implementing evidence-based practices exists across professions, countries and professional journals. The main idea is to produce and implement treatments that effectively deal with the problems which they claim to treat. The effectiveness of treatments is determined by empirical standards. Most frequently these include controlled trials or comparative group outcome studies, rather than reports of single case studies or single group outcomes (Carr, 2000b).

Fortunately, there are specific systems-based treatments for individual, couple, marital and family problems that have been found to be effective. There are evidence-based treatments for psychosexual, anxiety, mood, psychotic, psychosomatic and eating disorders; couple and marital violence; infidelity; divorce; child abuse and neglect; conduct and childhood emotional problems; alcohol abuse; and chronic pain (e.g. Alexander *et al.*, 1994; Jacobson and Gurman, 1995; Sandberg *et al.*, 1997; Carr, 2000a, 2000b).

Considering the abundance of evidence-based treatments available for family therapists to use, it seems odd that there are so many calls for therapists to begin to use such treatments. It may be that

there remains a perception that evidence-based treatments which rely on treatment manuals may constrain clinicians' behaviour. It has been argued that reliance on empirically supported treatments can lead one to miss the unique nature of each case. Further, resistance to the use of treatment manuals may well begin with faculty advisers and supervisors who advocate using treatments with little or no empirical support (Davison, 1998).

It seems that one of the main ways to promote the utility of using empirically supported treatments would be during a clinician's formative years of training. For example, among the proposals for training mental health professionals in the United Kingdom, Lambert and Gournay (1999) suggest including training targeted at implementing evidence-based treatments such as medication management, cognitive-behaviour therapy and family interventions. This would ensure that mental health professionals are competent in these proven approaches. In addition to training student therapists how to incorporate evidence-based treatments into their practice, Wilson *et al.* (1996) recommend that practising family therapists should remain 'up to date' on research findings and apply these to their clinical practice. So which model of training should we use? We would suggest the scientist-practitioner model.

What is the scientist-practitioner model?

The scientist-practitioner model has been used to describe a type of mental health graduate training programme (Crane *et al.*, in press), as well as a type of behavioural healthcare provider (Hayes *et al.*, 1999), both of which focus on using and producing empirically supported treatments. Whether referring to behavioural health graduate students or established professionals, those who advocate the scientist-practitioner model propose joining two historically separate roles: the scientist and the practitioner.

For example, Crane *et al.* (in press) suggest that within the scientist-practitioner model family therapy trainees should be immersed in both research and clinical skills. Likewise, Hayes *et al.* (1999) argue that behavioural healthcare providers following the scientist-practitioner model have essentially three roles: consumer of new research, empirical evaluator of personal practice, and original researcher who reports findings to the general scientific and practising communities. Similarly, Peterson (2000) suggests that the three major functions of behavioural healthcare professionals are

diagnosis, treatment and research. Within this model, the practitioner should be actively engaged in scientific inquiries and the scientist should be involved in the practice of providing behavioural healthcare.

Whether referring to graduate training programmes or mental healthcare providers, those advocating the scientist-practitioner model support an integrative approach to research and practice within behavioural healthcare. On the surface, the scientist-practitioner training model seems to be a wonderful idea, namely to train students in the intricacies of being both a scientist and a practitioner. This should produce practitioners who are involved in research and scientists who are involved in practice, resulting in a wealth of information shared between practitioners and scientists that would benefit students, professionals and clients. However, this theory assumes a reciprocal relationship between science and clinical work that may be lacking when applied to actual academic and clinical settings (Stricker, 1997).

Hayes *et al.* (1999) suggest five reasons why it is important to combine the roles of scientist and practitioner. First, a student trained as both a clinician and a researcher should be more able to engage in research, training or both, without becoming too narrow-minded. Second, a greater emphasis on empirically supported treatments would increase the substantiated knowledge available to behavioural health professionals. Third, there appear to be sufficient numbers of students desiring to become clinicians. Those overseeing training programmes should be encouraged to admit students likely to be both successful clinicians and researchers. Fourth, researchers with direct contact and knowledge of clinical situations would be more likely to know of clinically relevant research topics. Fifth, effective healthcare systems would be likely to provide funding opportunities for further research projects.

Development of the scientist-practitioner model

The scientist-practitioner model initially emerged from clinical psychology. In 1949, clinical academics, researchers and United States government representatives met in Boulder, Colorado to discuss more effective ways of training clinical psychologists. Even before the Boulder conference, an 'accepting atmosphere' ensured that the scientist-practitioner model would be developed (Drabick

and Goldfried, 2000). As a result it was determined that combining both clinical and research training should be adopted as the preferred model for educating clinicians. Today, it is recognized that, despite disagreements on both sides of the scientist-practitioner debate, the definition of clinical psychology as a science-based profession remains the legacy of the Boulder conference (Peterson, 2000).

From that beginning, the scientist-practitioner model, or 'Boulder model' as it has become known, has become a hotly debated topic within academic clinical psychology programmes and, more recently, in family therapy doctoral programmes. Currently, within the fields of clinical psychology and family therapy, the scientist-practitioner model continues, in large part, to be talked of as a target, rather than a full accepted model for training and practice. We will now consider this model within the professions of clinical psychology and family therapy.

Clinical psychology

The field of clinical psychology has been influenced over the past five decades by a variety of social, economic and political forces (Drabick and Goldfried, 2000). One powerful influence has been those who support the scientist-practitioner model as the preferred model for clinical psychology training. The model adopted in 1949 was officially reaffirmed as the preferred method of training in 1958 and 1965 at clinical psychology conferences in the USA. However, the implementation of this model has not been without its difficulties. Some faculty complained of inadequate direction in implementing such a model. Difficulties in implementation also seemed to produce a 'schism' between the scientist and practitioner aspects of the model (Drabick and Goldfried, 2000). Even leading scientist-practitioner universities (e.g. Columbia) admitted failure in integrating both clinical and research training (Hayes *et al.*, 1999).

Interestingly, it is changes in the healthcare industries in the United States and Europe that redirected attention to the potential benefits of the scientist-practitioner model. In the 1990s, the introduction of 'managed care' in the United States focused on limited, cost-effective care. Suddenly, in order to receive insurance payments, the practitioner was asked to demonstrate effective and efficient interventions. Clinical psychology took note and again

placed more of an emphasis on training graduate students as scientist-practitioners (Hayes *et al.*, 1999).

Wegener *et al.* (2000) suggest that the Boulder model still remains the most appropriate model for training. In fact, there seems to be some movement in this regard, and a recent study found a number of psychologists who identified themselves as scientist-practitioners (Lopez *et al.*, 1999). Furthermore, changes in the financing of healthcare have created the need for large, group practices capable of delivering comprehensive services. The demands for effective and efficient services require such groups to engage in ongoing data collection. As a result, it would appear that the Boulder model would fit nicely with these types of integrated delivery systems.

Perhaps not surprisingly, the scientist-practitioner model has its detractors. For example, Nathan (2000) argues that, contrary to the ideals of the Boulder model, few clinicians actually read research, much less undertake any significant data collection. Likewise, Hayes *et al.* (1999) suggest that not only are most practitioners failing to produce research, but they are even failing to be consumers of research. Attempts to explain this phenomenon have entered around the difference between results which may be statistically significant for researchers, but fail to be 'clinically significant' for therapists (Jacobson *et al.*, 1984). In other words, data which one may find important from a research standpoint may not be at all important when working with clients.

Family therapy

In comparison to clinical psychology, family therapy has been slower to address the scientist-practitioner model. Possibly because the scientist-practitioner emerged from clinical psychology, family therapy did not embrace it with as much enthusiasm. In attempting to explain family therapy's slow embrace of the Boulder model, Crane *et al.* (in press, p. 8) wrote:

Family therapy began as a maverick discipline, which was 'oppositionally defiant' to the prevailing psychotherapeutic Zeitgeist. Perhaps because they were rebels, many of the discipline's founders were strong, active personalities and powerful salespersons. Schools of family therapy were built around these compelling figures. The culture of the field has always depended far more upon intuitive appeal than on solid research evidence. At least until the early to mid 80's the field could not unfairly be described as a coterie of competing religions.

Clearly, the Boulder model has not been adopted by family therapy to any noticeable degree, as family therapists have begun to discuss it only recently. In fact, the first known public discussion about the possibility of adopting this model of training originated in the 1999 research conference sponsored by the American Association for Marriage and Family Therapy (e.g. Crane, 1999; Wampler, 1999). At this conference, questions related to the adoption of this model for training were raised and suggestions for incorporating the model were presented.

While there is some evidence that the scientist-practitioner model is at the forefront and beginning to be more widely discussed within family therapy, it is also clear that the model is still struggling to gain wide acceptance. For example, an examination of family therapy doctoral programmes did not locate any course descriptions which even mentioned the term 'Scientist-Practitioner', nor were there any programmes which had actually adopted and were teaching its precepts (Crane *et al.*, in press).

Whether or not any family therapy training programmes are based on the model, it seems clear that family therapy doctoral students are not receiving much exposure to this model (Crane *et al.*, in press). If doctoral students are failing to receive appropriate training within the scientist-practitioner model, it seems unlikely that as family therapy professionals, these same individuals would choose to practise the model. Considering the lack of education about the scientist-practitioner model in family therapy doctoral programmes, it is not surprising that the model has yet to find wide acceptance within the field. For instance, Crane *et al.* (in press) note that family therapy practitioners have been largely unsuccessful in their attempts to connect research and practice, despite repeated calls for the need to bridge the two.

Critiques of the scientist-practitioner model

Up to this point, the evidence presented has supported the idea of implementing the scientist-practitioner model; however, a review of this model would be incomplete without acknowledging existing critiques. There are those who believe that the model is flawed on two fronts. First, that the model is a poor fit to current clinical practise; second, that the model itself is empirically unfounded.

The foremost criticism of this model has been expressed by MacEachron and Gustavsson (1997). They argued that the traditional

scientist-practitioner model fits academic training settings better than it does the world of practice. In addition, Albee (2000) suggested that the fit between behavioural healthcare and the Boulder model is poor in that the Boulder model contains a 'fatal' flaw: specifically, its over-reliance on and acceptance of the medical model. While clearly accepting and advocating the utility of the Boulder model, Wegener *et al.*, (2000) suggest that the Boulder model has a poor fit within clinical psychology and needs to be revised, especially in the context of the new healthcare system. If the model provides a poor fit in professional settings, this would help to explain the lack of research seen in behavioural healthcare settings.

Ironically, another criticism of the scientist-practitioner model suggests that there is a lack of empirical evidence to support the model. For example, Thomas and Chan (2000) strongly advocate the viewpoint that there are many acceptable paths to becoming a psychologist and that no single approach has been demonstrated to be more effective than another in training. According to Thomas and Chan, the research literature has yet to demonstrate widespread empirical support for the model or for its usage by practitioners. Other authors argue that further research should compare this approach with other supervision and teaching methods, and that its effects on client outcomes should be investigated (Meier, 1999).

Evidence-based practice and the scientist-practitioner model

Evidence-based practice and the scientist-practitioner model have many similar ideas. For example, both value the role of research in clinical practice. From both perspectives, clinicians should have knowledge of, maintain skills for and hold an open attitude towards implementing research findings into their personal practice. However, neither way of integrating research and clinical practice has been widely accepted in the family therapy profession. Resistance from established clinicians, faculty and students seems to have focused around loyalty to treatments in which there is little existing empirical support. As a consequence, advocates for both points of view argue that one of the most logical points of intervention to reduce such professional resistance is within training programmes. Intervening early in training programmes is one way to potentially increase the overall acceptance of either

evidence-based treatments or the scientist-practitioner model of training.

While there are similarities between the scientist-practitioner model and evidence-based practice, they are complementary but not identical. The clearest difference between the approaches lies in the roles of the practising clinician. In the scientist-practitioner model, the clinician is expected to assume three interrelated roles: clinician, consumer of research and producer of research. In contrast, the role of the clinician from an evidence-based perspective is that of implementing specific treatments and consuming current research to stay up to date. There is no expectation that clinicians are also expected to be producers of research.

Logically, the scientist-practitioner model would seem to be an excellent answer for how to train clinicians to appreciate and use evidenced-based treatments. It offers a collaborative integration of research and practice. Further, the clinician would have a greater exposure to family therapy research, as the researcher would have a 'stake' in effective practice. Both sides could be seen as a team in the quest for the best outcomes for clients.

However, it may be more realistic to view, at least in the short term, integrating research and practice as stages of development. First, training programmes should produce quality therapists who are able to implement current evidence-based treatments with clients. Second, trainees could be taught to be discerning consumers of research. These students would be equipped with the necessary skills to critique new research and then incorporate new evidence-based ideas into their clinical practice. Third, therapists could learn to collect data from their clients during their training programmes. This would model research methods that could be employed within their future practice. Finally, trainees could learn the necessary skills to become 'translators' of research from basic research to applications for practitioners in the field. Perhaps this could best be accomplished with an increased emphasis on the integration of research and practice in family therapy training programmes.

Clearly, the field of family therapy, whether in the United Kingdom or the United States, has much work to do within even the first stage of integrating research and practice. As noted above, resistance to evidence-based treatments has come from clinicians, faculty and students. Until the resistance to empirically based treatments is resolved, it is doubtful that much can be done to increase the emphasis on integrating research into clinical training or the use of

evidence-based treatments by clinicians. We need to do a better job of explaining, arguing or defending our belief that research and clinical practice can and should be integrated. The main goal is to convince our colleagues of the necessity of research in our field.

Conclusion

Clearly, the history of the scientist-practitioner model suggests that implementation as it was originally intended has been unsuccessful; yet the model has much to offer the family therapy field. Ideally, clinical training programmes should be the first place to begin implementing the precepts of this model. Based on the history and current efforts in family therapy, four primary suggestions are relevant. First, family therapy training programmes are well placed to conduct research on families. In many ways they represent the academic base for the profession. Faculty and students in these programmes are ideally positioned to conduct family therapy research.

Second, to begin implementing the scientist-practitioner model within the field of family therapy, not only should students be trained as researchers, but there should also be an effort to identify and use family therapists within the community who are interested in conducting research. Collaborative research relationships between practitioner, researcher and students could be formed. This may also lead to research projects with practical and applied foci that may be more beneficial to practitioners.

Finally, it is necessary to conduct research demonstrating family therapy as efficient and effective. With empirical support for family therapy, the field's standing as a credible mode of treatment will become more concrete. If the field's standing is more credible, family therapists would likely see an increase in government funding of research projects and the use of family therapy services by public healthcare and private insurance systems.

Acknowledgements

The authors wish to thank David Law and Cathy Weber for their thoughtful reviews of the manuscript.

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