

# Strategies for bridging the research-practice ‘gap’ in sport and exercise psychology

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*ESTRATEGIAS PARA SUPERAR LA “BRECHA” ENTRE LA INVESTIGACIÓN Y LA PRÁCTICA EN LA PSICOLOGÍA DEL DEPORTE Y DEL EJERCICIO FÍSICO*

KEYWORDS: Applied research, evidence-based practice, scholarship, professional practice.

ABSTRACT: This paper explores the continuing research-practice gap that exists within sport and exercise psychology. It explores the reasons why this gap exists, and, crucially, considers solutions to reduce the magnitude and impact of the gap between researchers and practitioners within the field. In this narrative review, we explore what the consequences might be for the future of the field of sport and exercise psychology if solutions are not developed that are advantageous to both arms of the profession. The paper concludes by exploring strategies for closing the research-practice gap, including a renewed emphasis on practical theories, and the development of theories of practice that are research-informed and practitioner-led.

Sport psychology has an history of failing to address a notable and problematic ‘gap’ between research and practice (Hassmén, Keegan, and Piggott, 2016; Hutter, Oldenhof-Veldman, Pijpers and Oudejans, 2016). Vealey (2006) summarised this issue, reflecting that: “Research is viewed as incomprehensible, pointless and boring, while practice is viewed as pseudoscientific and ineffective. [We should be] asking real world questions, with an eye on the person in context, aiming for practical theory... not theoretical practice” (p.148). In essence, the research-practice ‘gap’ reflects differences between what is researched, written about, and read - and thus accepted by most graduates – versus what is helpful when it comes to sitting down opposite an athlete seeking psychological support. The research-practice and practice-research ‘gaps’ are a common problem across all of science, and not unique to sport and exercise psychology (Norman, 2010). This position paper

seeks to propose broad strategies that can be used to mitigate and reduce the research-practice gap.

## What causes the ‘research-practice gap’?

To fully understand the research-practice gap, we need to understand the different aims and activities of each side, and the different skill-sets required in both domains (Hassmén et al., 2016). Both skill-sets can be quite advanced, requiring extensive training and practice, a fact that can underpin the issue: very few people have the time or inclination to accumulate *both* these very different skill-sets. These two hard-earned skill-sets, with different languages, aims and methods, can be difficult to reconcile (cf. Norman, 2010). Thus the researchers ‘get on with’ research, and the practitioners ‘get on with’ practice, solving different problems using different methods and approaches;

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*separately*. In this way, a significant opportunity to advance both research and practice is lost (Norman 2010).

Research usually prefers carefully manipulated conditions, forming abstract characterisations of the phenomena under consideration and studying them in a controlled research environment. Similarly, the theories within research are often simplified and abstracted to a pristine form – and this is argued to be necessary in order to facilitate their testing. In contrast, the real world of applied practice is complex and messy, because it takes place in real-life situations, with uncontrolled and poorly defined variables; often behaving in ways that contradict the neat/clean assumptions of research. In this way, researchers attempting to study applied practice may see a messy and complex world with no control and rigor. By contrast, practitioners attempting to engage with research may see a world of stale, abstract and irrelevant findings that would never survive contact with the complexities of the real world. Hence, there are two separate groups, with a notable 'gap' between them.

### **What are the consequences of allowing a 'research-practice gap'?**

A simple overview of negative consequences from a research-practice gap is as follows: (a) research is not used for its intended purpose – or at least its moral purpose – of informing practice and generating improved outcomes in the real world; and (b) practice is not sufficiently 'evidence-based', sometimes to the extent that people start redefining 'evidence' very loosely, that is as their own opinions and applied experiences – which is not how evidence-based-practice is intended to be used (Chambless, 1999; Chambless and Ollendick, 2001; Gardner and Moore, 2005). There are additional concerns, however; for example, perceiving a disconnection between 'scientific' research and applied practice can undermine the professional image of the field, and thereby the confidence of those seeking sport psychological support.

The research-practice gap also makes it much more difficult to train future practitioners, as there is no consistent vocabulary, no strong models of practice, and thus no way of understanding what practitioners do, or why (Keegan, 2010; 2014; 2016a; b). This gap can reduce training in applied practice to an 'art' or 'craft'; wherein important rules and principles are not understood or conveyed (Jones, 2008). This lack of concepts and theories detailing the processes of applied practice can lead practitioners to make vital decisions about philosophy or

delivery-style quite arbitrarily, as opposed to this being a carefully reasoned and transparent decision (see also Martindale and Collins, 2010; 2012; Poczwadowski, Aoyagi, Shapiro, and Van Raalte, 2014; Poczwadowski and Sherman, 2011).

Researchers are judged on the number of papers they produce, the popularity of the journals they publish in, and the number of times other researchers 'cite' their work. These core values can then be combined into measures of impact such as the H-index. These measures are frequently referred to by review committees and grant funding panels when reviewing academics, but not practitioners. Hence, researchers have to create work that has a very good chance of being cited. At present, applied practitioners rarely write journal articles – so there is virtually no chance of being cited by applied practitioners (Hassmén et al., 2016). Hence, there is little real-world incentive for academics to do work of relevance to applied practitioners (Hassmén et al., 2016; Norman, 2010). Instead, researchers are incentivised to produce papers chiefly for other researchers that – for the main part – extend and propagate the same assumptions, theories, methods and measurement instruments that other researchers resort to. As a beginning on the journey to closing the research-practice gap, and reducing or avoiding the problems outlined in this section, the following passages will explore two broad 'strategies': practical theories; and theories-of-practice. First, however, theoretical practice – maligned by Martens (1979) and Vealey (2006) – must be explained.

### **What has been the problem? Theoretical practice**

In a world where theories and paradigms dominate how research is done (cf. Kuhn, 1970; Popper, 1959; 2002), and ethical frameworks (rightly) prescribe that practitioners should base their applied work on the literature that this generates, theory-driven practice is the result (Martens, 1987; Vealey, 2006). In some ways, given that we rarely attempt to test our theories to destruction, or seek to 'gold standard' evidence that a theory really does withstand scrutiny, theory-driven practice is a fair description of the outcome (cf. Gardner and Moore, 2005; Hassmén et al., 2016). A theory – good or bad, and with key claims often untested – can be used to tell a practitioner what to do with their clients (Jones and Mehr, 2007; Wilson, Armoutliev, Yakunina, and Werth, 2009). This can, at times, force a practitioner to simplify an athlete's uniquely personal and complex needs into a highly simplistic theory. And much of

the research in sport and exercise psychology is, quite famously, either based in labs away from actual performance settings (cf. Martens 1979, 1987), or based on cross sectional survey data and correlational analysis (cf. Keegan, 2016; Vealey, 2006), and as such provides insufficient evidence to know whether a theory is 'true'. Effectively forcing practitioners to use highly simplified (parsimonious) theories - developed in carefully controlled research settings that were not reflective to the real-world setting of applied practice – results in 'theoretical practice'.

### **Practical theories and theories-of-practice**

Picking up on his critique of the way he believed sport psychology was evolving, Martens (1979) specified that we should seek practical theories, not theoretical practice. This might be equated to the idea that “there is nothing more practical than a good theory” (Lewin; 1952, p.169). Many philosophers-of-science (e.g., Popper, Lakatos, etc.), as well as many well-known scientists (e.g., Hawking, Einstein) have argued that theories should be developed to help solve practical, real-world problems.

### **Practical theories**

Many authors have argued that theories, themselves, are not particularly important, but rather they are merely tools to assist in the solving of important problems (Hassmén et al., 2016; Popper, 1959; 2002). Martens (1979; 1987) was arguing that, in his view, theories had become the dominant driving force in sport psychology; that we had become a profession driven by our tools and gadgets as opposed to providing efficient solutions to meaningful problems. Martens (and many others since) argued that the theories driving sport psychology research were not 'fit-for-purpose' when it comes to applied practice. At this point, it is important to clarify exactly what a theory is, or should be. A popular and well-argued explanation was given by Hawking (1988; p.11 – italics and parentheses added): “A theory is a good theory if it satisfies *two requirements*: [1] It must accurately describe a large class of observations... and [2] it must make definite predictions about the result of future observations”. Occasionally there is an argument that, ideally, theories should be as simple as practically possible – although this should be viewed as a heuristic guide and not a hard rule (Baker, 2003, 2013; Courtney and Courtney, 2008; Sober, 1990, 1996). This latter idea of simplicity might be useful when considering that many existing and popular theories tend to

'sprout' additional qualifiers and 'get-out clauses' when faced with problematic observations – the so-called Duhem-Quine principle (Lakatos, 1970). As a final criterion, if a theory is to be discussed and evaluated by scientists, it must be communicable such that someone other than the 'holder' can understand it too. It seems relatively straightforward, and yet Martens and many since have argued that the theories of sport and exercise psychology often fail these basic tests, making them not fit-for-purpose and thus instead contributing to the research-practice gap.

It is perfectly possible for practitioners to generate, evaluate and refine theories, using this definition. And yet, so long as the literature is dominated by researchers – solving different problems and using different techniques and assumptions - practitioners will remain passive recipients or 'consumers', receiving whatever theories and evidence researchers offer them. It is difficult to imagine the mechanism through which a practitioner could take a new theory 'to market', for others to view, evaluate and perhaps adopt. In fact as well as being difficult it may not be particularly rewarding for the practitioner: offering one's best ideas to others might be seen as entrepreneurial suicide. Hence, there is no mechanism, nor any incentive, to attract the ideas, feedback, or creative contributions of applied practitioners in sport and exercise psychology. Perhaps, for example, being seen to work publicly with researchers, and praised by editors or journals on social media might constitute excellent promotion and additional credibility for practitioners.

As well as encouraging practitioners to publish and cite, the key gatekeepers of the literature can also play a key role. For example, when editors receive papers claiming to explain fractionally more variance in some subjectively rated concept that seems several steps removed from real-life, we might consider discouraging people from doing that research; and instead encouraging them to work alongside practitioners in delivering relevant and practical research. We should be asking practitioners what types of theories we need to build, and what problems they perceive in existing ones – and then using that information both in the commissioning of research and in its evaluation. The first priority of 'practical theories' should be to support real-world athletes, coaches, practitioners, parents and governing bodies. Morally speaking, at least, one of the lowest priorities should be advancing researchers' citations and impact factors.

### Theories of practice.

One approach that was not explicitly put forward in Martens' dichotomy of 'theoretical practice' versus 'practical theory' is the option for research to examine the 'art' of applied practice. Like any phenomenon, the processes of applied practice can be studied, described, modelled (or theorised) and evaluated. Recent work by Poczwadowski et al. (2014) and Keegan (2016) has started to describe the processes followed by practitioners. Keegan's model specifically suggests linkages between key processes followed by practitioners, and testable predictions. For example, the model could be used to predict that the quality of the needs analysis will contribute significantly to the quality of the outcomes; or practitioners who maintain a consistent philosophical approach with each individual client will likely produce improved client experiences and outcomes. Notwithstanding these very recent developments, sport and exercise psychology currently generates relatively little research examining the processes and mechanisms of applied practice.

There is a strong tendency in sport and exercise psychology – and many fields – to cast applied practice as an art or craft: mythical and magical processes not suitable for the scrutiny of

researchers (Hassmén et al., 2016; Keegan, 2016). On one hand, this is understandable given the profound differences in assumptions and methods between researchers versus practitioners. On the other hand, such a shroud of mysticism undermines the credibility and transparency of any discipline it affects. The benefits of researching applied practice are relatively clear: (1) we would understand the processes of applied practice better; (2) we could therefore give our applied practitioners increased ability to deliver positive outcomes (and avoid negative outcomes) when they work with clients; (3) the very theories and research generated by researchers would be used by practitioners in the real world, not simply remaining in journals where they may or may not be picked up by other researchers: actual 'impact'; (4) we could improve the training of applied practitioners (5) we could improve the accountability and transparency of applied practitioners, and facilitate informed and meaningful reviews of practice and case-studies; and thus (6) ultimately, we could increase the credibility of the field of sport and exercise psychology. Overall, therefore, there is incredible value yet to be realised in proactively researching the processes, assumptions and mechanisms of applied practice.

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**PALABRAS CLAVE:** Investigación aplicada, práctica basada en la evidencia, becas, práctica profesional.

**RESUMEN:** Este artículo explora la persistente brecha entre investigación y la práctica profesional de la psicología del ejercicio y deporte. Este artículo explora las razones por las que existe esta brecha y, fundamentalmente, considera soluciones para reducir la magnitud y el impacto de la brecha entre investigadores y profesionales en el campo. En esta revisión narrativa, exploramos cuáles podrían ser las consecuencias para el futuro del campo del deporte y la psicología del ejercicio si no se desarrollan soluciones que sean ventajosas para ambos componentes de la profesión. El documento concluye explorando estrategias para cerrar la brecha investigación-práctica, con el énfasis en las teorías prácticas, y el desarrollo de teorías de la práctica que son investigador-informado y dirigido por el practicante.

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