



COMMENTARIES

The Causes and Consequences of a Scientific Literature We Cannot Trust: An Evidence-Based Practice Perspective

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Kepes and McDaniel (2013) have provided us with a valuable and challenging overview of some of the poor scientific practices that have become institutionalized within industrial and organizational (I–O) psychology research. As they make clear, these dubious scientific practices are not unique to I–O psychology, they are not new, and have been subject to serious and well-founded criticism for decades. Dubious practices are to be found in many areas of practice, and evidence-based perspectives seek, in part, to understand why such practices are adopted, what else, apart from evidence, shapes practice decisions, and what evidence-based approaches to making practice decisions might look like. We believe these perspectives provide further insights into the issues raised in the focal article.

We first discuss the fact that researchers are themselves practitioners. Next, we consider some of the reasons I–O and HR practitioners give for adopting dubious practices and illustrate how these closely parallel researchers own practice decisions.

Finally, we address the question of how practitioners can be evidence based if the scientific evidence itself is untrustworthy.

Researchers Are Practitioners – Of Research

Though rarely discussed, researchers are also practitioners¹—practitioners of research—whose practices and activities have the espoused aim to advance our scientific understanding of the world. As the focal article points out, many research practices in I–O psychology are perverse in that they limit and distort rather than enhance and elaborate our understanding of the world. It seems odd perhaps that a group of practitioners—in this case research practitioners—would engage in practices that do not help them achieve their espoused aims and purposes.

However, for anyone interested in evidence-based practice, the observation that practitioners adopt ineffective and even counterproductive practices is only

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1. Most academic I–O psychologists are both research practitioners and teaching practitioners and one can therefore also ask about the extent to which, as teaching practitioners, the teaching practices used in universities are based on the best available evidence about effective teaching.

too familiar. In the case of evidence-based medicine, for example, it was argued some 20 years ago that many practices routinely used by medical practitioners were not based on solid evidence and were doing more harm than good (Smith, 1991). This led, in time, to profound changes in medical training, medical practice, and the ways in which, as discussed in the focal article, medical research is conducted and reported.

It has similarly been suggested that practices in both I–O psychology (Briner & Rousseau, 2011) and management (e.g., Pfeffer & Sutton, 2006; Rousseau, 2006) are often not evidence-based and may be ineffective or actually do harm. Evidence-based management approaches to increasing the use of valid and relevant evidence have been described as being about (Briner, Denyer, & Rousseau, 2009, p. 19):

making decisions through the conscientious, explicit, and judicious use of four sources of information: practitioner expertise and judgment, evidence from the local context, a critical evaluation of the best available research evidence, and the perspectives of those people who might be affected by the decision.

To what extent does this description of evidence-based practice apply to the practice of I–O psychology researchers? After all, researchers make decisions all the time about the research questions they wish to address and the study design and research methods best suited to answer those questions. So why do many of these decisions result in the use of poor practices? Why aren't researchers paying attention, for example, to the evidence about the damaging effects of publication bias or null hypothesis significance testing? What else is shaping the decisions of these practitioners of research?

The purpose of this commentary is first to consider some of the possible causes of poor scientific practices in the I–O psychology research practitioner community by exploring some of the parallel causes of

poor practices in other practitioner communities. What can we learn about the behavior of I–O psychology researchers by looking at the behavior of other practitioners in relation to their adoption of poor practices? Second, we consider the implications of an untrustworthy scientific literature for evidence-based I–O psychology. In other words, how can I–O practitioners be evidence-based if they cannot trust one of the four key sources of evidence: the academic literature?

Why Do Practitioners Adopt Practices That Are Known to Be Dubious?

Practitioners work within particular fields of practice that have their own structures and rules. For I–O psychology research practitioners these structures and rules are well-developed and quite rigid. As described in the focal article, such structures and rules are found in the peer-review process, competition between academic journals and departments, and the incentive structures for researchers.

Through our teaching and other professional activities around evidence-based management we have had many discussions with organizational practitioners including managers (particularly HR managers) and I–O psychologists. In such discussions, we consider the quantity and quality of the scientific and other forms of evidence that were used to support their decision to adopt specific organizational practices. Typically this conversation leads to the conclusion that the decision was not strongly evidence based, which then leads to further reflection about why a decision was taken to implement a practice which seems, on the face of it, to be unlikely to achieve their goals. So why does it happen?

An important distinction often made by practitioners at this point is between the espoused or explicit and the enacted or implicit aims and goals of their activities. The espoused aims of these organizational practitioners are around helping organizations—just as the

espoused aims of research practitioners are to advance our scientific understanding. However, the implicit aims for both relate much more to career concerns and the reward and punishment systems in which practitioners work. And it is these implicit aims that often drive practice decisions rather than evidence about which practices are more likely to further the espoused aims and goals. So what are some of the main reasons organizational practitioners give for making practice decisions and how do they relate to the decisions researchers make as practitioners?

Reason 1: It would be career-limiting if I didn't use pretty much the same practices as everyone else. There is often a strong sense among organizational practitioners that making mistakes and doing things differently may be punished or not rewarded. In order to avoid this, an effective defensive strategy is to simply copy what others in similar settings do though, for example, benchmarking. This may not meet the practitioners' espoused aims but rather meet their implicit aims of keeping their job and being provided with opportunities for advancement. A parallel for research practitioners is copying the way other researchers conduct their research to minimize the chances of rejection from peer-reviewed journals.

Reason 2: The best organizations have the best practices so it makes sense to look at what they are doing and to do it too. Perhaps a defensive strategy but also perhaps to meet espoused aims is to copy not what most organizations are doing but what those perceived to be the "best" are doing. This is based on the flawed logic (e.g., Pfeffer & Sutton, 2006) that highest performing organizations adopt the most effective practices and that the practices they adopt are the cause of high performance. For research practitioners this happens when they try to copy the research practices they observe in papers published in the "best" journals. However, as is

the case with adopting best practices in organizations, if researchers try this strategy they may soon learn that the observable publication success factors (what is visible in a paper) are only a part of what determines publication success.

Reason 3: I'm not rewarded for introducing practices that work because they are not really evaluated—I'm rewarded for getting stuff done—and fast. Organizational practitioners commonly point out that even if they wanted to introduce effective practices this is not necessarily valued by the organization as there is so little emphasis placed on evaluation. The implicit goal is to actually implement practices and do so quickly rather than to meet the espoused aim of improving organizational effectiveness. A direct parallel for research practitioners is the demand to publish quickly and frequently in order to avoid career-limiting publication "gaps" in curriculum vitae (CVs). Research practitioners find it very difficult to evaluate the extent to which their activities contribute to their espoused goal of developing understanding of the world. In just the same way, organizational practitioners may argue that it is difficult to evaluate whether and how a practice had contributed to organizational effectiveness.

Though it may already be apparent, it is worth stating that, as these examples show, even when practitioners are not practicing in an evidence-based way in relation to their espoused aims and goals they may be engaging in evidence-based practice in relation to their implicit goals. Research practitioners may, for example, closely study the CVs of successful academics, look at the considerable scientific literature on the determinants of scientific productivity, and examine the local context for evidence about what determines the career success of colleagues.

There are also important and, some would argue, ever-closer parallels in the contexts in which both organizational and research practitioners work that also push practice decisions towards meeting implicit

rather than espoused goals. Broadly speaking, these are forms of managerialism that favor doing things fast, short-term goals and targets, low validity quantification of the quality of work, large differences in salary and status between those at the top and those at the bottom, an exclusive focus on success, command and control approaches, low validity competitive ratings and rankings between and within organizations, low tolerance of mistakes, and so on.

We suggest that the reasons why I–O psychology research practitioners adopt practices that are not evidence-based are similar to the reasons other practitioners, in this case HR managers and I–O psychologists, adopt poor practices. These reasons are largely institutional and are caused by the need for practitioners to focus on their implicit rather than their espoused goals.

How Can Practitioners Be Evidence-Based if They Can't Trust the Scientific Literature?

An evidence-based practice perspective also provides some insights into an important implication of the focal article: If the scientific evidence base is untrustworthy, how can practitioners rely on it or use it to help inform their practice? The short answer is that practitioners should not trust any source of evidence whether from their experience, the local organizational context, the views of people who may be affected by the decision, or the scientific literature. Rather, as expressed in the description of

evidence-based management above, evidence needs to be critically evaluated for its reliability, validity, and relevance to the problem at hand. In addition, it needs to be combined with the other sources of evidence in order to reach a decision.

As the focal article makes clear, the current state of our scientific literature is far from ideal: yet, clearly describing the ways in which it may be untrustworthy provides an important service to practitioners who want to use such evidence in their decision making. We must of course strive to improve its trustworthiness, but at the same time, we must be more open about its limitations and provide potential consumers of our research with “health warnings” to help them make more informed choices about how it can and should be used.

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