

What helps and what hinders in the development of a research-practitioner identity: Exploring clinical psychology trainees' views.

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Abstract

The increased emphasis on the practical application of research has led to expansion in the number and diversity of professional doctorates (PD) within the USA, UK and Canada. However, the research-practice gap is a commonly observed and written about phenomenon and PD programmes have been questioned for not being able to support the development of a scientist-practitioner identity. This exploratory study focuses on the research-practice gap in practitioner clinical psychology doctoral training and the struggle with identity transition that clinical researchers undergo throughout the course of their professional doctorate. A questionnaire using closed and open-ended questions was developed to explore both scientist-practitioner identity in fourteen final year doctoral clinical trainees and, their perception as to how the connection between these two aspects of identity had either been facilitated or undermined during the course of training. Results showed that by the end of their training, all but one trainee identified themselves as a scientist-practitioner whereas, prior to entering training, none did. Supervisor guidance and reflection were identified as key aspects of training that supported this identity transition. Tensions within the professional practice context and some programme assessment practices challenged the scientist-practitioner model. Trainees recounted specific changes in their professional practice that reflect this new dual identity.

Keywords: Evidence-based Practice, Scientist-practitioner model, Supervision, Reflective Practice, Clinical Psychology, PsychD.

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Introduction

The increased emphasis on the practical application of research has led to expansion in the number and diversity of professional doctorates (PD) within the USA, UK and Canada (Kot & Hendel, 2011). These PDs often take place within the context of applied practice or professional work and are usually more structured than traditional doctorates, with specific additional requirements such as coursework, portfolios or peer-reviewed publication (Neumann, 2005). Critically, within these PDs there is an increased emphasis on enhancing or extending professional practice through research, rather than simply producing research for its own sake (Costley, 2013). Therefore, PD programmes from a wide range of applied disciplines are well placed to develop professionals who are able to lead innovation, bridge the gap between research and practice, and have an impact on society and the economy (Costley & Lester, 2012).

The conventional doctorate (PhD) has been criticized for not developing the skills or knowledge needed to drive the modern economy and enhance practice (Nerad, 2010; Shapiro, 2002). For PD programmes to have a genuine and sustained impact on society, their doctoral graduates must be able to maintain the ability to develop research-based practice and become leaders in their respective fields (Norcross & Castle 2002). Therefore, when developing the pedagogy of a PD programme, it is important to support the development of a dual identity that embraces both 'science' and 'practice' and is able to robustly withstand tensions between these two worlds (Corrie & Callanan, 2001; Burgess et al., 2011). Despite the challenges and complexities that such an approach entails, research investigating the specific aspects of pedagogy that facilitate it, is scarce.

This paper presents results of a small-scale study aimed at exploring the views that clinical psychology trainees have regarding the critical factors within their professional doctorate programme that have facilitated and/or hindered the development of a researcher-practitioner identity.

The Scientist-Practitioner model

The model of the 'scientist-practitioner' in clinical psychology was developed in 1947 by the American Psychological Association (APA) and was driven by the need for new clinical

training programme standards (Baker & Benjamin Jr, 2000). Since this time, the scientist-practitioner model has remained a cornerstone of applied psychological training at the doctoral level. However, critics have questioned the ability of doctorate programmes to truly meet the demands of both 'scientist' and 'practitioner'. Aspenson and colleagues (1993) found that, by the end of their studies, doctoral students had mixed views on the scientist-practitioner model, with many citing an unresolvable opposition between the two identities. Furthermore, those viewing the scientist-practitioner identity most positively were more research-oriented and had career aspirations within academia as opposed to practice. More recently, Corrie and Callanan (2001) also found mixed views about the scientist-practitioner model. This has led critics to question whether it is possible to foster a scientist-practitioner identity in doctoral candidates, especially in those students who are more practice-oriented (Barkham & Mellor-Clark, 2003; Chwalisz, 2003). The professional doctorate in clinical psychology was established in order to address the need for a more practice focused doctoral degree. In the UK, clinical professional doctorate programmes continue to emphasize the scientist-practitioner model, albeit in the context of professional practice (Kennedy & Llewelyn, 2001). However, in light of the potential tensions between the two aspects of this dual identity, it is critical to determine how effective these PDs are at supporting the development of both aspects of this identity and thus their ability to bridge the gap between research and practice, especially since they tend to recruit trainees who come from practice backgrounds.

Identity transitions within the professional doctorate

The journey undergone during the course of obtaining a doctorate has a profound and complex effect on the candidates' identity, both personally and professionally (Forbes, 2008; Atkinson-Baldwyn, 2009; Fenge, 2012). The professional identity transition that occurs during the course of a PD is particularly complex because those deciding to do a PD are likely already to be practitioners, some of whom may have previous negative experiences with the concept of 'science-led' practice (Corrie & Callanan, 2001; Holttum & Goble, 2006). Therefore, these individuals come into the doctorate with a strong sense of identifying with their profession, and possibly with preconceived ideas about what it means to be a 'researcher'. In fact, the choice to do a PD as opposed to a PhD often lies in this identity and the desire to remain identified with a profession (Fenge, 2012). Therefore, whereas a

typical PhD journey might lead to an identity transition from 'student' to 'researcher', a PD journey is more likely to lead either to a tension between identities that may be in conflict (Burgess et al, 2011) or a dual identity of 'practitioner' and 'scientist/researcher' that facilitates the ability to integrate research with practice (Corrie & Callanan, 2001; Wellington & Sikes, 2006; Klenowski & Lunt, 2008).

If the goal of a PD programme is to achieve a balance between 'scientist/research' and 'practitioner/professional' identities, it is important to understand which aspects of doctoral training help candidates overcome the potential tensions between research and practice. Relatively few studies have investigated how specific aspects of pedagogy within the context of PD programmes support the development of the scientist-practitioner dual identity, despite accounts that this can be a challenging issue for doctoral candidates. Several studies indicate that reflective practice, a key component of most PD programmes, improves candidates' ability to use research within their professional practice and support identity transitions within the context of educational doctorate programmes (Forbes, 2008; Atkinson-Baldwyn, 2009). However, one study looking at beliefs about research in the context of clinical psychology found that trainees may fail to see how reflective practice fits with the scientist-practitioner model (Corrie & Callanan, 2001). Other studies have found that cohort support and communities of practice are critical to doctoral candidates as they deal with the tensions between research and practice (Fenge, 2012). However, to our knowledge there is no study that has looked at elements of pedagogy that support or challenge the development of a 'scientist-practitioner' identity within the context of a clinical psychology doctorate, or determine whether the scientist-practitioner identification leads to enhanced research-led practice.

Understanding Scientist-Practitioner Identity in a Clinical Psychology PD

In the UK, doctoral candidates within a professional clinical psychology doctorate, referred to as clinical psychology trainees, are recruited and trained in a national context that emphasises the importance of the reflective scientist-practitioner identity position. Clinical psychology trainees are expected to become leaders in research development and evidence-based practice within the National Health Service (NHS) and other health and social care applied contexts, and to be sophisticated consumers of research evidence. In the

course of their training, however, clinical psychology trainees are inevitably met with varied views about what constitutes evidence, the value of research to practice, and how these two domains of knowledge can and might work together. They also enter training with their own views, often derived from their experience in applied clinical, health or social care contexts, about what constitutes legitimate ways of producing knowledge in clinical psychology and the ways in which they can and should evidence their own practice. Clinical training programmes, therefore, need to develop learning experiences through which trainees might be facilitated to reflect on and develop their identity position as a scientist-practitioner. In this exploratory study, final year trainees from a clinical psychology professional doctorate programme describe their identification with the science-practitioner model and elements within the course of their training which were critical in supporting or challenging this identity position. Trainees also reflect on how their practice has changed as a result of their doctoral experience.

Method

Participants

The clinical psychology practitioner doctorate is a three-year programme combining clinical practice placements, teaching and academic assignments, and independent original research. The programme is underpinned by a 'critical reflective scientist-practitioner' model. The sample comprised clinical psychology trainees who were two months from the end of training. We considered that trainees nearing the end of the programme would be well placed to reflect on the development of the scientist-practitioner position. Thirty-two final year trainees were enrolled and attending at the time of the study. Fourteen of these completed the survey (43.7% uptake rate). Experience gained prior to entry to the programme is typically via applied clinical and/or research posts. Pre-entry experience of this sample was: clinical posts only (N=5); both but more clinical than research (N=4); equal mix of clinical and research (N=4); and, both but more research than clinical (N=1). No trainee entered the programme with research experience only. We did not collect demographic data such as age or gender given that most trainees are women aged 22 to 29 years. Requesting this data might have compromised anonymity.

The Questionnaire

Based upon the scientist-practitioner model literature, the aims of the clinical psychology doctorate and direct contact with trainees, a short questionnaire was developed to understand current identification as a 'scientist-practitioner' and trainees' perception as to how the connection between these two aspects of identity had either been facilitated or undermined during the course of training. Content and number of items was discussed between the authors of this article and, when consensus was reached, the final version of the questionnaire included five questions. Two-closed questions asking trainees about their experience prior to entry to the programme (clinical and/or research posts) and three open-ended questions asking trainees:

- *One or more critical events/moments where the connection between science and practice has either been facilitated/strengthened or weakened/undermined;*
- *The possibility of training people to become scientist-practitioners;*
- *Any changes in trainees' self-perception or clinical practice that they might attribute to training within a scientist-practitioner framework.*

Procedure

The questionnaire was distributed to trainees at the end of a teaching session. A cover sheet was attached to the questionnaire explaining its purpose and that participation was voluntary and anonymous. Trainees were advised that completion and return of the questionnaire would be taken as consent to participate, and that this consent permitted analysis and dissemination of the findings on the understanding that individuals could not be identified. Completed questionnaires were returned within a day of them being distributed.

Analytical procedure

Frequencies were calculated for the different response options for closed questions. Data from the open-ended questions were analysed using thematic analysis in order to identify, analyse and report patterns (themes) within data (Braun & Clarke, 2006). An inductive, "bottom-up data" analysis process was conducted that aimed to elucidate trainees' past and current identification as 'scientist-practitioner', identify critical moments that reflect

aspects of pedagogy considered to facilitate or hinder the development of this identity, and discern changes in self-perception and/or practice arising from training within a scientist-practitioner model. This study did not intend to impose pre-existing categories; rather, it aimed at identifying underlying ideas, concepts and categories generated by participants.

Following Braun and Clarke's steps, each response was read carefully in order to identify meaningful units of text relevant to the research question. Initial codes were generated which were then grouped into provisional categories. During a second analysis, the data were re-examined again to make sure that no information had been omitted from the analysis and the categories were representative of the data. The final step involved giving a thematic label to each category.

Findings

Three main themes relevant to the study aims were identified. The first theme, *self-identification with a scientist-practitioner position*, refers to the trainees' self-perception and development of their identity as scientist-practitioners. It involved both the identity changes they had experienced (or not) as a result of their training and their overall position regarding the principles of this model. The *scientist-practitioner pedagogy and supervision* theme gathered responses related to aspects of the course that helped or hindered the development of a scientist-practitioner identity such as course content, assignments, group discussions and overall supervision. The third theme, *scientist-practitioner and practice*, encompasses the main principles of this approach and refers to the ways trainees' practice had been enhanced (or not) by the scientist-practitioner identity. Following sections will describe each theme in more detail.

Scientist Practitioner Identity

At the start of the survey, trainees were asked to consider a number of statements in order to gauge current identification with the scientist-practitioner position. The data indicated that, prior to entering training, none of the trainees had identified themselves as a scientist-practitioner. In contrast, all but one currently identified as a scientist-practitioner. No trainee endorsed the statement that they would be unlikely to ever identify as a scientist-

practitioner, or that they did not know what this identity meant. However, one trainee added to their response:

“I do identify with it but I don’t think it is particularly well defined or useful to describe self as such (especially outside the world of psychology)”

The view that one might come to identify with the position in the perceived absence of it being well articulated or operationalized was reflected in other ways. For example, when trainees were asked to describe any changes in self-perception or clinical practice that arise from being trained within a scientist-practitioner framework one commented:

“I feel this was a label that was liberally applied to various aspects of the course and at times this felt rather over-emphasised...I feel my development came more gradually through a greater variety of experiences as opposed to simply those labelled that way”

This comment suggests that attempts to develop the scientist-practitioner position by denoting specific learning experiences as particularly pivotal might be experienced as artificial by some trainees and, as a consequence, not produce the intended developmental outcomes. In contrast, one trainee perceived that deliberate emphasis on the scientist-practitioner position in programme pedagogy had promoted change. They also highlighted the importance of this philosophy being echoed in the practice context:

“I think it’s the emphasis that the course places on the model that has helped me to change my perception and think in a scientific way. Placements that reiterate this have been key”

Changes in self-perception and practice that trainees identified as a result of training in the scientist-practitioner framework included:

- being a more reflective practitioner;
- paying more attention to the evidence base when working with clients;

- applying more rigour and critical faculty when reading the evidence and selecting interventions; and,
- having a guiding framework for practice.

In addition, the emphasis on theory-practice linking and research can foster the development of professional identity and distinctiveness:

“General greater awareness of theory-practice links, plus value of research as being part of what makes clinical psychology different from other disciplines”

Scientist-Practitioner Pedagogy and Supervision

Trainees cited a number of critical events in training that they perceived as either facilitating or undermining adoption of the scientist-practitioner position, along with noting some general learning and assessment situations that were perceived to develop this stance. These included: writing assessed clinical case reports, research assignments, discussion of clinical cases with supervisors and reflective accounts. For example, writing up case reports was seen as having a significant impact on the ability to connect science with practice in a way that became far more explicit than had been the case in teaching sessions or during supervision. Furthermore, trainees identified that debate and discussion within personal and professional development groups facilitates theory-practice linking. General features of training that were perceived to undermine the scientist-practitioner stance were being exposed to a narrow range of theoretical models and perspectives and limited inclusion of empirical data to support teaching on interventions.

Regarding specific critical events that support development of the scientist-practitioner position, supervision was cited as an important influence in the ability to connect theory and evidence with applied work. For example, clinical supervision was considered to provide an important opportunity to discuss the importance of using evidence to support case formulation, and research supervision to support consideration of the practical applications of empirical findings. In line with the literature, trainees encounter varied positions on the scientist-practitioner model amongst supervisors in practice. As a result, placement-based learning may not connect the two aspects of the model. This underscores the importance of

clinical supervision being provided within the training institution if the value of the model is to be reinforced in trainees:

“My first placement there was less theory and practice links due to the supervisor style. My clinical tutor helped me to really think about this and make links”.

Trainees might also encounter practice that actively opposes current evidence. Importantly, the data suggest this might serve to increase rather than decrease the value of the model:

“On placement I was asked to run a CBT group in a manner that was not consistent with research. This undermined the link between science and practice, but actually reinforced my belief in its importance”.

Two trainees perceived, however, that the scientist-practitioner position, or its operationalization, had the potential to stifle flexibility and creativity. For example, one trainee perceived that some aspects of what might be effective in clinical work are not considered to be a legitimate feature of science and, as a consequence, are not well represented in learning sessions:

“Sometimes there has felt to be a mismatch between ‘science’ and the reality of working in a clinical context with people. I have personally found that the therapeutic alliance, and to some extent intuition and flexibility have been the core components of recovery. I have felt that this has been under-emphasised in teaching because this is contradictory to the scientist-practitioner model”.

The sole trainee to not currently identify as a scientist-practitioner indicated that merely reversing the terms of the position might be effective in promoting engagement with it and, like the trainee above, seems to infer that ‘science’ is associated with a lack of artistry:

“In academic assignments (but actually much less so in clinical contexts) I have felt it might have been useful to work on being a ‘practitioner-scientist’

rather than a 'scientist-practitioner' but this has not been supported, perhaps to the detriment of psychological creativity".

Despite some reservations about the operationalization of the scientist-practitioner model, all trainees thought that it was possible to train people to become scientist-practitioners. The most consistent theme in this data was the provision of opportunities to discuss and debate the links between theory, research and practice and to apply this thinking to real cases and, importantly, to allow a chance for reflection on this process:

"Specific exercises to discuss in lectures to link a new idea/theory to practice, followed by chances to actually do this on placement supported by your supervisor, with opportunities to reflect on this with others e.g. in discussion groups, with a tutor, in academic assignments."

"Not only focussing on theory, but thinking about how trainees would apply theory and evidence to their practice, and encouraging reflection on this afterwards."

Again, trainee comments suggested a perception that there is a proscribed way of being a scientist-practitioner that discourages innovation and creativity:

"Encouraging people to have their own opinions and not be afraid to back them up with different sources of evidence."

Scientist-Practitioner and Practice

Importantly, trainees were able to describe ways in which their practice has been enhanced by the 'scientist-practitioner' identity. Trainees noted that decisions they made within the context of their work were more reflective and evidence based:

"I think I am a more reflective practitioner now than before training, which enables me to consider how my practice fits within a scientist-practitioner model. I see myself as someone who always considers evidence and theory before beginning a piece of work, which is a direct result of my training"

“Evaluating the socio-political context of [intervention] guidelines. Feeling that I have structures and models to draw from in my clinical practice. Being able to evaluate the worth of practice-based and evidence-based research in relation to clinical work”.

“I pay more attention to the evidence base when I select interventions, I also reflect on these issues in general, e.g. when working in teams. I apply more rigour and am able to review available literature/research/interventions more critically”.

Notwithstanding this, one trainee also referred to the fact that the scientist-practitioner identity is “over-emphasised” and that it is the variety of learning and teaching experiences they had throughout the course what really helped their development as clinical psychologists.

Discussion

By the end of their doctoral journey, all but one of the clinical trainees in this study identified themselves as a scientist-practitioner, while none indicated having this identity at the outset of their training. This suggests that the pedagogy of the training programme investigated in this study successfully facilitates identification with the scientist-practitioner model. A further important finding is that trainees were able to identify specific ways in which their practice has been enhanced by the development of the scientist-practitioner position. As such, they were not merely endorsing the model but considering how they apply it in practice.

Clinical trainees highlighted the significance of supervisor guidance and reflective practice during the development of the scientist-practitioner identity. Similar elements were highlighted as important to identify development and research-led practice in both clinical psychology and in education doctorate programmes (Corrie & Callanan, 2001; Klenowski & Lunt, 2008; Fenge, 2012), suggesting these are critical elements that enable doctoral candidates to integrate this new identity as a scientist/researcher within their professional

identity. A consistent theme is that pedagogy found in both the academic and placement context contributes to reinforcing the scientist-practitioner position. Ideally, these pedagogies will be congruent; however, there is evidence that conflicting positions can also promote adherence to the model and that trainees will develop the scientist-practitioner position outside of formal learning situations. This is a positive finding given it is evident, from both anecdote and published evidence, that trainees will encounter resistance to the scientist-practitioner model and that this will represent an on-going challenge to the development of their identity (Gee, 2000; Burgess et al., 2011).

The data suggest that training programmes have an important role in supporting identity development outside of the placement context and equipping trainees to hold it when they encounter challenge. However, the data also highlight that how a training programme conveys the scientist-practitioner position through its pedagogy and the assumptions underpinning the way it is operationalized are important, as are trainees' own assumptions about what constitutes 'science' and 'practice'. Some trainees' perceived that practice legitimately involves intuition, creativity and having one's own opinions whereas science does not. These ideas are similar to myths about evidence-based practice (EBP) identified by Lilienfeld et al. (2013) such as that EBP stifles innovation, requires a 'one size fits all' approach and that it prescribes the type of evidence required. Trainee views in the current study regarding perceived prohibitions on creativity might also be consistent with data from other studies indicating that practitioners fail to see how reflective practice fits with the scientist-practitioner model (Corrie & Callanan, 2001).

The findings reported here also indicate a perception amongst some trainees that programme assessment methods endorse specific ways of being a scientist-practitioner, particularly ways which rule out innovation and creativity. These viewpoints invite consideration of how training programmes promote their underlying philosophies through pedagogy, supervision and assessment methods and the consistency with which they do this, particularly given that doctoral programme staff teams typically comprise those who have primarily a clinical or a research/academic background and who, consequently, will have varied scientist-practitioner identity positions. It is also important to understand that trainees' personal and professional development is influenced by a range of factors, with

the research training environment as a key factor, but by no means the only one (Holttum & Goble, 2006).

Limitations and Future Directions

Whilst the questionnaire asked whether trainees considered themselves to be scientist-practitioners we did not ask them to define this identity position. Although their assumptions about what this might and might not constitute became evident to some extent from their responses to the questionnaire, future work using in-depth interviews and/or longitudinal research involving larger samples might try to establish how they construe this identity, the flexibility in its definition, and how and whether this changes over time. Using less directive questions and allowing trainees to elaborate more on their beliefs and attitudes towards the scientist-practitioner approach and its applicability to a high demanding working environment, could give us a better idea of the trainees' actual endorsement of the model. Various studies do show that individuals can adhere to a rather narrow view of the scientist-practitioner model or can view the model much more flexibly, and that these definitional viewpoints have an impact on acceptance of the model in general (Holttum & Goble, 2006; Jones & Mehr, 2007).

The current study represents a limited snapshot of clinical trainees' identification with the scientist-practitioner model. It would be interesting to explore how this identity develops over the course of the programme by surveying trainees at different stages to better understand the evolution of this identity transition. This approach would give more detailed insight into factors within the research training environment, and beyond, that influence clinical psychology research activity (Holttum & Goble, 2006). It would also be interesting to explore what happens to this identity after graduation to determine if this dual identity remains and produces clinicians who are able to successfully negotiate the worlds of research and practice or, if once immersed within the context of practice without their cohort or supervisors for support and guidance, they are unable to maintain the 'research' identity.

Overall, evidence from the current small-scale study supports the use of the scientist-practitioner framework in developing professionals who are able to use research to enhance

practice. This is critically important when seen within the context of contemporary healthcare policy that emphasises evidence-based practice and empirically-supported interventions. Reflective practice, supportive supervision and a curriculum that is consistently aligned with the ideals of the scientist-practitioner model appear to be key elements in this development. Perhaps the single most important finding to emerge from the current investigation is the central importance of how 'science' is construed, both from the perspective of doctoral candidates and how it is manifest within programme pedagogy, and the potential for its construction to be in opposition, either wittingly or unwittingly, with elements commonly associated with practice, such as reflection, innovation and creativity. This has implications for the (re)design of clinical psychology training curricula, and perhaps for PD programmes in general, that might effectively promote trainees' ability to integrate science and practice into a meaningful, useful and flexible knowledge structure that will endure post-qualification.

Notes on Contributors

Dr Marcela Acuña-Rivera is an environmental psychologist with multidisciplinary, mixed-methods research and professional experience covering a variety of topics and scenarios such as teaching and learning, environmental risks, risk perception, mental health recovery, fear of crime, and health promotion. She recently completed a study investigating lecturers' and clinical supervisors' beliefs and practices about evidence-based practice and its implications in clinical psychology trainees. Two other recent studies focused on social mental health recovery in children and their families, and another one on risk perception and fear of crime in residential areas. She is also interested in scholarly communication and open access publishing.

Dr Dawn Duke is the Head of the Researcher Development Programme. Dawn received her PhD from Imperial College in Neuroscience, but since became interested in researcher development and has been working in this area since 2008. Dawn is experienced in the design and delivery of a large range of professional skills training for researchers. She has a special interest in how to help researchers to develop employability skills so that they are able to be successful both within and outside of academia. She is also interested in creating training to support researchers through transition stages, such as the transition into research and the transition from research student to the next stage in their career, which are often particularly challenging times for researchers. Dawn is also

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Dr Laura Simonds is a Lecturer who has taught research methods and statistics to clinical psychology trainees for the past 12 years. Laura has supervised the research of more than 70 doctoral clinical psychology trainees on a wide variety of clinically-relevant topics utilising quantitative, qualitative and mixed-methods designs. Laura's main research interests are related to mental intrusions and compulsions, mental health recovery in young people, and the link between shame and mental health problems.

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