

# More options and better job security required in career paths of physiotherapist researchers: an observational study

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**Question:** What career paths have physiotherapist researchers taken? What should career paths for physiotherapist researchers look like? **Design:** Observational study with questionnaire. **Participants:** Australian physiotherapists who had completed a Doctor of Philosophy degree by 2006. **Results:** Fifty-six of 87 physiotherapists with a doctorate degree (response rate 64%) completed the questionnaire. Over half had completed the doctorate since 2000. An interest in clinical research was the strongest driver for undertaking a doctorate degree. Of the respondents, 52% worked in traditional academic roles while those who pursued other mixed clinical/research or pure research paths reported a lack of job security; 38% continued to work clinically, with a further 43% reporting they would like to but had insufficient time or a career structure that did not allow clinical work. 54% felt that the profession valued research, while 63% felt that research was valued by clinicians. The four main suggestions for improving current research career paths were: 1) develop research careers that allow mixed clinical/research and academic/clinical roles; 2) improve funding for training, particularly post-doctoral positions, and secure appropriately funded physiotherapy research positions; 3) improve co-operation between academic (university) and clinical researchers; and 4) develop more flexible research careers to accommodate private practitioner researchers and others wishing to combine clinical work with teaching and research. **Conclusion:** Physiotherapist researchers need broader career options and seek greater opportunity to link with clinical practice. Encouraging a vibrant research culture should foster professional excellence and enhance our reputation in the community. [Bernhardt J, Tang LS (2008) More options and better job security required in career paths of physiotherapist researchers: an observational study. *Australian Journal of Physiotherapy* 54: 135–140]

**Key words:** Research, Physiotherapy, Career, Australia

## Introduction

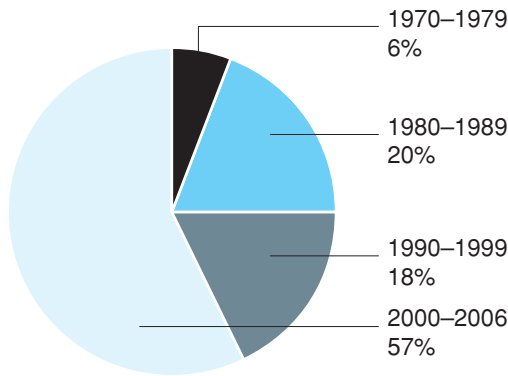
Physiotherapy education is largely focused on developing competent clinicians who can assess and treat a wide range of conditions. In Australia, physiotherapists have opted to undertake high level research training since around 1990. Prior to this, research training to a Doctor of Philosophy (PhD) level was unavailable within schools of physiotherapy, but available through related disciplines. Today, increasing numbers of physiotherapists are choosing to undertake PhD degrees and training is available through most schools of physiotherapy. In a health care environment that is conscious of evidence-based care and cost effectiveness, the output of researchers will help drive changes in physiotherapy practice. It is therefore timely to consider the current and future career options for physiotherapist researchers. The research questions were:

1. What career paths have physiotherapist researchers (ie, who have chosen to undertake PhD research training) taken?
2. What should career paths for physiotherapist researchers look like in the future?

## Method

### Design

Data for this study were acquired using a 28 question anonymous questionnaire to Australian physiotherapists who had completed a PhD. The questionnaire had seven sections: 1) demographics, 2) details of the course undertaken and reasons for undertaking a PhD, 3) current research role, 4) current clinical role, 5) career satisfaction, 6) their career path, and 7) suggestions for future career paths. A mix of closed and open questions were used (see Appendix 1 on eAddenda for questionnaire). The questionnaire was piloted in November 2005 on attendees of Australian Physiotherapy Association National Neurology and Gerontology Groups Joint Conference prior to final distribution. Distribution was by post and email to identified sites and individuals between March and October 2006. Physiotherapist researchers were asked to complete and return the questionnaire in an unmarked envelope. General reminder emails and phone calls were made to encourage return by the due date. Involvement was voluntary and no monetary compensation was provided. Return of the questionnaire indicated consent to participate.



**Figure 1.** Year of graduation of study participants. Over 50% have graduated since 2000.

**Participants**

Australian physiotherapists were included if they had completed their PhD degree as of March 2006. No national register of these physiotherapists exists. Potential participants were identified using multiple overlapping sources including: state registration boards, university (medical, physiotherapy, psychology, engineering, allied health and anatomy) research and graduate studies offices, and the Australian Physiotherapy Association (APA) state branch public listings. The physiotherapy departments of all Australian hospitals with more than 200 beds were contacted, as were a number of private practices, and pharmaceutical and medical device companies. Participants were also identified by colleagues. Current student enrolments in PhD programs were also ascertained.

**Data analysis**

Returned questionnaires were separated from envelopes and assigned an identification number by the author (LT) with little knowledge of the Australian research community. Data from the closed questions were entered into spreadsheets. Data from open questions were coded using the open coding method of grounded theory (Strauss and Corbin 1991), with line by line examination of responses and the development of a coding tree that represented the discrete ideas underlying each sentence or word. These data were independently coded by two examiners and any discrepancy was resolved by consultation.

**Results**

**Participants**

We identified 87 Australian physiotherapists, who had completed a PhD degree up to the end of March, 2006. Fifty-six questionnaires were returned representing a 64% response rate. Fourteen respondents (25%) were male and 41 (73%) were female (one did not disclose gender). Thirty-one (55%) were aged 41-50, with 12 (21%) older than 50 years and 10 (18%) aged 31-40. Only three (5%) were aged 21-30 years. Over 50% had completed their PhD since 2000 (Figure 1). In 2006, 100 physiotherapists were enrolled in PhDs in Australia.

The majority of participants completed their doctorate in Victoria or New South Wales; 4 (7%) had trained overseas and were now working in Australia (Table 1). Thirty-two (57%) completed the doctorate within a school of physiotherapy. The remainder graduated from faculties of

**Table 1.** Number (%) of participants by location of PhD.

Location	Participants (n = 56)
Victoria	21 (38)
New South Wales	13 (23)
Western Australia	7 (13)
Queensland	6 (11)
South Australia	4 (7)
Tasmania	1 (2)
United Kingdom	4 (7)

**Table 2.** Participants' top three reasons for undertaking a PhD by number (%\*).

Reasons for undertaking a PhD	Participants (n = 56)
Clinical research interest	39 (70)
Needed to pursue a university career	25 (45)
Greater career opportunities	20 (36)
Boredom with clinical work	19 (34)
Improve patient care	18 (32)
Dissatisfaction with clinical career options	9 (16)
Job flexibility	7 (13)
Opportunity to supervise students	4 (7)
Financial reward	1 (2)

\*Multiple answers were provided by each individual. % does not add to 100

medicine (n = 8), bioengineering (n = 2), pharmacology (n = 2), anatomy (n = 2), biochemistry (n = 2), biosciences (n = 3), psychology (n = 1), public health (n = 1), surgery (n = 1), physiology (n = 1), and community medicine (n = 1).

The most common reason for undertaking a PhD degree was an interest in clinical research (Table 2). The requirement to complete a doctorate to pursue a university career was ranked second.

**Research employment and funding**

Only two participants were not currently employed in a research capacity (Table 3). Of the 54 who were, 22 (41%) were employed full-time and 28 (52%) were part-time; the remaining four (7%) were either casual or unspecified. They engaged in research-related tasks such as student supervision and teaching, project management, research development, and grant and manuscript writing. Among the research-active participants, 48 (89%) reported completing unpaid work each week that supported research (eg, reviewing other peoples' manuscripts and grants, supporting professional journals). Time spent on these activities varied across the sample: 1-5 hours (n = 12, 22%); 6-10 hours (n = 16, 30%); 11-15 hours (n = 14, 26%); with 5 (9%) working as much as 16-35 hours per week in this capacity.

Of the research-active participants, 33 (61%) were employed in tenured (ongoing/secure) positions funded by their employer (Table 4). Those employed in untenured positions, were often funded from more than one source, with funding typically expected to last between 2 and 3 years (Table 5).

**Table 3.** Number (%) of participants by place of employment.

Place of employment	Participants (n = 56)
University only	29 (52)
Public hospital only	3 (5)
Research institute only	1 (2)
University-public hospital mix	9 (16)
University-research institute	1 (2)
Public hospital-research institute	2 (4)
University-public hospital-research institute	3 (5)
Private practice	2 (4)
Other (government department, pharmaceutical company)	4 (7)
No longer employed in research (illness, poor pay)	2 (4)

**Table 4.** Number (%) of tenured and untenured participants by source of funding.

Funding source	Participants (n = 54)
Tenured	33 (63)
University	28 (53)
Public hospital	3 (6)
Research institute	2 (4)
Untenured	20 (37)
University	7 (13)
NHMRC grant	5 (9)
Other grant	5 (9)
Private hospital	1 (2)
Not specified	2 (4)

### Clinical employment

Twenty-one participants (38%) were still engaged in clinical work. For the 35 (63%) who were not, lack of time was the reason most commonly cited (n = 17, 49%). A further 7 (20%) reported that they could not combine clinical and research work (but would like to). Six (17%) were not interested in clinical work, and five (14%) were prevented from undertaking clinical work by injury or illness.

### Job satisfaction and perceived support

Of the research-active participants, 46 (85%) were either very or moderately satisfied with their job. Uncertainty about job security and poor remuneration were commonly reported as influencing job satisfaction.

Asked whether they perceived research (and researchers) to be valued, 30 participants (54%) felt that research (and researchers) were valued by the profession, and 35 (63%) felt valued by their clinical colleagues. One-third of participants did not feel that research was valued and around 10% were unsure.

### Current career paths

Fifty-one participants provided a synopsis of the career paths leading to their current employment. Three main career paths were identified: 1) academic, 2) clinical, and 3)

**Table 5.** Number (%) of participants by expected duration of untenured funding

Expected duration of untenured funding	Participants (n = 20)
< 1 year	2 (13)
1–2 years	4 (25)
2–3 years	8 (50)
3–5 years	2 (13)
Not specified	4 (25)

mixed. In the academic path, 27 (53%) began their research careers within a university and remained there. Fourteen (27%) had followed a clinical path, maintaining roles within hospital or private practice settings. For these individuals, a move from part-time research work to full-time research work was common as funding improved. The remaining 10 (20%) had taken a mixed path, with movement in and out of industry/government sectors (eg, pharmaceutical industry, departments of health) into university or hospital appointments. The large range in age and research training history of the participants prevented identification of common time lines for the development of career paths.

### Future career paths

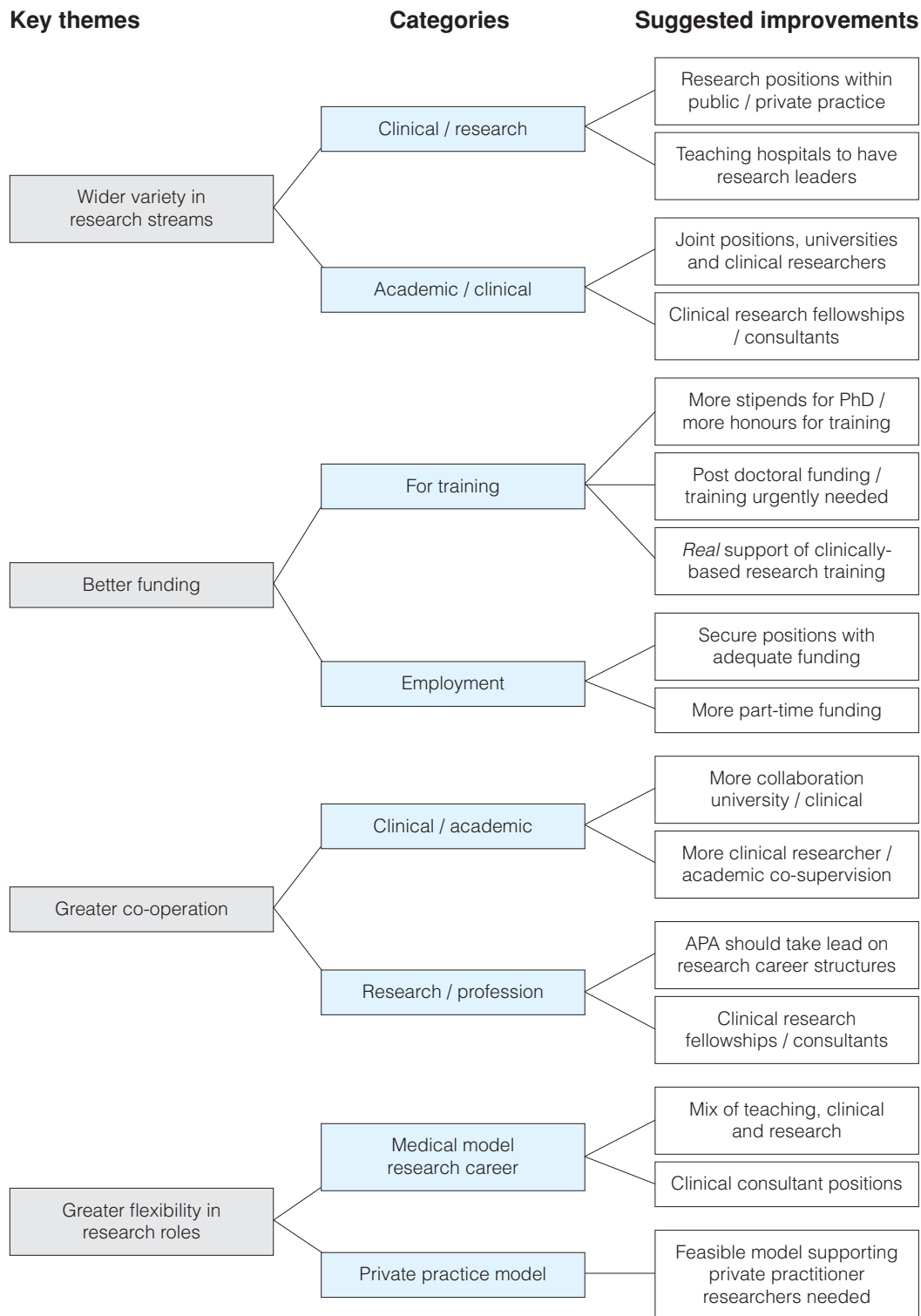
Fifty participants provided views on the research career paths they would like to see in the future. The four main themes that emerged were the need for: 1) greater variety in research careers; 2) better funding for research positions and training, particularly at the post doctoral level; 3) greater co-operation between researchers and the profession; and 4) greater flexibility to move between research and clinical (both public and private) and academic domains (Figure 2).

The greatest single improvement suggested by the participants was more joint clinical/academic appointments to supplement the pure academic or pure research paths that are currently most common. Twenty-nine respondents (58%) suggested that joint appointments would enhance physiotherapy research careers by improving collaboration, fostering excellence, helping drive clinically-relevant projects, and improving remuneration and job security.

The need for better remuneration was noted by 20 participants (40%). Improved research training opportunities for clinicians and for post-doctoral fellows was advocated strongly. The current absence of a secure, well-funded career path following a doctoral degree was noted as a significant problem for researchers by 24 participants (48%). Limited part-time funding opportunities were also a problem. Better career mentoring was considered highly desirable in any future research career structure.

The need for real and 'tangible' support for research within the clinical sphere was emphasised by 5 participants (10%). Suggestions included: 'quarantined time allocation; backfill; support for writing and conference attendance; better recognition of skills and contribution within the industrial/promotion system'. One participant noted that in the United Kingdom, improved research support was achieved when the profession advocated for, and achieved, a 20% mandatory funded research component as part of each senior clinician's job description.

Fifteen participants (30%) suggested that improved co-operation between academic and clinical researchers would



**Figure 2.** Future career paths model, showing key themes, categories and examples of suggested improvements

meet the need for research to be conducted in ‘real world clinical settings’ and would ‘enhance research training opportunities’. More co-supervision between researchers in clinical and academic domains was suggested. Similarly, 14 participants (28%) emphasised the need for the profession to take the lead in helping develop better physiotherapy research career paths. Improved recognition of the role that researchers play in enhancing the reputation of the profession both within the health care system and the public domain was deemed important. Two participants suggested that a clinical research consultant position, equivalent to a

clinical consultant, should be considered.

In the final theme *Greater flexibility in roles* two models were suggested. One was pursuit of a ‘medical model’ research career pathway. The medical model encourages a combination of clinical work (at a consultant level) and participation in teaching as well as dedicated research time. This model would suit clinically-based researchers working in large teaching hospitals. The second model was a flexible model to suit private practitioner researchers.

## Discussion

There has been exponential growth in the number of physiotherapists electing to undertake research training to the highest level in the past six years and consideration of the career paths that might be available for these individuals is important. To our knowledge, this is the first study to explore the issue of research career paths in physiotherapy. Although this study was limited to those with PhDs, this should not be taken to indicate that physiotherapists who have undertaken other forms of research training (eg masters, professional doctorates) are not an important part of the physiotherapy research community. They are. However physiotherapists who have undertaken a PhD more commonly pursue a research career path, which was the focus of this study.

Participants indicated that the dominant driver for pursuit of a research career was an interest in answering clinically-driven questions. Approximately one-third of physiotherapist researchers continued with clinical work, with those that did not typically reporting that they would like to but could not fit this into their current role. There is a perceived divide between academics (university based physiotherapist researchers) and clinicians, with a perception that physiotherapist researchers in universities do not understand the clinician or the patient perspective (Crosbie 2000). Rather than finding that physiotherapist researchers were happy no longer to engage in clinical work, in the majority of cases, we found that the opposite was true. Furthermore, the most common suggestion for improving career paths was the development of more joint clinical/academic positions.

Although most physiotherapist researchers reported moderate levels of job satisfaction, lack of dedicated research time was a source of frustration for academic and clinical researchers alike. They reported that other time-critical tasks such as teaching, patient care, or day-to-day administration, were 'taking over' or being given 'higher priority by managers'. In any career there are multiple demands, however, the findings of this study highlighted that research time is vulnerable and that ways to prevent its loss should be pursued.

Improved pay and job security are needed in future career paths, particularly for those not employed in permanent positions. Pursuit of research-only career paths, funded typically by grant monies, saw physiotherapist researchers in this study earning less than clinicians, at least initially, with uncertainty about how long their funding would last. Greater funding opportunities for part-time research work and better mentoring were also deemed important. Those in academic positions reported greater job security. However, given the current financial constraints that exist within the university system throughout Australia, an increase in the number of full time academic (research) positions within universities is unlikely. Both factors, greater job security with low staff turnover, and little foreseeable increase in the number of positions, means that additional career options for researchers are needed.

A limitation of this study is that despite an extensive search, not all physiotherapists with a PhD were identified. Furthermore, a 100% response rate was not achieved. Nevertheless, the response rate was acceptable for an anonymous questionnaire and the data from this study are

likely to be representative of the target population. A major theme of the results was the need to develop alternative pathways that allow physiotherapist researchers to use their skills and expertise.

There has been surprisingly little discussion in the international physiotherapy literature about research career paths. While research is clearly valued in the United Kingdom, Canada and the United States, from available documents it is difficult to determine what, if any, attention is being paid to the issue of career path development for physiotherapist researchers (Chartered Society of Physiotherapists 1995, Chartered Society of Physiotherapists 2004, Richards 1990, Shields 2006). In Australia, Brauer and colleagues (2007) reported on a model developed to foster clinician-led research, while Crosbie (2000) provided an overview of what the Australian physiotherapy profession has achieved through research. He argued that the polarisation of clinical work and research should not exist. He commented that in other professions (eg nursing) clinical professors exist who are leaders in both research and clinical practice and noted that in our profession there are few such positions.

Physiotherapy is not the only profession to experience an increase in the research expertise of clinicians over recent years. Clinical psychologists now support a 'scientist-practitioner' path for psychologists who wish to pursue research and clinical practice (Davila et al 2006). In the field of mental health, high attrition of post-doctoral fellows from research careers has led to the development of early career researcher support that includes high levels of mentoring and training in research survival skills (Reynolds et al 2007, Waitzkin et al 2006).

Right now, the next generation of physiotherapist researchers is being trained. While some of the career paths suggested in this study are likely to develop naturally over time as we achieve a critical mass of research-active physiotherapists, others require a shift in funding, culture, or behaviour on the part of Government health departments, managers, clinicians, the professional body, and the researchers themselves. Before new career paths can develop, open dialogue is needed between stakeholders who share a commitment to finding solutions to the current challenges. The development of secure, adequately remunerated research career paths should be a high priority if we wish to maintain a vibrant research culture.

**eAddenda:** Appendix 1 available at [www.physiotherapy.asn.au](http://www.physiotherapy.asn.au)

**Ethics:** Ethical approval was granted by the Human Research Ethics Committee of Austin Health, Victoria.

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## **Statement regarding registration of clinical trials from the Editorial Board of *Australian Journal of Physiotherapy***

This journal now requires registration of clinical trials. All clinical trials submitted to *Australian Journal of Physiotherapy* must have been registered prospectively in a publicly-accessible trials register. We will accept any register that satisfies the International Committee of Medical Journal Editors requirements. Authors must provide the name and address of the register and the trial registration number on submission.