SCIENCE-BASED PRACTICE AND THE DANGERS OF OVERREACH: ESSENTIAL CONCEPTS AND FUTURE DIRECTIONS IN EVIDENCE-INFORMED PRACTICE

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What scientific evidence should we consider in providing services to families? This has become a heated debate, potentially impacting both social policy and intervention planning for families. Overreach has been common in this debate and can seriously harm families. While recognizing the valuable information that randomly-controlled trials may provide, the authors identify situations in which other scientific information may be more reliable, relevant and helpful for the complex families we serve. They discuss the essential elements of evidence-informed services, the scope of evidence that may be relevant, and the importance of exercising clinically and scientifically informed inference in planning services.

Key Points for the Family Law Community

- Evidence informed practice requires broad knowledge and disciplined application of scientific findings relevant to separated families and children, adapted to the needs of individual families.
- There is no single form of scientific inquiry that will tell us all we need to know about court involved families; a broad range of scientific information is needed.
- Oversimplified descriptions of social science are likely to be misleading and can cause serious harm to families and children.
- All court-involved mental health professionals should be able to explain the scientific and clinical bases for their opinions, procedures, recommendations, and interventions.
- As a profession, we need to clarify categories of scientific evidence and provide better tools to judicial officers for using social science evidence.

Keywords: *Court-Involved Families; Evidence-Informed Intervention; Science-Based Practice.*

Billy and Olivia Smith are the children of Monique Perez and David Smith. Monique is of Mexican descent and David is black. They are before the court on a motion to change or prohibit parts of their court-ordered family therapy plan. Billy, age 6, has been exhibiting disruptive behaviors at school and there are concerns that he suffers from ADHD. Olivia, age 13, has been depressed and exhibits periodic episodes of anxiety as well. The parents are in conflict regarding both issues. The children's medical providers, including the providers of an evidence-based behavioral parent training class, have found the parents to be exceedingly difficult to work with, which is disrupting their ability to evaluate and treat the children. The family therapist has constructed a plan in which both children will receive evaluations and appropriate treatment from their medical providers, and the family therapist will work with the parents to reduce conflict and the children to strengthen coping skills. She will also serve as a resource to the medical providers when the parents' child custody conflict impedes their work.

David is before the court requesting that the children's assessment and treatment be delayed and that services be provided only to the parents, as he has been told that randomly controlled studies have shown that intervention with children is often unnecessary if the parents can reduce conflict,

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and he believes that the children would have no problems if Monique would support his relationship with them. He presents an article suggesting that evidence-informed intervention can be just as bad as treatments known to cause harm and that there is no randomly controlled study showing that the treatment plan created by the therapist will be effective. The judge, concerned by the suggestion that his decree could cause harm, orders that services to the children stop until the parties have completed 6 months of coparenting counseling.

Four months later, the case is back in front of the court. Billy has been involved in a fight at school and has been suspended. The school is threatening to expel him if there is another incident, and his teacher has strongly recommended that he be placed on medication for ADHD. Olivia is having "anxiety attacks" with increasing frequency, and is withdrawing from all potentially stressful situations, including parenting transitions. The parents, of course, have starkly different interpretations of the children's behavior and each is requesting strong action from the court at the other parent's expense. David believes that Billy is being treated differently because of his race. The court reinstates permission for the children to receive services for these problems, but Olivia has developed entrenched dysfunctional behaviors and there is little time to fully evaluate Billy before a decision must be made about his ability to remain in school.

This scenario illustrates both the enormous complexity of court-involved families, and the dangers of either neglecting available science or adopting too-rigid rules about what research evidence to consider and how to responsibly apply it in these challenging cases. Debates about what findings are worthy of consideration and how applicable they are to specific families have become central to both professional debates and policy decisions on issues that impact court-involved families. As described below, the manner in which we engage these debates and use current science may have profound impacts on both the profession and the families we serve. In this article, we identify some central elements of *evidence-informed intervention*, in relation to other relevant literature and the complexities of actual cases, suggesting some essential concepts and future directions, as well.

It is widely accepted that there are a variety of research and treatment evaluation methods that can help us better understand psychological issues and to provide effective treatment. It is also commonly accepted that randomly controlled trials (hereafter RCTs) can provide the highest quality of evidence about specific variables, including treatment interventions, within the limits of the conditions in that study. RCTs have made outstanding contributions to our knowledge of many issues including, for example, effective vs. ineffective treatments for trauma and other mental disorders (Drozd, Saini, & Vellucci-Cook, 2019). As the other authors in this section exemplify, we give due weight and appreciation to RCTs as valuable information to consider in developing intervention plans, but also amplify the importance of considering the complexity of these cases, the scope of evidence that may be relevant, and the importance of *clinically and scientifically informed inference* (Greenberg & Lebow, 2016) in determining how to best apply such evidence while combining and adapting interventions to the needs of an individual family. In this article, we draw on the other papers in this section to demonstrate the richness of data that can be gathered and used effectively in treatment planning, enhancing the relevance of both RCTs and other forms of research and intervention.

Some professionals addressing controversial issues in our specialty have asserted that the absence of a particular kind of evidence for an intervention program or family dynamic equates to there being no evidence whatsoever supporting the concept or practice. Overreach has occurred in relation to issues of resist-refuse dynamics or alienation, arguments about parenting plans for infants, and many other issues. Some have adopted very narrow definitions of what evidence can be considered relevant, rejecting or refusing to consider even strong findings from related specialties that may be quite applicable to the families we serve or presenting one-sided interpretations on disputed issues (Harman & Lorandos, 2020; Lilienfeld, Ritschel, Lynn, Cautin, & Latzman, 2014; Mercer, 2019; Milchman, Geffner, & Meier, 2020).

Some practitioners continue to engage in practices that are unsupported by research and have even been demonstrated to cause harmful (iatrogenic) effects. For example, a therapist who blurs her role with that of an evaluator, engages with only one parent in a divorcing family, and relies on

interpretation of a child's sand play and projective drawings to diagnose child sexual abuse is at risk of causing considerable harm to the family. This therapist is engaging in practices that are inconsistent with current science (Allen & Tussey, 2012), which could in fact cause harm. This example also illustrates the enormous difference between evidence-informed and "intuitive" practice. A child's therapist who has not studied the research may find it "intuitive" to believe that a child's behavior cannot be affected if the therapist engages only with one parent, and may find it intuitive to believe that the child's drawings will reliably demonstrate whether the child has been sexually abused. This would *not* be considered evidence-informed practice and we would strongly oppose it.

When absolutist, overly broad, overly narrow, or inaccurate representations of scientific research are used to justify case interventions or policy, the result is likely to be unresponsive to the individual needs of families and could even cause substantial harm. This can occur when a mental health professional engages in iatrogenic (harmful) procedures, and can also occur when a researcher overstates the implications of a research finding and its relevance to policy or intervention planning.

For example, the case scenario at the beginning of the article illustrates the dangers of oversimplification, overreach, and misapplication of research. With respect to the claims being presented by the father in this case, it is indeed true that some research studies on prevention programs have found that there was no value added by providing direct services to children (O'Hara et al., this issue). Arguably, however, that study was attempting to address different issues, and a different population, than appear in our hypothetical family. In addition, other studies demonstrate that children who have suffered adverse child experiences (Felitti et al., 1998; Sciaraffa, Zeanah, & Zeanah, 2018; Zeanah & Sonuga-Barke, 2016), including parental separation and exposure to parental conflict, are at risk for developing developmental, behavioral, emotional, and even physical disorders. Many have difficulty developing effective coping abilities (O'Hara, Sandler, Wolchik, & Tein, 2019). Moreover, evidence-based approaches are available, or adaptable, for the types of problems exhibited by the children in this scenario, such as possible ADHD, depression, and anxiety (Division 53 of the American Psychological Association, 2020; Higa-McMillan, Francis, Rith-Najarian, & Chorpita, 2016; Society of Clinical Child and Adolescent Psychology, n.d.; Sullivan & Miklowitz, 2010). Based on both clinical experience and relevant research, we know that many of the issues we encounter in these complex cases are more effectively treated when identified and addressed early (Colizzi, Lasalvia, & Ruggeri, 2020).

It is also true that no RCT would be available for the integrated treatment plan outlined in this scenario, as it includes a combination of scientifically informed services. Nevertheless, evaluated in the context of the family's treatment plan (which is what the judge is deciding about), we would argue that there is considerably more scientific evidence in support of the treatment plan than in support of the suggestion that all services to the children be stopped. It is not uncommon to see advocates present biased statements about what evidence is worthy of consideration, which can lead to confusion and frustration among the judicial officers who are tasked with making difficult decisions in limited time (Altobelli, 2021; Moss, 2021; Walker, 2021). In the hypothetical case above, overly broad statements about these issues could lead to harm by delaying treatment and allowing the situation and the children's condition to deteriorate further – particularly tragic in this hypothetical situation given the availability of related and relevant research and evidence-based interventions.

This is not to suggest that services should be carelessly chosen or that science should be ignored. On the contrary, we believe that treatment providers should be able to explain the psychological science and clinical expertise underlying the approaches they use. In addition, we expect providers to identify behavioral goals that can be easily understood by other professionals, to be able to illustrate the connections between those goals and the services they provide, and to identify progress (or lack of progress) toward those goals. That being said, we believe that experts, evaluators, researchers, and advocates should be held to the same standards: required to justify the methods they use, the statements they make, and the applicability of their statements to actual families. In the next section of this paper, we underscore some central principles for both considering and applying arguments about what science is applicable, the scope of science-based practice, and how professionals can use our combined expertise to both promote healthy policy and assist families.

I. DEFINITIONS AND INNOVATIVE APPLICATION OF SCIENCE

In addressing commonalities and perspectives on science-based practice, a common language and careful definitions are important. The American Psychological Association (APA, 2021) defines evidence-based practice as, "the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences". Of note, this definition refers to the best available research *and* clinical expertise. It does not specifically require RCT evidence to support a treatment plan, let alone an integrated family therapy plan, to be considered science-based practice (APA, 2021; Davis & Sexton, 2021; Sexton et al., 2011). Sackett (1997), one of the originators of evidence-based medicine, defines it as "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients" (p. 3). He adds, "Good doctors use both individual clinical expertise and the best available external evidence, and neither alone is enough. Without clinical expertise, practice risks becoming tyrannized by external evidence, for even excellent external evidence may be inapplicable to or inappropriate for an individual patient" (Sackett, 1997, p. 3). The National Association of Social Workers also explicitly notes that evidence-based practice requires both knowledge of research and the ability to apply and adapt it based on clinical experience, ethics, and the clients' circumstances, culture, and preferences (National Association of Social Workers, 2021). They also note that qualitative evidence may enhance the utility of other research evidence, as several authors in this volume also describe (Davis & Sexton, 2021; Harris-Britt, Paces-Wiles, & Max, 2021; Pruett, Greenberg, & Holtzworth-Munroe, 2021).

As consistent with Davis and Sexton (2021) and Sexton et al. (2011), we have used the term *evidence-based practice* to describe interventions that have been subject to randomly controlled trials, and *evidence-informed practice* to describe the conscientious search for, and use of, the best available evidence to guide services, adapted to clients' circumstances, needs, problems, and resources and utilizing all types of scientific information to guide intervention. As described above, this is a more restrictive definition of evidence-based practice than many professionals use. In our view, evidence-based and evidence-informed approaches complement one another, and each is vital to understanding and serving clients well. The term *science-based practice* (Pruett, introduction, 2021) may be seen as inclusive of both of these high-level approaches using and applying scientific information.

II. THE ENORMOUS APPEAL – AND DANGER – OF OVERSIMPLIFIED RULES

Most family law professionals wish that we had clear evidence about which families would benefit from which interventions, and exemplary models for adapting services to different settings and specific families. Families in crisis often present with multiple issues – some related to the parental separation and custody conflict, others reflecting a combination of clinical problems complicated by high conflict divorce dynamics, parenting concerns and myriad other individual or family factors that impact how we deliver effective treatment (i.e., educational level, culture, religion, economics, community issues). RTCs that measure a limited number of variables are often of limited help in these real-world treatment planning scenarios. Many sources of science-based information must be considered.

Simplified decision rules are enormously appealing. Suggesting that courts or other professionals routinely weight one type of evidence over all others reduces the amount of data that must be consumed and understood, appears to provide an easily understandable path to solutions and may reduce the felt obligation to even engage complex issues. An oversimplified rule such as "give priority to information from RCTs" can also be easily distorted, misunderstood, or used to imply that other types of information or science are too unreliable to be considered. Oversimplified rules can also result in categories of evidence or practice being blurred, such that many concepts and approaches that are based on available science, but have not been subject to an RCT, are conflated

with approaches that do not rely on available science, or with practices that are iatrogenic (i.e., likely to cause harm). For example, Rudd, Holtzworth-Munroe, Reyome, Applegate, and D'Onofrio (2015) posit a contrast between "evidence-based" and "intuitive" approaches, even going so far as to suggest that families not receive services that have not been empirically demonstrated to be successful (i.e., via an RCT). This obscures a number of scientifically-based treatment planning procedures, such as evidence-informed intervention, that are considerably more than "intuitive" in their approach and, potentially, more inclusive of a range of scientific and clinical information. Holtzworth-Monroe (introduction, 2021) also suggests that there are some approaches with a scientific basis, as well as those not based on science, that can and even have caused harm. Since she is not using established definitions for evidence informed intervention it is difficult to precisely know to what she is referring. Nevertheless, such a broad and far reaching assertion could be used to seriously undermine legitimate scientifically based interventions.

Blurring of categories that are in fact distinct would appear to create a two category system in which information derived from RCTs is "good" and should be heavily relied upon, while all other categories of evidence are lumped together into a group that is to be viewed as less valuable and potentially even harmful (Sandler et al., 2016). This may be useful to an advocate (either in a case or on a social policy issue) who wishes to limit the range of information that the reader or judicial officer considers, in support of the advocate's overall position, but does not fairly represent either current science or current scholarships on these issues.[1] It certainly offers the rhetorical appeal of simplicity and, as Sandler et al. (2016) noted, the most rhetorically pleasing argument may not be the one that most accurately represents social science. In this case the result is decidedly misleading since, as exemplified both in our case example and in the articles in this section, automatic weighting of RCT results over other types of science-based practice does not necessarily lead to better or more reliable, relevant, or helpful information.

There are practical and professional consequences to such oversimplification, as it presents distorted information to decision-makers. The reality is that there is more than one form of scientific information. Coupling such artificial dichotomies with warnings of potential harm can mislead professionals into bad decisions that harm families. Oversimplification also provides a handy excuse for those who prefer not to engage complex issues at all, reversing years of efforts to improve professional practice. For example, it is a common complaint among professionals that parenting plan evaluators too frequently fail to include enough detail, or relevant science-based information, either in considering the effectiveness of past treatment or recommending future services for the family. Many current guidelines for child custody evaluation do not even require evaluators to have a working knowledge of available treatment modalities, the levels of science-based practice, or relevant research. This can result in harm to families if, for example, a parent who has received inappropriate therapy is considered to be a "lost cause" because he did not adequately progress in an ill-formed treatment plan – or if the plan recommended by an evaluator is not based on current knowledge in the field. Many evaluators are now embracing the need for knowledge about effective intervention, just as they are expected to be knowledgeable on issues of child development, family violence, the impact of parental conflict and other issues. But just as it is unfortunately common to see poor quality therapy in the field, it is also not uncommon to see experts overreach with regard to what is and is not known in this area. Broad statements such as, "there's no proof that any of this stuff works," without necessarily considering either the details of the intervention or the type of harm that could be caused by doing nothing, are both misleading and potentially harmful to families. Conversely, professionals may cause harm suggesting that it does not really matter what approach is used with the family because too little is known about any of them. In many cases, this is an inaccurate or even dangerous suggestion. This is why we believe that all professionals should be able to justify their opinions and approaches with current science.

Attorneys and judicial officers will find it important to question what the evaluator considered in either assessing prior treatment progress or recommending future treatment, or how much the evaluator knew about the science underlying interventions. Their ability to understand these issues, and

to effectively cross-examine these professionals will be impaired if they have been misled into believing that there is no relevant science without an RCT.

One must also be careful in overgeneralizing about what does not work. If an RCT finds that a coparenting program did not achieve its intended goals, is it appropriate to use that result to cast doubt on all coparenting programs? Or should we be looking at how the program was designed, how well the program fit with the goals and target populations, and whether the participants in the program matched those in the case we are dealing with?

This would be a particularly important element of analysis for our example case, since there is a fair amount of research supporting behavioral parent training programs for children with suspected ADHD (Evans, Owens, & Bunford, 2014), and some well-supported family interventions for adolescents with depression, anxiety, and bipolar disorders (Higa-McMillan et al., 2016; Sullivan & Miklowitz, 2010; Weersing, Jeffreys, Do, Schwartz, & Bolano, 2017). This suggests that some form of parent education might be useful for this family, although programs derived with other populations may require adaptation to the family law context. An evidence-informed, court-based coparenting program (O'Hara, Wolchik, & Sandler, 2021; Pruett, Alschech, & Feldscher, 2021) might be a valuable adjunct to treatment of this family, depending on the family's needs and the adaptability of the program. The complex, multilayered approach that Pruett, Alschech, and Feldscher (2021) used for evaluating and modifying their program offers a richness of data that may be useful in considering an intervention plan and identifying those who may need more services. Davis and Sexton (2021) also describe a family therapy model that is supported by RCTs with other types of populations, but also includes a component allowing therapist flexibility for individual family problems, cultural issues, etc.

Scientifically-informed intervention also requires considering the evidence on effective services for the problems that exist in a family, and there is a large literature base on these issues. The Society of Child Clinical and Adolescent Psychology (Div. 53 of the American Psychological Association) sponsors a web-based tool for learning about methods that are scientifically supported (SCCAP, n.d.). Few of the available studies on clinical issues were focused on divorcing parents, although parental separation is one of the many acute stressors that can lead to distress in children. There are certain approaches which have also been demonstrated to be ineffective with these populations – few professionals, for example, would recommend progressive relaxation as the only treatment for severe depression (cognitive therapy has much more research support), and some forms of treatment for trauma have much stronger evidence bases than others. Adaptation of effective programs would likely be required for the family law context. For example, high-conflict parents might not be able to attend a program together, or might require the assistance of a coparenting therapist to arrive at a common understanding of what they learned in the program.

Greenberg and Schnider (2018) and Fidler and Greenberg (2019) also provide models for coordinating interdisciplinary intervention when a family needs a number of services. It is a reality that real families will rarely match the precise controls and limited variables of a randomly controlled trial, and the results of the RCT will not be precisely applicable once the conditions change. Leading researchers and practitioners have become increasingly creative in both designing studies that allow some case specific flexibility and in accessing the best available science relevant to a particular family's struggles. To lose or discount either source of such information is likely to cause serious harm.

It is assumed that the proponents of oversimplified rules do not intend to cause harm to families, although some may be advocating a social policy agenda. Some of the most contested issues in family law are currently being debated, at least in part, around the issue of what information, and specifically what science, can or should be included in services to families or in policy making. Polarization and the dynamics of distortion and personal attacks have displaced inclusion of large bodies of scientifically informed literature (Emery et al., 2016).

Judicial officers are obviously familiar with the adversarial system and the fact that each parent may be selective in presenting evidence. They rely on social scientists and mental health professionals to accurately represent the state of scientific knowledge, to be forthright in acknowledging

its limitations, and to be able to demonstrate the connection between scientific information and the professional's decisions and services (Gould-Saltman, 2021). Judicial officers value social science information that is presented in a manner that is "succinct, clear, and easily digestible" (Altobelli, 2021) but also want to be given enough information to understand the limitations of any research presented and how it is applicable to the instant case. The reader is referred to the judicial officers' contributions to this volume for more information on their perspectives.

As a profession, we need to wrestle with how to provide clarity and perhaps guidance for considering scientific information, without sacrificing the appreciation of complexity which is so essential to assisting families. AFCC Guidelines for the use of social science information, child custody evaluation, court-involved therapy, and parent coordination have in common the expectation that science guide practice. What judicial officers tell us, however, is that more work is needed to communicate that information clearly and make it relevant and usable in the courtroom (Altobelli, 2021; Gould-Saltman, 2021; McColley, 2021; Moss, 2021; Walker, 2021).

III. HOW DO WE DO BETTER?

A. HUMILITY HELPS

Remembering that we do not have all the answers and conveying an appreciation of those limits in how we describe the research is necessary for maintaining integrity. This goes beyond the core values of "thoroughness, integrity and precision" (p. 2) as advocated in the AFCC Guidelines for the Use of Social Science Research in Family Law (2018), to a true appreciation of the fact that the approach one is most comfortable with may not provide the best fit for the family, and that we need to be open to rethinking and revising our approaches as new scientific and practice information emerges. It also requires that we avoid overgeneralization – not just about types of information or the applicability of a specific research study, but also about one another. Poor communication and stereotyping between members of professional groups – or among people who hold different positions about contested issues – is unfortunately common and almost always counterproductive. Such attitudes harm our credibility with the court and our ability to help families. Moreover, some of the best professionals have backgrounds in both scientific and clinical areas. Of course, we each have a responsibility to recognize the boundaries of our own competence, strive to recognize our own biases, and be forthright in describing the limits of both our knowledge and the findings we are describing (APA, 2017, Standard 2.01, 2.03, 2.04).

B. REMEMBERING THE SCIENTIST-PRACTITIONER MODEL

Mental health professionals trained in the scientist-practitioner model are taught to use empirical research to guide applied practice, and researchers are trained to use practice to inform research questions. Many types of research—qualitative, quantitative, experimental, quasi-experimental, correlational, cross-sectional, longitudinal, and more—contribute to the body of knowledge upon which practitioners rely. Monitoring treatment progress, establishing behavioral goals, and documenting progress toward those goals have long been a part of therapist training. Well-conducted clinical work also includes periodic assessment of progress and necessary adjustments.

C. NOT EVERY STUDY IS A GOOD STUDY, AND NOT EVERYTHING CAN BE STUDIED BY RCT

Just as not all services are effective, not every study is of equal quality or relevance. Even a study that is perfectly conducted in the lab can be less useful if the procedures and results cannot be replicated or the study population is too dissimilar to the target community. For example, RCTs

do not always study the most relevant variables and can include a particular group in particular circumstances, where results may not be generalizable beyond that group. To illustrate this point, many studies measure rates of re-litigation to determine whether an intervention has been effective in reducing parental conflict (Pearson & Thoennes, 1984; Rudd et al., 2015). While such studies offer important information about parents' use of judicial resources to resolve their differences, more information would be needed to tell us anything about family functioning or the reasons the parents did or did not return to court. More detailed information would also be needed in order to determine the relevance of this result to other programs or groups. As stated above, this is not to deny the value of RCTs that are relevant to families. Many of the treatment procedures that we are recommending are based on research results as well. Our point is simply that one needs to look at the details of a study to determine if there were meaningful differences found between groups, how applicable the procedures are to people's lives, whether the results have held up across time and settings, and other factors that indicate relevance of the study to the diverse families we see.

For example, Pruett, Alschech, and Feldscher (2021) have conducted mixed-method research, making ongoing attempts to gather a variety of data that will offer a more detailed picture of the population and its response to any particular intervention or group of interventions. This research cannot offer complete statistical information on every issue, but offers important information on the different results of their preventative intervention for a variety of populations. This research can also be useful in customizing interventions for particular families. An RCT that is precisely designed at an experimental level, but places parents in artificial situations, or uses measures that are not relevant to desired outcomes in real life, is not very useful because it cannot be generalized or adapted to the unique and diverse situations our families face. When considering scientific information in order to conduct evidence informed treatment, it is important to be aware of these issues. Readers need to examine how well the results of various studies fit the population they will be applied to, and scientists and social scientists need to be responsible in how they present and explain scientific information.

It is also worth noting that RCTs are not a practical approach in certain conditions, even when the question clearly appears to be one that would best be answered by an RCT. Yeh et al. (2018) humorously reminds us of this in their "RCT" on the effectiveness of using parachutes to prevent traumatic injury or death when falling from planes. The study encountered difficulties when researchers were unable to find subjects who were willing to jump from a plane without a parachute while flying high off the ground. As a result, all of the subjects (i.e. those who were and were not wearing parachutes) jumped from planes that were sitting on the ground. Results under the modified conditions revealed that there were no differences in rates of injury or death between the two groups, with the conclusion being that parachutes did not make a difference in preventing death or injury when jumping from a plane. Still, parachutes are widely (and wisely) used by the military and sky divers to this day.

We do not expect that judicial officers and practitioners will immediately become experts in social science methods, rather we suggest that if an expert or advocate brings a research result to the courtroom, the person presenting that evidence should be prepared to answer basic questions about what procedures were used, whether the results were clinically significant (i.e. making a difference in people's lives), and how the study is relevant to the case at hand. See Bakker, van Dijk, and Wicherts (2012), McEwan (2020), and Schäfer and Schwarz (2019) for detailed information on issues like effect sizes, replication, representative samples, etc.

D. BE ALERT THAT BIAS CAN COME FROM ANYWHERE

Bias is a ubiquitous human quality, and much scholarship has been devoted in recent years to improving our understanding and ability to control our biases. Confirmatory bias, or the tendency to overvalue information that confirms our beliefs, is particularly powerful (Martindale, 2008) and can be found among professionals in all roles. Some authors (i.e. Holtzworth-Monroe, introduction,

2021, Lilienfeld et al., 2014) are particularly concerned about practitioners' clinical judgment as a source of bias, and such biases certainly exist, but it is far from the only type of bias. Advocates who are trying to support or undermine specific policies (or positions in a legal matter) may be selective in the research they report and how they interpret and present what they find. Researchers may also be motivated to support or oppose policy, to prove that something works, to provide evidence that it does not work, or even to support the contention that nothing works (Harman & Lorandos, 2020; Lilienfeld et al., 2014; Mercer, 2019; Milchman et al., 2020). This can impact the questions they choose to study, their methods, and how they report scientific findings.

Biases may also become evident in how a professional reports scientific findings, including the results of their own research. Most responsible researchers acknowledge the limitations of their studies when they publish, but such nuance may get lost in the adversarial context of a court case. It may be helpful for judges and attorneys to be prepared to ask questions about how similar the study conditions and subjects were to the case under consideration, and to specifically ask professionals if there is scientific evidence supporting a different conclusion. Professionals can enhance the usefulness of scientific information to judges, and our own credibility, by clearly demonstrating that they have considered alternate possibilities.

In managing one's own biases, it is often a useful exercise to make a point of seeking contrary information. In training clinical students, the first author often advises them to make a list of at least five possible interpretations of a concerning behavior they observe. They are often guided to repeat this exercise periodically to promote more objectivity in understanding clients. Those studying or presenting research literature might reduce bias by making a point of looking at literature that supports a contrary position. Researchers might periodically revisit the limitations of a study that they present frequently. And judges and lawyers need to know what questions to ask to elicit that information. We all share an interest in having, and effectively using, more scientific information.

IV. WHAT INFORMATION SHOULD WE CONSIDER?

Evidence-informed practice seeks an inclusive view of science-based information, certainly not engaging in harmful approaches, but combining the scientific contributions of relevant specialties while also considering research (RCTs, other designs, and multilayered approaches) about separating families. That does sometimes require us to occupy a space that honors complexity and requires more thoughtful analysis, both in considering scientific information and communicating it clearly.

In some respects, court-involved families represent a different sub-population from other families who receive psychological services. They frequently present with multiple, complex issues and therapy may be profoundly affected by the overlay of the legal conflict, parents' positioning to try to prevail in that conflict, compromised parenting due to these stressors, and their perceptions of their children's needs and issues (Fidnick & Deutsch, 2012; Greenberg, Fick, & Schnider, 2012; Greenberg, Gould, Gould-Saltman, & Stahl, 2001; Greenberg, Gould-Saltman, & Gottlieb, 2008). The *AFCC Guidelines for Court-Involved Therapy* (AFCC, 2011) were developed to address this issue and the first author has written extensively about them as well. Nevertheless, there are developmental issues and needs common to children and families in and outside of the legal system, as particular stressors, such as the impacts of trauma and particular mental health disorders, may have commonalities as well. For example, O'Hara et al. (2019) addressed the impacts of parental conflict, and the coping abilities children need to develop, in and outside of the divorce context. Dunn, Davies, O'Connor, and Sturgess (2001) and Dwyer (2012) also studied common coping and developmental issues among adolescents following parental divorce.

The AFCC *Guidelines for Court-Involved Therapy* (2011) recommend that practitioners be knowledgeable about issues related to divorce, but also explicitly recommend competence in related issues (e.g., child development, various mental health disorders, special needs, therapy approaches, and methods of adapting them to family law, etc.). As children of divorce are at greater risk for a

variety of problems, we need to be knowledgeable about those issues and consult a range of relevant information in determining interventions. This will, of necessity, include clinical information and professional judgment based on both research findings and the experience and knowledge of the professional.

V. WHAT DOES THIS MEAN FOR THE SMITH HYPOTHETICAL FAMILY?

The Smith family presents a number of issues and problems, underscoring the complex issues facing many of the families we serve. Knowledge of a number of areas of research, as well as the clinician's professional judgment, will be required to provide adequate intervention for the family. No single piece of research points the precise way forward and neglecting any of them could result in harm to the family.

A court-based or online coparenting program may address common issues in coparenting communication, but many families facing such complex issues also need tailored assistance. With respect to our case example, David may be concerned about his son being labeled in a way that disadvantages him and about black children being suspended at disproportionate rates (Darensbourg, Perez, & Blake, 2010). Studies actually show that children of color are less likely to receive adequate diagnosis and treatment of ADHD and more likely to be perceived as disciplinary problems (Morgan, Hillemeier, Farkas, & Maczuga, 2014). None of that changes the fact that Billy is experiencing problems. The practitioner would be wise to consult existing research about effective treatments and assessment methods for both the behaviors Billy is exhibiting and Olivia's depressive and anxiety symptoms, and to know how these may present differently, or be resolved differently, in some black-Latinx families (Harris-Britt et al., 2021). The family will also be dealing with the demands of the school system and may need assistance advocating for appropriate services there.

Effective approaches often require both cooperation and effective behavioral responses from parents, but separating parents may need assistance cooperating to support their child. Moreover, there will be a realistic limit to how many services the family can participate in at one time. How services will be combined may be based on a variety of issues ranging from available resources to the severity of each child's situation. Based on both available scientific evidence and experience with these families, Greenberg and Schnider (2018) and Fidler and Greenberg (2019) have proposed models for managing and coordinating the complex needs of families dealing with potential special needs in their children. An effective intervention plan for this family will require both a therapeutic assessment and familiarity with, or ability to access, the best available science regarding each problem affecting this family. Informed inference and creativity will be required to create an integrated treatment plan addressing all of these issues.

There will never be an RCT examining the type of treatment planning process described above, although there is plenty of science underlying it. Justifying it to the parents, and if necessary, the court, will require a forum – hopefully, a mental health professional's office rather than the courtroom – and the patience to articulate the connection between available science and this family. A discussion of the risks and benefits of any treatment plan vs. available alternatives is always important and an element of informed consent. But that obligation cuts both ways. A professional who suggests withholding services based on a claim that it is not scientifically supported should be prepared to identify the evidence supporting that position and the risks and benefits of either doing nothing or adopting a different course of action.

VI. CONCLUSION

Evidence-informed practice requires that professionals stay abreast of, or seek out, relevant research and social science literature – not just in the specialized area of family law but also in other

areas that are relevant to a particular family. They need to critically review studies for their relevance to this family and understand the cultural and societal factors that may place them at increased risk. RCTs will always be one important source of this information and, where the conditions of the study are sufficiently relevant to the family, may provide important information to guide services.

While RTCs may provide the greatest confidence in the utility of a particular treatment under specific circumstances, they are simply lacking for much of the complex work that we do. It is unrealistic to insist on RTCs to justify the implementation of a treatment that is otherwise scientifically informed. This approach is consistent with the scientist-practitioner model of training in which many mental health professionals have been trained. Practitioners should always evaluate progress and adjust treatment accordingly—or end treatment—when a client or patient is not benefitting from it. Both the *APA Ethics Code* (2017) and the *AFCC Guidelines for Court-Involved therapy* (2011) address these professional obligations in greater detail.

With that said, it is important that these expectations be applied to all professionals and viewpoints equally. Any professional bringing expert information or opinion to the court should be expected to specify the limits of that information, and this should be expected of authors as well. Our hypothetical family could be harmed, in part, by the presentation of an overly broad, scientifically unsupported, yet vaguely ominous suggestion that a scientifically informed treatment plan could be dangerous to the family. Just as those proposing treatment should be able to justify their approaches, those offering opposition should present evidence to support their claims. As Pruett (introduction, 2021) has noted, we need some refinement of how we categorize and communicate about the strength and relevance of scientific evidence.

Judicial officers and others who receive our information should be able to expect clear explanations of what information was considered and why, as well as a clear analysis of the risks and benefits of taking any particular course. They need better, collaboratively developed tools for both assessing social science evidence and treating with caution overly broad statements that do not stand up under scrutiny. This will require that we work to integrate disparate points of view in a coherent way, and that we pay close attention to feedback from lawyers and judges about what we can do to communicate more effectively.

ENDNOTE

1. Sandler et al. (2016) define scholar-advocacy bias as "the intentional or unintentional use of social science research to legitimize advocacy claims."

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