Physiotherapy clinical education in Australia: Development and validation of a survey instrument to profile clinical educator characteristics, experience and training requirements.

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ABSTRACT

Clinical education (also termed "clinical supervision") is essential for entry-level physiotherapy student training. Physiotherapists providing clinical education have a vital role in facilitating student learning and assessing performance, however research suggests that many assume this role due to willingness, availability or expectation rather than skills or experience. There is a lack of literature internationally describing the involvement of physiotherapists in clinical education, and currently no valid and reliable survey instrument with which to collect this information. The purpose of this study was to develop and validate a survey to explore physiotherapy clinical education in Australia. A draft online survey was developed and reviewed by expert physiotherapists, clinical education managers and clinical educators to ensure face and content validity. Following revision, physiotherapists employed in various healthcare facilities pilot-tested the survey. Survey utility and internal consistency were then evaluated. The final survey has 39 questions in five sections with categorical, Likert and free text response options. Internal consistency of the variables in the two Likert scale questions was acceptable (Cronbach's alpha: 0.98 and 0.97, respectively). A valid and reliable survey has been developed and can be used to profile the professional characteristics of physiotherapy clinical educators, perceived barriers and training requirements related to the provision of clinical education.

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INTRODUCTION

Clinical education is an essential component of all entry-level physiotherapy training programmes including, bachelor graduate-entry masters and doctoral degrees (World Confederation for Physical Therapy (WCPT), 2011). Physiotherapy clinical education provides an opportunity for entry-level students to apply theoretical concepts and skills acquired at university to 'real-life' situations with patients and team members (Buccieri, Pivko & Olzenk, 2011; Jette, Nelson & Wetherbee, 2014; Patton, Higgs & Smith, 2013; WCPT, 2011; Wetherbee, Buccieri, Fitzpatrick, Timmerberg & Stolfi, 2014) and is necessary to prepare students to enter the workforce as competent health professionals (Crosbie et al., 2002; Delany & Bragge, 2009; Ernstzen, Bitzer & Grimmer-Somers, 2010; Giles, Wetherbee & Johnson, 2003; WCPT, 2011). In Australia and New Zealand, the structure and duration of clinical education is similar across all entry-level physiotherapy training programmes and students are evaluated using a common assessment tool against the same standards of practice (Australian Physiotherapy Council (APC), 2016a; Crosbie et al., 2002; Dalton, Davidson, & Keating, 2011; McAllister & Nagarajan, 2015). Typically in Australia, physiotherapy students undertake clinical placements in five week blocks in a variety of clinical settings, such as public and private hospitals, private practices and community based facilities. During these clinical education placements, students are responsible for managing people across the lifespan with musculoskeletal, neurological or cardiorespiratory pathology under the supervision and instruction of a qualified physiotherapist, commonly referred to as a clinical educator (Fish, Pickering & Hagler 2005; WCPT, 2011). In the discipline of physiotherapy, clinical educators (Australian terminology, in this instance, as often termed "clinical supervisors" in New Zealand) play a vital role in facilitating learning of physiotherapy students through the provision of clinical training, supervision and assessment of competence to practise (Ernstzen et al., 2010; Greenfield et al., 2012; Best, 2005).

Over the past decade there has been a large increase in the number of tertiary institutions offering entry-level physiotherapy

programmes within Australia and internationally (Bennett, 2003; McMeeken, Grant, Webb, Krause & Garnett, 2008; Rodgers, Dunn & Lautar, 2008). This has resulted in an overall rise in the total number of physiotherapy students (Crosbie et al., 2002, Dean et al., 2009, Johnston, Newstead, Sanderson, Wakely & Osmotherly, 2016; McMeeken et al., 2008), with a 34% increase in the number of students enrolled in approved physiotherapy training programmes in Australia between 2011 and 2013 alone (Health Workforce Australia (HWA), 2014). As a consequence, the demand for physiotherapy clinical placements has also increased (Bennett, 2003; Edgar & Connaughton, 2014; Johnston et al., 2016; McMeeken et al., 2008) and is recognised by physiotherapy professional organisations as a key challenge facing the workforce (Australian Physiotherapy Association (APA), 2015). It is currently not clear how the increasing demand for clinical placements is being met by physiotherapists employed in clinical settings. In recent years, some changes have occurred with respect to the structure and delivery of clinical education, including changes in the ratio of students allocated to clinical educators and the introduction of simulated learning experiences, which may assist in meeting the rising demand for physiotherapy clinical placements (Blackstock et al, 2013; Currens, 2003; Lekkas et al, 2007; Moore, Morris, Crouch & Martin, 2003; Watson et al, 2012). In addition to these changes, it is also possible that physiotherapists already involved in clinical education are more frequently providing experiences for physiotherapy students (Bennett, 2003), or that physiotherapists are assuming a clinical educator role earlier in their career (Rogers, Lautar & Dunn, 2010). Previous research suggests that some physiotherapists are involved in clinical education due to willingness, availability or as a job expectation rather than because of demonstrated skills, experience and confidence in facilitating student learning (McMeeken, 2008; Öhman, Hägg & Dahlgren, 2005; Rodger et al., 2008; Rodgers et al, 2008; Sevenhuysen & Haines, 2011). Although not thoroughly investigated, a rising demand for clinical education placements, and increasing reliance on a range of physiotherapists to assume the role of a clinical educator, might impact upon the overall quality of clinical experiences and student learning outcomes. This could be related to inexperience and a lack of confidence in the provision of varying aspects of clinical education, such as clinical instruction, providing feedback and assessment.

To maintain the quality of clinical education experiences, it is imperative that physiotherapists involved in clinical education are adequately prepared for, and supported in, their role (Higgs & McAllister, 2007; McAllister, Blithell & Higgs, 2010; Recker-Hughes, Mowder-Tinney & Pivko, 2010). One method of ensuring this is to provide effective training regarding clinical education and supervision, particularly for novice clinical educators (Currens & Bithell, 2000; Edgar & Connaughton, 2014; Greenfield et al., 2014; Higgs & McAllister, 2005; Jarski, Kulig & Olson, 1990; Öhman et al., 2005; Recker-Hughes et al., 2010). In Australia and New Zealand, clinical education training resources are available through individual workplaces, universities and professional organisations, such as the Australian Health Education Training Institute (HETI). However the content of these materials, and mode of delivery, are often generic and participation is not mandatory for physiotherapists in Australia or New Zealand prior to becoming a clinical educator. Available training programmes and materials related to clinical education may not be targeted to the individual skill levels of physiotherapists with respect to clinical education, or the needs of physiotherapists based on factors such as work type, setting and geographical location. In addition, it is not clear if current methods of training are effective in developing the clinical education skills of physiotherapists, particularly novice clinical educators, or if training methods impact on student learning and assessment outcomes in the clinical setting.

At present, little is known about the characteristics of physiotherapists involved in student clinical education in Australia or New Zealand, including their professional qualifications, clinical and clinical education experience, and perceived training needs regarding entry-level physiotherapy student clinical education. A comprehensive review of published literature identified a limited number of studies exploring the professional characteristics and experience of physiotherapists involved in student clinical education (Buccieri et al., 2006; Giles, Wetherbee & Johnson, 2003; Morren, Gordon & Sawyer, 2008). These publications present data obtained from cross-sectional surveys of clinical educators affiliated with physiotherapy training programmes in various locations within the United States of America. Findings from these studies cannot necessarily be extrapolated to physiotherapy clinical educators in Australia or New Zealand due to differences in the structure of entry-level physiotherapy clinical education, the assessment of entry-level students in the clinical setting, and the availability and content of training opportunities relating to physiotherapy clinical education. No similar literature focusing on the professional characteristics, experience and training requirements of physiotherapists involved in clinical education in Australia or New Zealand was identified.

To ensure that physiotherapists are adequately prepared to be clinical educators, and optimise the quality of clinical education experiences, it is necessary to gain an understanding of contemporary clinical education practices. At present, no published validated survey instrument exists to obtain detailed information regarding clinical education from the physiotherapy workforce in Australia or New Zealand. Surveys used to gather similar data in the United States of America (Buccieri et al., 2006; Giles et al., 2003; Morren et al., 2008) have not been validated for use with the Australian or New Zealand physiotherapy workforce, and the content is not relevant to this population due to differences in the structure of clinical education and available training opportunities. Therefore the purpose of this study was to develop and validate a survey instrument to profile physiotherapy clinical education initially in Australia, including: the professional characteristics of physiotherapists; barriers preventing involvement in clinical education and training requirements relating to entry-level student clinical education.

METHODS

This research project was conducted between October 2015 and June 2016 and occurred in three discrete stages (presented in Figure 1) based on published literature relating to survey development and validation (Keszei, Novak & Streiner, 2010;

Liamputtong, 2010; Sarantakos, 2005; Streiner, Norman & Cairney, 2014): (i) survey item development and expert review; (ii) survey face and content validity testing; (iii) survey utility and internal reliability testing. The proposed methodology was deemed appropriate to ensure the developed survey instrument adequately covered the intended scope of interest, would produce reliable information and would be sufficient to describe the professional characteristics, experience and training requirements of physiotherapists regarding student clinical education (Liamputtong, 2010; Streiner et al., 2014).

Ethics approval was received from the University of Sydney (Reference no. 2015/785) and Northern Sydney Central Coast Local Health District (LNR/16/HAWKE/147) Human Research Ethics Committees.

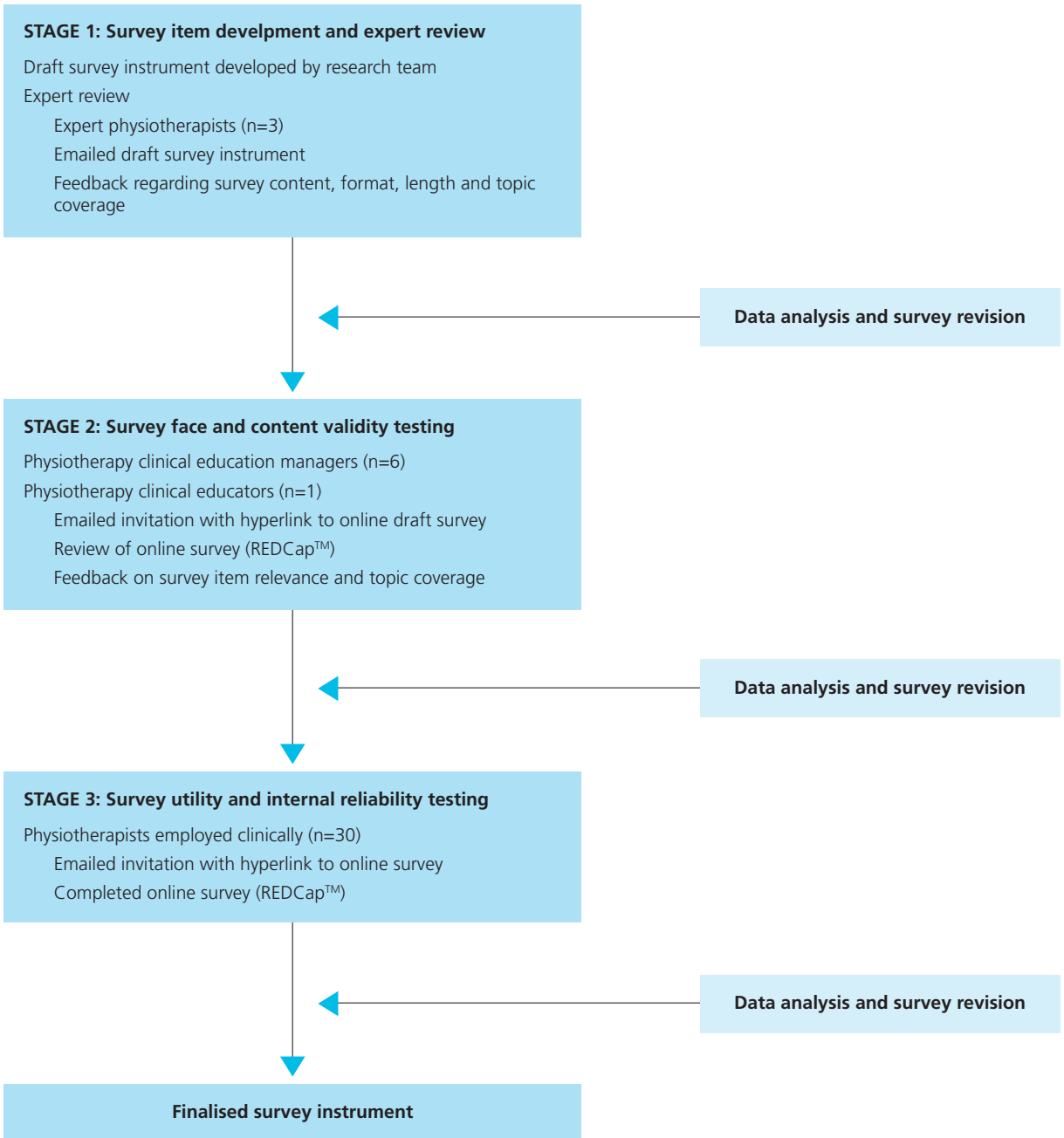

Figure 1: Stages of survey instrument development and validation

Stage 1: Survey item development and expert review

Participants

Draft survey items were based on gaps in current literature and developed by a multi-professional research team with professional backgrounds in physiotherapy, speech pathology and nutrition and dietetics. All members of the research team had prior experience in entry-level student clinical education and clinical educator training. Following development of the draft survey items, a convenience sample of three physiotherapists was selected to review these items and overall survey structure. The selected physiotherapists were known to the research team and were chosen due to their past experience of greater than ten years facilitating student learning in clinical and academic settings. In an attempt to minimise bias associated with this convenience sample, the physiotherapists chosen differed with respect to gender, physiotherapy qualifications, workplace and setting and geographical location (public healthcare facilities and a tertiary education institution across metropolitan and regional areas of New South Wales, Australia).

Data collection

A single email invitation containing a copy of the draft survey items was sent to all three physiotherapists by a member of the research team. These physiotherapists were asked to review the draft survey items and provide feedback via reply email regarding question format, survey content and survey structure, including the overall length of the draft survey instrument.

Data analysis

Written response data provided by the expert physiotherapists were collated and reviewed by the research team. Based on this feedback a draft survey instrument was created in online format using Research Data Capture (REDCap™), a web-based application hosted at the University of Sydney (Harris et al., 2009). The developed draft survey instrument consisted of 38 questions in five sections: demographic data; work type and location; experience and opinions regarding physiotherapy clinical education; physiotherapy clinical educator training and general comments. Survey item responses included a combination of closed categorical questions (for example, participant demographics), Likert scale items (relating to participant experience and confidence in various aspects of clinical education) and free-text response options. The developed draft survey instrument, in online format, was subject to further review to ensure face and content validity. Establishing face and content validity of the survey instrument was deemed necessary to ensure the survey content adequately covered aspects of clinical education relating to the professional characteristics of physiotherapists, barriers preventing involvement in clinical education and training requirements relating to entry-level student clinical education (Imms & Greaves, 2010).

Stage 2: Survey face and content validity testing

Participants

A sample of academic physiotherapy clinical education managers (ACEM) and physiotherapy clinical educators (CE) were selected to participate in face and content validity testing of the draft online survey instrument. Physiotherapy ACEM participants were employees of Australian universities delivering physiotherapy training programmes. The contact details of the ACEM participants (n=6) were obtained from individual university websites. In Australian states or territories with more than one entry-level physiotherapy training programme, one ACEM from one university was randomly selected to participate.

Physiotherapy CE participants were purposefully selected from a university database of physiotherapists regularly involved in clinical education for entry-level physiotherapy students. To ensure a representative sample of physiotherapy participants, the following selection criteria were used: a male and female physiotherapist, working in public and private healthcare facilities across metropolitan and regional areas of Australia (n=6).

Data collection

An email invitation was sent to selected physiotherapy ACEMs (n=6) and CEs (n=6) inviting them to participate in the face and content validity testing of the survey instrument. This email invitation contained a participant information statement, a brief explanation of the research project including the survey aims, and a link to the online survey instrument. Participants were asked to indicate whether or not they thought each individual survey item was relevant to the topic and if it should be included in the final survey instrument. Participants were asked to provide written feedback on each survey item and explain why they thought any item should be excluded. A free text section was also provided for participants to give general feedback on any aspect of the survey instrument. A single reminder email was sent two weeks following the initial email invitation. All responses were anonymous.

Data analysis

A matrix of participant responses was created and any survey items identified by participants as not being relevant to the overall project aims, along with corresponding written comments, were reviewed by the research team. Consensus of all members of the research team was required prior to excluding or amending any individual survey item. Following data analysis a revised draft survey instrument was created and hosted online using REDCap™ (Harris et al., 2009).

Stage 3: Survey utility and internal reliability testing

Participants

The revised draft survey instrument was subject to online testing to evaluate the utility of the instrument and inter-item consistency of survey scale items (Streiner et al., 2014; Liamputtong, 2010). A sample of physiotherapists (n=97) employed in public and private healthcare facilities were invited to participate in pilot testing the online survey instrument. To ensure that physiotherapists were represented from differing workplaces, convenience sampling was used to select healthcare facilities from one Australian state (New South Wales) and included two private physiotherapy practices and two public hospital facilities, including associated community physiotherapy services. Each of these facilities were located in metropolitan and regional areas.

Data collection

Publicly available sources were used to obtain the contact details of the managers of the physiotherapy private practice

and hospital facilities. Managers of these facilities distributed an invitation to participate in pilot testing of the anonymous online survey instrument, on behalf of the research team, to all physiotherapists employed at their healthcare facility. Each invitation contained a participant information statement and a link to the survey instrument, hosted on REDCap™ (Harris et al., 2009) software. Participants were instructed to access and read the information statement and complete the anonymous online survey instrument. A reminder email was sent by the same means to all participants two weeks and four weeks following the initial invite.

Data analysis

Final pilot survey data were transferred from REDCap™ (Harris et al., 2009) to SPSS software (Version 20.0. Armonk, NY: IBM Corp) for further analysis. All closed categorical response options were reviewed to determine if any responses were consistently omitted from any individual survey item. Free text responses were reviewed to ensure that written data were relevant to the question in terms of providing an appropriately positively or negatively framed response based on individual attitudes or beliefs. For the survey items consisting of Likert scale items, an inter-item correlation matrix was developed and each subscale analysed to ensure a Cronbach's alpha coefficient of greater than 0.7 (Nunnally & Bernstein, 1994).

RESULTS

Stage 1: Survey Item development and expert review

All three expert physiotherapists invited to review the original draft survey items provided feedback to the research team. Minor suggestions were made regarding wording for clarity; for example, one physiotherapist suggested the addition of an introductory paragraph at the commencement of sections two and three of the survey instrument to define a 'primary physiotherapy role', an 'entry-level physiotherapy student' and the role of a 'primary physiotherapy clinical educator'. In addition, two physiotherapists suggested incorporating extra response options for categorical questions in section four of the survey relating to physiotherapy clinical education training. For example, one physiotherapist suggested the addition of a single response option to a question asking participants to indicate why they had not participated in any additional training related to clinical education post-graduation. All changes suggested by the expert physiotherapists were made accordingly, none of the physiotherapists suggested the removal of any individual survey item, and only one participant recommended the addition of a question asking participants to provide the postcode of their workplace. This question was incorporated to allow more thorough analysis of participant responses based on geographical location. The experts invited to review the survey instrument indicated that the survey structure was logical and of appropriate length with an estimated a completion time of 15 to 20 minutes.

Stage 2: Survey face and content validity testing

Six physiotherapy ACEMs (100%) and one physiotherapy CE (17%) reviewed the survey to evaluate the face and content validity. Responses consisted primarily of written feedback relating to wording of survey items for clarity and suggestions for expansion of categorical question response options. For example, some physiotherapy ACEM participants suggested the addition of free text response options to allow participants to elaborate on training they had previously received relating to clinical education, barriers to accessing training opportunities and content to be included in the development of future training programmes. These changes were made to the relevant survey item responses as suggested.

A small number of participants questioned the relevance of the survey items relating to participant demographic and workplace information in sections one and two of the draft survey, for example, questions relating to participant post graduate qualifications, current work status, and location of workplace by Australian state or territory. All questions were discussed by the research team and a collective decision made to retain all demographic items in the final survey instrument to allow for thorough exploration of the professional characteristics of physiotherapists involved in physiotherapy student clinical education, consistent with the overall aims of the survey instrument.

Stage 3: Survey utility and internal reliability testing

The demographic data relating to participant characteristics for Stage 3: Survey utility and internal reliability testing are presented in Table 1.Thirty physiotherapists participated in pilot testing the survey instrument, with an overall response rate of 32%. The mean age of participants was 33 years (SD 10 years), with a mean of 11 years (SD 8 years) of experience working as a physiotherapist in a clinical setting. The majority of physiotherapists were employed in public hospital facilities in metropolitan and regional areas of New South Wales, Australia.

Review of participant responses indicated that the survey instrument was functioning as intended in its online format with respect to access via the survey hyperlink, data format rules and 'skip logic' functions. Review of written response data indicated that all questions were interpreted appropriately. In total, 29 (94%) returned surveys were completed in full, suggesting the survey length and content was appropriate. Across all questions requiring a closed categorical response, only seven questions yielded missing data, amounting to a total of 15 (1%) omitted data points. The highest rate of missing data was observed for question 7 (asking participants to indicate the number of years they had worked as a physiotherapist in a clinical role), with no response from four participants (13%). Only one response was missing from a single Likert sub-item in one survey question. All data provided in the free text sections were consistently relevant to the corresponding survey item, with no misinterpretation of any individual question based on response. Written responses were provided by more than 63% of participants (n=19) for each question requiring a free text response.

Item-total correlation for the 16 Likert scale items in questions 25 and 26, relating to participants' 'experience' and 'confidence' with various components of clinical education ranged from 0.79 to 0.96 and 0.73 to 0.92, respectively. Likewise, the sixteen Likert scale items in questions 25 and 26 demonstrated 'excellent' internal reliability (Nunnally & Bernstein, 1994) with an overall Cronbach's alpha coefficient of 0.98 and 0.97, respectively. No individual Likert sub-items were removed from either question 25 or 26 of the survey instrument.

Table 1: Stage 3: Survey utility and internal reliability testing – Participant characteristics.

Respondent characteristics	n (%)
Gender	
Female	17 (57)
Male	13 (43)
Entry-level physiotherapy qualification	
Bachelor degree	26 (87)
Graduate-entry Masters	4 (13)
Post-graduate qualification	
Graduate diploma	1 (3)
Coursework masters	3 (10)
None	24 (80)
Missing	2 (7)
Location of entry-level training	
Australia	30 (100)
Employment status	
Full time	26 (87)
Part time	4 (13)
Primary job classification	
Clinician	26 (87)
Administrator	1 (3)
Educator/teacher	3 (10)
Primary work setting	
Private practice	8 (27)
Hospital (inpatient service)	17 (57)
Hospital (outpatient service)	5 (17)
Rehabilitation service	1 (3)
Educational facility	1 (3)
Community health service	2 (7)
Population of primary workplace location	
Less than 5 000 people	1 (3)
Between 5 001 & 10 000 people	1 (3)
Between 10 001 & 25 000 people	0 (0)
Between 25 001 & 100 000 people	18 (64)
Greater than 100 000 people	10 (30)
*Classification of workplace location (MMM)**	
MMM1	18 (60)
MMM3	12 (40)

Note: *MMM=Modified Monash Model classification (1 – 7) of geographical location.

DISCUSSION

The outcome of this study is the development of a valid and reliable survey instrument (Appendix 1). To the authors' knowledge, this is the first published valid and reliable survey instrument which can be used to gather data regarding: the professional profile of physiotherapists in Australia, their experience in entry-level physiotherapy student clinical education, barriers to providing clinical education experiences and perceived training needs relating to clinical education. The survey instrument was developed with input from a multi-professional research team, based on gaps in current literature and utilising published recommendations for survey item development and evaluation (Liamputtong, 2010; Streiner et al., 2014). The final survey instrument, consisting of 39 questions in five sections, is user-friendly, easily comprehensible and of appropriate length and content for use with Australian physiotherapists.

The methodology used to develop and validate the survey instrument was rigorous and based on a classical test theory process (Liamputtong, 2010) and published literature describing survey instrument validation (Liamputtong, 2010; Streiner et al., 2014). In accordance with author recommendations, the project occurred in several well defined stages including survey item creation, expert review, and pilot testing prior to the formulation of a final survey instrument (Sarantakos, 2005). Individual survey items and corresponding response options were extensively reviewed and revised to minimise measurement error, with careful consideration given to the overall survey length and structure in order to enhance utility (Liamputtong, 2010). Face and content validity of the survey instrument, along with internal consistency of survey items, were evaluated using response data from a cross section of physiotherapists from one Australian state where initial survey dissemination is planned. In addition, comparisons can be made between the participants in the pilot testing stage of the research project and the physiotherapy workforce in Australia in terms of gender, age, years of physiotherapy clinical experience and physiotherapy qualifications attained (Australian Institute of Health and Welfare (AIHW), 2014; Australian Government Department of Health National Health Workforce Dataset (NHWDS), 2015). Although most respondents in the survey pilot testing phase were employed in public hospitals, responses were obtained from physiotherapists in a range of work settings including outpatient, rehabilitation, community, educational and private practice facilities.

The development and validation of a survey instrument relating to physiotherapy clinical education is likely to be of interest to physiotherapists, and other allied health professionals, employed in academic and clinical education management roles at tertiary education institutions in Australia and by association, New Zealand. As highlighted in published literature, obtaining information regarding the professional profile of physiotherapists involved in the clinical education of entry-level students is essential in order to provide training and support relevant to the needs of clinical educators (Crosbie et al., 2002), and the survey instrument developed from this study can be used by tertiary institutions for this purpose. Information obtained from completion of this survey instrument will

provide a greater insight into the professional characteristics of physiotherapists currently involved in student clinical education, along with those who are planning on becoming involved in clinical education in the future. Furthermore, invaluable information regarding the barriers to accessing physiotherapy clinical educator training, such as associated cost, travel, time and knowledge of training opportunities, will be obtained. Collecting this information will assist in improving the quality of physiotherapy clinical education experiences available for entry-level physiotherapy students through the provision of targeted training and support for physiotherapists involved in clinical education.

Although the survey instrument has been developed and validated for dissemination amongst Australian physiotherapists, globally clinical education is a common element of all health professional education programmes (Patton et al., 2013), and the results of this research may be of interest to physiotherapists internationally, as well as other allied health professionals. The survey instrument could be adapted in the future to explore the professional characteristics, experience and training requirements of clinical educators in different health professions and geographical locations, including New Zealand. Collecting information related to clinical education in different health professions and geographical locations would enable comparison of clinical education practices and training needs. This information could assist in the development of novel support and training models for individual health professions, or the development of multi-professional training resources based on common needs.

Limitations

The main limitation of this research project was that a small sample of physiotherapists from only one Australian state were invited to pilot test the survey instrument. However, in Australia the standards of physiotherapy practice and entry-level physiotherapy training are regulated nationally by the Australian Physiotherapy Council (APC) (APC 2016a; APC, 2016b; HWA, 2014). Furthermore the practice thresholds for physiotherapists are the same for Australia and New Zealand ensuring consistency in physiotherapy standards, and entry-level physiotherapy student training, across Australia and New Zealand (Physiotherapy Board of Australia and Physiotherapy Board of New Zealand, 2015). In addition, physiotherapists involved in pilot testing the survey instrument were employed in public and private healthcare facilities in metropolitan and regional areas and are likely to be representative of the final survey target population.

CONCLUSION

A valid and reliable survey instrument has been developed with input from a multi-professional research team and following extensive review by a range of physiotherapists. The survey instrument will be used to gather information relating to the professional characteristics, experience and training requirements of Australian physiotherapists regarding entry-level student clinical education. Information obtained from future research projects utilising this survey will assist in addressing gaps in published literature regarding the involvement of physiotherapists in entry-level student clinical education. In addition, the data collected from Australian physiotherapists using this survey could form the foundation of further research into the preparation of physiotherapists for the role of a clinical educator.

KEY POINTS

1. Clinical education is an essential component of all entry-level physiotherapy training programmes. During clinical education experiences, students are supervised by qualified physiotherapists commonly referred to as a clinical educators. Clinical educators play a vital role in the provision of student clinical training and assessment of competence.
2. Due to an increasing number of students enrolled in entry-level training programmes, the demand for physiotherapists to participate in clinical education is also increasing. There is a need to explore the professional profile of physiotherapists in Australia and New Zealand, including: their involvement in entry-level physiotherapy student clinical education, participation in training relating to student clinical education, barriers to accessing available training opportunities and perceived training needs.
3. No published validated survey instrument exists to obtain information from Australian physiotherapists regarding their professional characteristics, experience and training requirements. This study describes the processes of developing a valid survey instrument which can be used to gather this information.

DISCLOSURES

No funding was received for any part of this research project. The authors declare no conflicts of interest.

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APPENDIX 1

Final survey instrument

Physiotherapy Clinical Education in Australia: Educator characteristics, experience and training requirements.

Section 1: Demographic data - Information about you and your physiotherapy qualification

1. What is your gender?
   - ☐ Male
   - ☐ Female
2. What is your age in years?

   _____
3. Which of the following describes the entry-level physiotherapy training programme you completed? (Select one)
   - ☐ Diploma
   - ☐ Bachelor degree
   - ☐ Masters degree
   - ☐ Professional doctorate
4. In what year did you complete your entry-level physiotherapy qualification?

   _____
5. Where did you complete your entry level physiotherapy qualification? (Select one)
   - ☐ Australia
   - ☐ Overseas, please specify the country below:

   _____
6. Since completing your entry-level physiotherapy qualification, have you completed any of the following post graduate qualifications? (Select all that apply)
   - ☐ Graduate certificate (Please specify area of study below)
   - ☐ Graduate diploma (Please specify area of study below)
   - ☐ Masters degree (coursework) (Please specify area of study below)
   - ☐ Masters degree (research)
   - ☐ Doctorate (Professional) (Please specify area of study below)
   - ☐ Doctorate (PhD)
   - ☐ Other (Please specify area of study below)
   - ☐ I have not completed any post-graduate qualifications
7. How many years have you worked as a physiotherapist in a clinical role? (Excluding breaks of greater than one year)?

   _____
   - ☐ I have never worked as a physiotherapist in a clinical setting
8. Are you a member of any of the following education related professional associations? (Select all that apply)
   - ☐ Australian Physiotherapy Association (APA) Educator's group
   - ☐ Australian and New Zealand Association for Health Professional Educators (ANZAHPE)
   - ☐ Australian Collaborative Education Network (ACEN)
   - ☐ Association for Medical Education in Europe (AMEE)
   - ☐ Other, please specify

   _____
   - ☐ I am not a member of any education related professional associations

Section 2: Information about your work type and location

This section contains questions regarding your work type and location. Some questions in this section ask you to indicate your 'primary' physiotherapy role, workplace and area of expertise. The term 'primary' refers to the physiotherapy role, workplace and area of expertise in which you spend most of your time during a typical working week.

9. Which of the following describes your current work status? (Select one)
   - ☐ Full-time
   - ☐ Part-time
   - ☐ Casual
   - ☐ Retired
   - ☐ Not currently working (Proceed to Q. 17)

10. Which of the following describes your primary physiotherapy role? (Select one)
   - ☐ Clinician (including managers also providing clinical services)
   - ☐ Administrator (including managers not providing clinical services)
   - ☐ Teacher or educator
   - ☐ Researcher
   - ☐ Not currently employed in a physiotherapy role
   - ☐ Other, please specify

   _____

11. Which of the following describes your current primary place of work? (Select all that apply)
   - ☐ Private practice
   - ☐ Hospital (excluding outpatient services)
   - ☐ Outpatient service
   - ☐ Rehabilitation service
   - ☐ Educational facility (e.g. University or TAFE)
   - ☐ Community health services
   - ☐ Residential aged care facility
   - ☐ Other residential care facility
   - ☐ Other commercial business/service
   - ☐ Other government department or agency
   - ☐ Other, please specify

   _____

   - ☐ Not applicable

12. In which state or territory are you currently working? (Select all that apply)
   - ☐ New South Wales
   - ☐ Victoria
   - ☐ Queensland
   - ☐ Western Australia
   - ☐ South Australia
   - ☐ Tasmania
   - ☐ Northern Territory
   - ☐ Australian Capital Territory
   - ☐ am not currently working in Australia

13. Which of the following best describes the population of the town or city in which your workplace is located? (Select one)
   - ☐ Less than 5 000 people
   - ☐ 5 001 – 10 000 people
   - ☐ 10 001 – 25 000 people
   - ☐ 25 001 –100 000 people
   - ☐ Greater than 100 000 people

14. What is the postcode of the town or city in which your workplace is located?

   _____

Section 3: Your experience and opinions regarding physiotherapy clinical education

This section contains questions regarding your experience with, and opinions towards, supervising entry-level physiotherapy students in a clinical setting. 'Entry-level' physiotherapy students are those who are completing their primary physiotherapy qualification, such as a bachelor, graduate masters or doctorate of physiotherapy. The term 'entry-level' does not include those completing post-graduate physiotherapy qualifications.

Throughout this section, some questions require you to describe your current or previous involvement in entry-level physiotherapy student clinical education. In this section, a 'clinical educator' refers to a therapist who is involved in teaching, supervising and assessing physiotherapy students on clinical placement (including instances where student training and assessment may be shared with one or more physiotherapists). A 'primary clinical educator' refers to a physiotherapist who has the main responsibility for the organisation, teaching and assessment of entry-level physiotherapy students on clinical placement.

15. As a part of your current role, are you ever a clinical educator for entry-level physiotherapy students? (Select one)
    - ☐ Yes (Proceed to Q 20)
    - ☐ No
16. In your current role, if you are not involved in entry-level physiotherapy student clinical education briefly indicate the reason(s) why?

    _____
17. Have you ever been a clinical educator for entry-level physiotherapy student(s)? (Select one)
    - ☐ Yes **(Proceed to Q. 20)**
    - ☐ No
18. If you have never been a clinical educator for entry-level physiotherapy students briefly indicate the reason(s) why:

    _____
19. Are you planning on supervising your first entry-level physiotherapy student(s), as a primary clinical educator, during the next year? (Select one)
    - ☐ Yes **(Proceed to Q. 25)**
    - ☐ No **(Proceed to Q. 25)**
20. Which of the following best describes your involvement in entry-level physiotherapy student clinical education? (select one)
    - ☐ Physiotherapy clinical educator with no other clinical caseload
    - ☐ Physiotherapist with own clinical caseload, and a primary supervisor of physiotherapy students
    - ☐ Physiotherapist with own clinical caseload, and sometimes involved in supervising physiotherapy students
    - ☐ Other, please specify
21. When did you last supervise an entry-level physiotherapy student(s)? (Select one)
    - ☐ Within the last year
    - ☐ Approximately two to five years ago
    - ☐ Approximately six to ten years ago
    - ☐ Greater than ten years ago
22. In total, approximately how many entry-level physiotherapy students have you been the primary clinical educator for? (Select one)
    - ☐ Less than 5
    - ☐ 5 to 20
    - ☐ 20 to 50
    - ☐ 50 to 100
    - ☐ Greater than 100
23. On average, when you are/were a primary clinical educator for entry-level physiotherapy students, how many students do/did you supervise at one time? (Select one)
    - ☐ One
    - ☐ Two
    - ☐ Three
    - ☐ Four
    - ☐ Greater than four
24. In which area of physiotherapy practice do/did you supervise entry-level physiotherapy students? (Select all that apply)
    - ☐ Mixed general
    - ☐ Musculoskeletal
    - ☐ Orthopaedics/trauma
    - ☐ Cardiorespiratory
    - ☐ Neurological
    - ☐ General rehabilitation
    - ☐ Paediatrics
    - ☐ Aged care
    - ☐ Women's health
    - ☐ Other (e.g. burns, hand therapy, oncology, palliative care), please specify

    _____

25. In the following table, please indicate your level of **EXPERIENCE** with each component of entry-level physiotherapy student clinical education:

Component of clinical education	LEVEL OF EXPERIENCE				
	Not at all experienced	Slightly experienced	Moderately experienced	Very experienced	Not applicable
Pre-placement preparation	☐	☐	☐	☐	☐
Organising clinical placement experiences	☐	☐	☐	☐	☐
Providing student orientation	☐	☐	☐	☐	☐
Teaching theoretical concepts	☐	☐	☐	☐	☐
Teaching practical skills	☐	☐	☐	☐	☐
Teaching clinical reasoning skills	☐	☐	☐	☐	☐
Teaching/modelling professional behaviours	☐	☐	☐	☐	☐
Providing feedback on student performance	☐	☐	☐	☐	☐
Identifying a student's strengths	☐	☐	☐	☐	☐
Identifying a student's area(s) for improvement	☐	☐	☐	☐	☐
Providing students with strategies to improve/addressing learning needs	☐	☐	☐	☐	☐
Performing a formative ('mid-placement') assessment	☐	☐	☐	☐	☐
Performing a summative ('end of placement') assessment	☐	☐	☐	☐	☐
Managing multiple students at one time	☐	☐	☐	☐	☐
Balancing other clinical responsibilities and student supervision	☐	☐	☐	☐	☐
Managing challenging students	☐	☐	☐	☐	☐

26. In the following table, please indicate your level of **CONFIDENCE** with each component of entry-level physiotherapy student clinical education:

Component of clinical education	LEVEL OF CONFIDENCE				
	Not at all confident	Slightly confident	Moderately confident	Very confident	Not applicable
Pre-placement preparation	☐	☐	☐	☐	☐
Organising clinical placement experiences	☐	☐	☐	☐	☐
Providing student orientation	☐	☐	☐	☐	☐
Teaching theoretical concepts	☐	☐	☐	☐	☐
Teaching practical skills	☐	☐	☐	☐	☐
Teaching clinical reasoning skills	☐	☐	☐	☐	☐
Teaching/modelling professional behaviours	☐	☐	☐	☐	☐
Providing feedback on student performance	☐	☐	☐	☐	☐
Identifying a student's strengths	☐	☐	☐	☐	☐
Identifying a student's area(s) for improvement	☐	☐	☐	☐	☐
Providing students with strategies to improve/addressing learning needs	☐	☐	☐	☐	☐
Performing a formative ('mid-placement') assessment	☐	☐	☐	☐	☐
Performing a summative ('end of placement') assessment	☐	☐	☐	☐	☐
Managing multiple students at one time	☐	☐	☐	☐	☐
Balancing other clinical responsibilities and student supervision	☐	☐	☐	☐	☐
Managing challenging students	☐	☐	☐	☐	☐

27. In the section below, list the three main factors that you think would motivate you to participate in physiotherapy student clinical education

28. In the section below, list the three main factors that you think could be a barrier to you participating in physiotherapy clinical education

29. In the section below briefly describe what you feel are the main benefits and challenges of physiotherapy clinical education for you, your workplace/department and your patients/clients:

	Benefits	Challenges
Yourself		
Your physiotherapy department (i.e. other physiotherapists and/or physiotherapy services)		
Your workplace (i.e. other staff and/or services within your workplace)		
Your clients/patients		

Section 4: Physiotherapy clinical educator training

30. Did you receive any preparation and/or information as a part of your entry-level physiotherapy programme to prepare you to be a clinical educator? (Select one)

- ☐ Yes, please specify

_____

- ☐ No
- ☐ Unsure

31. Do you think that entry level physiotherapy training programmes should include any training and/or information to prepare graduates to be clinical educators? (Select one)

- ☐ Yes, please specify

_____

- ☐ No
- ☐ Unsure

32. Have you participated in any additional training programmes, related to clinical education, since receiving your entry level qualification? (Select one)

- ☐ Yes
- ☐ No **(Proceed to Q. 34)**

33. In what form was your additional training related to student clinical education delivered? (Select all that apply)

- ☐ Lecture(s) or seminar(s)
- ☐ Online training programme(s)
- ☐ Workshop(s) or short course(s)
- ☐ Higher degree (e.g. PhD, EdD, Masters degree)
- ☐ Other, please specify

_____

(Proceed to Q.35)

34. What are the main reason(s) you have not participated in any additional training, related to clinical education, since receiving your entry level qualification? (Select all that apply)

- ☐ I am not aware of any available clinical education training programmes
- ☐ I find it difficult to access clinical education training programmes
- ☐ There are no training opportunities available in my region
- ☐ I find training programmes too expensive
- ☐ I do not have the time to attend training programmes
- ☐ My workplace does not enable or encourage me to attend training programmes
- ☐ I do not think I would benefit from available training programmes
- ☐ I am not interested in further training in clinical education
- ☐ I do not believe you need training to be a clinical educator
- ☐ Other, please specify:

35. Do you think you require more training related to physiotherapy student clinical education? (Select one)

- ☐ Yes
- ☐ No

36. Do you think physiotherapists should complete formal training or credentialing prior to becoming a primary clinical educator? (Select one)

- ☐ Yes
- ☐ No
- ☐ Unsure

37. List three aspects of physiotherapy student clinical education that you think training should cover

38. Do you think physiotherapists should have their skills related to entry-level student clinical education (such as teaching, assessment and feedback) evaluated prior to becoming a primary clinical educator? (Select one)

- ☐ Yes
- ☐ No
- ☐ Unsure

Section 5: General comments

39. Do you have any additional comments relating to any aspect of entry-level physiotherapy student clinical education or physiotherapy clinical educator training?

Thank you for completing this survey