

---

## RESEARCH ARTICLE

# Clinical Placements: The Perspectives of UK Physiotherapy Students on How Prepared they were by their University for their First Clinical Placements: an example of one HEI

Di Thomson, Daniel Boyle, Christopher Legg, Mathew Owen,  
Melanie Newman & Mary-Jane Cole

St George's, School of Rehabilitation Sciences, University of London, Cranmer Terrace, London SW17 0RE, UK

### Corresponding author:

Dr Di Thomson, Senior Lecturer, St George's, University of London, Cranmer Terrace, London SW17 0RE, UK  
Email: d.thomson@sgul.kingston.ac.uk, Phone: +44 (0)208 725 0377

---

## Abstract

*Background.* Clinical placements are an integral component of physiotherapy education as they give physiotherapy students the opportunity to apply their academic knowledge and skills and at the same time universities aim to provide an education that responds to the demands of practice settings.

*Objective.* This study aims to investigate the perceptions of second year physiotherapy students on a range of aspects regarding their university's education as a preparation for their first clinical placement.

*Method.* Second-year physiotherapy students were invited to participate in a survey before and after engaging in their first clinical placement. Domains covered by the survey were: knowledge and skills, professionalism, communication, inter-professional awareness, and stress, coping and support.

*Results.* The findings revealed that although the students felt prepared with regard to their anatomy, physiology, manual handling and treatment strategies they felt unprepared in patient record keeping, clinical reasoning, goal setting and communicating with families and carers.

*Conclusion.* Universities can do much to ease their students' path into the clinical setting and create a seamless transition from academic life to the world of practice. Possible ways in which this could be achieved are discussed.

**Keywords:** clinical placements, academic curricula, physiotherapy students, survey, theory-practice gap

## Introduction

Practice education, also referred to as clinical placements, fieldwork or internships is a vital component of the education of healthcare professionals and in the UK student

physiotherapists are required to undertake clinical placements as part of their education in very diverse clinical settings. The purpose of these placements is to provide the students with the necessary practical experience for beginning their career as a physiotherapist and it is in this context that students' professional socialisation begins (Miller & Solomon 2002). Hence, the clinical aspect of physiotherapy students' education sees them placed in a 'complex social context with many formal and informal learning opportunities' (Brown *et al.* 2011, p23). With regard to learning, clinical environments differ from an academic setting in that they expose students to a variety of unplanned and unstructured activities (Brown *et al.* 2011) whereas classroom learning is more organised (Ernstzen *et al.* 2009). Additionally, although service users', patients' and carers' involvement (Thomson & Hilton 2012) and inter-professional education is increasing the class room setting, as yet, does not provide as much engagement with these groups compared to a clinical setting. This is an important consideration because, in taking a situated perspective (Skoien *et al.* 2009) different environments and social contexts undoubtedly have varying ramifications for the response of learners and, thus, on what is actually learnt (Jones & Sheppard 2008, Skoien *et al.* 2009).

With this in mind, the university-based preparatory education might be looked on as a form of 'front-loaded instruction' (Brown *et al.* 2011) to the student, as to what might be demanded of them on clinical placement, or expected of them by their clinical educator, patients and the wider social and professional institution of which they are to become temporary members. However as Newton *et al.* (2009) maintain there are difficulties translating the academic curricula into real-life situations and this is the source of the debate regarding the theory-practice gap. The authors rationalize that this may be due to the fact that academic and clinical environments are managed differently and students are required to undertake a process of translation rather than one of transition. Garraway (2010) concurs with these observations and concedes that knowledge at work and knowledge at university are differently structured, differently acquired and used for different purposes. Clinical practice placements consist of unpredictable situations, responding to the needs and preferences of patients, adapting to new circumstances, seeing all the perspectives on a situation and are therefore a combination of the practical and discursive aspects of knowing. The lack of predictability means that practice is not simply the application of propositional knowledge that can control and anticipate occurrences; it is an integration of propositional, craft and personal knowledge (Thomson 2005).

The move from a hospital to a university education for student physiotherapists in the UK has strengthened evidence-based practice in the profession and hence its academic underpinning and this is generally perceived as being very positive. Robinson (2002) asserts that it has initiated a move by physiotherapists to a critical analysis, clinical reasoning based approach in the management of their patients, underpinned, where available, by current evidence. On the negative side the delivery of academic knowledge in a university setting is very different from how it is used in the workplace and this could hamper the students' use of it in a clinical placement (Newton *et al.* 2009). Garraway (2010) supports this by asserting that academic knowledge tends to be codified in the form of academic subjects which have explicit learning objectives and structure. Swanick & Morris (2010) summed it up by stating that knowledge accrued at university is learning-as-acquisition and practice knowledge is learning-as-participation.

One way proposed by Crist & Keilhofner (2005), and colleagues, to bridge the academia-practice gap is to implement the 'Scholarship of Practice' model. This is a commitment to conduct research as a specific response to questions initiated by practitioners and by developing partnerships between practitioners and academics (Taylor 2011). However, Bonsakesen *et al.* (2013) observed that students as a group appear to be neglected as

stakeholders in this debate. Their study implemented a collaborative project which explored students' and their clinical educators' perceptions of an assessment produced by practitioners to assess communication and interaction skills (ACIS) of patients with mental health problems. The students specifically valued the concrete nature of the knowledge that was gained from using the assessment in which they were able to base either feedback to individual clients or reports to other members of the multidisciplinary team (MDT). Thus, one way to bridge the theory-practice gap might be to increase the collaboration between universities and clinicians so that a 'translation' of the academic curricula in the clinical setting would be unnecessary.

The present study focuses on students' perceptions regarding the extent to which their university education prepares them for their clinical placements. Brown *et al.* (2011) in their review found a mismatch between perceived and preferred expectations of undergraduate health science students from eight different healthcare disciplines, including physiotherapy. Similarly, Delany & Bragge (2009) sought to develop practical teaching and learning strategies by studying both the students' experience on their first clinical placements and the clinical educators' perceptions of their role in the teaching and learning process. One of the recommendations espoused by their study was to increase the students' preparation before the clinical experience. The area of communication skills, in terms of interactions and negotiations with both patients and other healthcare team members, is explicitly mentioned in relation to this recommendation (Delany & Bragge 2009). On the other hand Hall *et al.* (2012) found that although an overwhelming majority of both students and clinical educators presented a very positive view of the clinical placement experience they did not attribute preparation as a factor in their positive perceptions. Instead, the clinical educators cited the attitudes of the students as important and the students highlighted the attributes of the educators. Both these studies emanate from outside the UK and are based on the views of health professionals as well as physiotherapists. Therefore it seems appropriate to explore the experience of physiotherapy students educated within the UK. Each programme in UK universities varies in emphasis, structure and staff expertise but all programmes have to be validated by the Health Care Professions Council (HCPC) and scrutinised by the Chartered Society of Physiotherapy who attend re-validation events every five years. There is therefore a commonality between programmes and all require their students to do a minimum of 1000 hours of practice in clinical settings (HCPC 2012).

The purpose of this study is therefore to explore second year physiotherapy students' perceptions of their university-based preparatory education for their first clinical placements in the following domains: knowledge & skill; professionalism and inter-professional awareness; communication; and finally, stress, coping and support.

An inherent necessity of this preparation is that the students are given adequate insight into the clinical placement environment and an understanding of what to expect and what might be expected of them. Such prior insight is an important part of preparation because it should help students to better focus on areas of their own personal and professional development that require particular attention (e.g. weaknesses). It should also help to identify aspects of the placement where they can expose themselves to new areas of experiential learning for expanding their physiotherapeutic scope (e.g. opportunities), and help to recognise potential factors acting as limitations to their development (e.g. threats). Insights into the forthcoming experiences also help to clarify uncertainties and dispel some of the apprehension that may be experienced leading up to clinical placements. Before the initiation of clinical practice placements, the university bears the considerable responsibility of adequately preparing students for this experience. The level of students' preparation for the workplace has become an important focus in the academic literature (Hunt *et al.* 1998). This preparation involves equipping students with the necessary knowledge and skills required to perform at an acceptable level in the clinical environment, thereby enabling

them to harness fully the benefits of these valuable opportunities and achieve maximal professional development.

There is no formal feedback mechanism directly related to students' university-based preparation for the clinical environment that covers all of the aspects addressed by this study and furthermore, there appears no current literature that addresses whether students' perceived level of preparedness before clinical placement matches what, by the end of their placement, they come to realise was their actual level of preparedness in relation to the various aspects of the Physiotherapy course.

It is hoped that the results of the study may highlight any gaps, or areas requiring further emphasis, within this university's preparatory education that would be of benefit to future physiotherapy students engaging in their first clinical experience. It is also justified by the idea that a greater understanding of students' perceptions of preparedness for placement may help the academic institution's staff provide students with greater insight into, and understanding of, the nature of clinical placements and professional practice before their first placement. This research is intended to not only contribute to the on-going processes of evaluation and improvement of physiotherapy education in this institution but its format may also be of interest to researchers in other institutions.

## Methods

### Participants

Purposive sampling was carried out and the paper questionnaire (see Supplementary files 1 and 2 (insert link to DOI)) was distributed by the researchers (who were not part of this cohort) to all the students in the second year of their three-year programme. They were completed one week before and a week after the students undertook their first clinical placement. This five-week clinical placement took place during the first semester of the second year. These placements varied but were situated both in the community and in hospital settings (Table 1). Oral and written explanations of the purpose of the study were given. Voluntary participation was guaranteed and the students were allowed to take as long as they wished for the completion of the questionnaire. The students were asked their age and gender and their student number to allow for comparison of the pre and post questionnaires.

**Table 1** Distribution of Clinical Specialties.

	Frequency	%	
Clinical Specialties	Neurological	11	22
	MSK Outpatients	8	16
	Elderly	7	14
	Paediatrics	7	14
	Respiratory	5	10
	Community	4	8
	Palliative	2	4
	Oncology	2	4
	Orthopaedics	2	4
	Amputee	1	2
	Mental Health	1	2

## Questionnaire

This is a survey-based research design that consists of a set of predetermined questions, in this case, in the form of a questionnaire that is given to a specific group to assess their thoughts, opinions, and feelings on a specific topic. This is mainly a quantitative approach that provides numerical data and delivers statistical significance. As well as closed questions the questionnaire also contained some open questions that invited comments from the students about their preparedness for their clinical placement experiences. The questionnaire was based, although not exclusively, on the current Clinical Placement Assessment Form, on whose criteria participants are marked during their first Clinical Placement (<http://support.pmpartnership.org.uk>.) As well as a literature search a pilot study was conducted in order to assess the feasibility and validity of the questionnaire to enhance its application. The pilot study included six physiotherapy students (who did not take part in the study) followed by a focus group discussion. Feedback highlighted several areas where either improvements could be made or questions added to this widely used assessment. All clinical placements are currently managed by the Placement Management Partnership which is a joint venture between 10 participating universities in the South East of England. The placement assessment form which is being used currently was collaboratively developed and designed by these 10 Higher Education Institutions. A 6-point Likert scale was used to ensure that the participants gave a viewpoint rather than a neutral answer, thereby producing richer data and reducing social desirability bias arising from the participants' desire to appear helpful or not to be seen to give what they perceive as being a socially unacceptable answer.

## Analysis

Data obtained from the questionnaire was analysed using the Statistical Package for Social Sciences (SPSS), version 16 for Windows. Inferential statistics were used in the form of the Spearman Rank Correlation.

Responses from the open questions were converted to a numerical value with the aid of a Coding Frame, where a numerical value is allocated to each answer category (Oppenheim 2001). The questionnaire contained three open-ended questions asking the students to identify three causes of stress whilst on placement, as well as three strengths and three weaknesses of their physiotherapy education as a preparation for their practice placement. The common topics identified are given as a percentage of the total participants who took part in the study ( $n = 50$ ).

## Ethics

Ethical approval for the study was gained before data collection by the Faculty Research Ethics Committee and all ethically approved procedures were undertaken during the data collection.

## Results

### Demographic details of the participants

Fifty second-year physiotherapy students completed the questionnaire ( $n = 50$ ; 74% response rate). The mean age of the participants was 24.92 (range 19–39; s.d. 5.33). There was an equal number of male ( $n = 25$ ; 50%) and female ( $n = 25$ ; 50%) participants. The participants were spread across eleven different areas of clinical speciality.

## Knowledge and skills

Table 2 presents the students' post-placement responses of how prepared they were in eleven different areas of knowledge and skills. Of note, a high proportion of students felt prepared in anatomy, physiology, manual handling, assessment and treatment. Areas that had high percentages of students feeling unprepared by their university as reported after their placement were patient record keeping (74%) and goal setting (56%) with outcome measures (46%) and clinical reasoning (42%) having moderately high levels of students reporting that they felt unprepared.

**Table 2** Second-year UK Physiotherapy students' post-placement perceptions of preparedness for Clinical Placement - Knowledge and Skills.

	Unprepared %			Prepared %			Total %	Total %
	Extremely	Very	Somewhat	Somewhat	Very	Extremely	Unprepared	Prepared
Anatomy	0	4	10	28	54	4	14	86
Physiology	0	2	16	40	40	2	18	82
Pathology	2	2	32	36	28	0	36	64
Manual Handling	0	4	16	28	32	20	20	80
Assessment	0	4	24	40	24	8	28	72
Treatment	0	0	22	52	24	2	22	78
Clinical Reasoning	0	8	34	36	18	4	42	58
Patient record keeping	10	28	36	12	10	4	74	26
Outcome Measures	2	10	34	40	12	2	46	54
SMART Goals (with patient)	4	14	38	24	12	8	56	44
MDT Working	2	8	16	32	18	24	26	74

## Professionalism and inter-professional awareness

In the post-placement questionnaire, all participants (100%) felt they had been adequately informed about professionalism and what being a healthcare practitioner entails. Eighty-six percent (86%) of participants in the post-placement questionnaire felt that the university's physiotherapy course preparation and training in relation to understanding the role of a physiotherapist within a multi-disciplinary team had been 'comprehensive' (somewhat, very or extremely comprehensive).

## Communication

Table 3 presents the students' post-placement responses of how prepared they were in communication skills. It was found that 80% ( $n = 40$ ) of students felt that the education they had received in communicating with other healthcare professionals and patients was 'comprehensive' while 48% ( $n = 24$ ) rated the education they had received in communicating with patients' families and carers as 'limited'.

## Level of association between pre- and post-placement responses

The results from the Spearman Rank correlation test revealed that thirteen variables had a significant association ( $p < 0.05$ ) between pre- and post-placement responses (Table 4). A statistically significant association between the pre and post level of preparedness (either positive or negative) was demonstrated in knowledge of anatomy, MDT working skills, communication with patients, families and carers, the role of the MDT and the importance

**Table 3** Second-year UK Physiotherapy students' post-placement perceptions of communication preparedness.

	Extremely limited	Very limited	Somewhat limited	Somewhat comprehensive	Very comprehensive	Extremely comprehensive	Limited total	Comprehensive Total
Other HPCs	2%	4%	14%	32%	26%	22%	20%	80%
Patients	2%	6%	12%	30%	28%	22%	20%	80%
Families & Carers	4%	14%	30%	20%	14%	18%	48%	52%

of reflection. Of interest is that the students felt prepared pre and post placement in their knowledge of anatomy, patient assessment skills, MDT working skills, communication with other health professionals, communication with patients and understood the importance of reflective skills. On the other hand they felt unprepared before and had not changed their perception of their pre-placement preparation when they had completed their placements in: record keeping, clinical reasoning, outcome measures, goals setting and communicating with families and carers.

**Table 4** Results of Spearman Rank Correlation Significant values highlighted ( $p < 0.05$ ) level of association between the pre and post placement questionnaires.

Variable	Spearman rank ( $p$ value)
Knowledge of Anatomy	<0.001
Patient Assessment Skills	0.018
Clinical Reasoning Skills	0.004
Note Writing Skills	0.001
Knowledge of Outcome Measures	0.035
MDT Working Skills	<0.001
Communication with other HCP's	0.002
Communication with Patients	<0.001
Communication with Families/Carers	<0.001
Role of Physiotherapist within MDT	<0.001
Importance of Reflection	<0.001

## Open data

### Precipitators of Stress

The students were asked to identify causes of stress and those who perceived that they did suffer from stress during their placement cited time constraints (18%), clinical educator (16%), interactions with patients (16%) and record keeping (14%) (Table 5) Out of fifty participants, three (6%) required external support as a result of stress.

The strengths of the students' education were identified as the teaching in the areas of anatomy/dissection, communication, professionalism, the role of the physiotherapist within the MDT and manual handling. The most common theme highlighted by the students of the weaknesses of their education was: teaching record keeping, the lack of opportunities to interact with 'real' patients before placement, clinical reasoning and communication with patients' families and carers (Tables 6 and 7).

**Table 5** Coding frames of open questions - precipitators of stress.

Answer category	Numerical Value	Frequency	Percentage
Lack of knowledge	3	9	18
Time constraints	4	9	18
Record keeping	5	7	14
Clinical educator	6	8	16
Patient interaction	8	8	16

**Table 6** Course strengths.

Answer category	Numerical Value	Frequency	Percentage
Interprofessional learning	1	16	32
Communication skills	2	14	28
Manual Handling	4	10	20
Professionalism	5	12	24
Anatomy/Dissection	6	25	50
Practical Sessions	7	11	22
Bio-Psychosocial teaching	12	6	12

**Table 7** Course weaknesses.

Answer category	Numerical Value	Frequency	Percentage
Lack of contact with patients, carers, families	1	12	24
Record keeping teaching	2	25	50
Clinical reasoning teaching	8	8	16

## Discussion

On the whole the students in this study appeared to feel fairly satisfied with the university's preparation for their placements but some areas give cause for concern. These were patient record keeping, clinical reasoning, setting SMART (specific, measurable, achievable, realistic, time bounded) goals with patients, outcome measures and communication with family and carers. Medical record keeping is an important legal and professional requirement as it facilitates the communication of patient information to all members of the MDT and is vital to ensure holistic patient care (Higgs *et al.* 2008). Even though it might be seen as a reified form of clinical reasoning and thus possibly easier to carry out it is a 'complex process, requires practice, gives constructive feedback and opportunities for revision' (Prosser *et al.* 1997). However, students may be voicing a problem that is more general than their experiences indicate. Phillips *et al.* (2006) carried out an audit of 100 randomly selected medical records in a physiotherapy department and found the standard of documentation was significantly affected by the patient's primary diagnosis and deficiencies were found in the objective assessment and aspects of the patients' lifestyle and presentation. Enhancing the standard of clinical documentation generally may need to begin with students and universities have an opportunity to develop these skills in a setting which does not have the constraints imposed upon the students by their clinical



placements. Interestingly record keeping was mentioned by 14% of participants as a precipitator of stress during their placements and issues with speed of clinical record keeping led one participant to specifically seek external support as a result. Moreover efficient record keeping is a tangible sign of developed clinical reasoning, in which case an attempt to improve students' record keeping skills may simultaneously also boost their preparedness for clinical reasoning on their placements. The scheduling of more university-based sessions dedicated to clinical record keeping would, on the surface, seem a realistically viable consideration for course designers and facilitators, rather than leaving this for students to pick up in clinical practice alone.

Fifty six percent of the students declared they were 'unprepared' in post-placement hindsight to set SMART goals collaboratively with their patients and this may have exposed some contentious and problematic issues in practice generally. On the other hand it may not be the collaborative nature of setting SMART goals but clearly understanding what the various elements consist of. Even so, Leach *et al.* (2010) maintain that the way goal-setting and its natural link with outcome measures occurs in clinical settings has not received significant debate and is often left to the style of the individual therapists, hence universities may feel that they cannot be prescriptive in this respect. However, conjecturally, it may be a question of whether therapists see their practice within a medical model perspective or within the International Classification of Functioning, Disability and Health (ICF) framework. In the former the goals are controlled by the therapist who, following the assessment, identifies the impairments and sets the goals. In the latter a more patient-centred approach is taken in which the patient's preferences, family involvement and the multidisciplinary team's views are taken into consideration. Leach *et al.* (2010), purposively sampled five patients with neurological conditions and subsequently explored the goal setting process of the eight therapists (3 PTs, 3OTs and 2 SLTs) who were treating them. They established three categories of goal setting, therapist controlled, therapist led and patient focused that were mainly set at the level of impairment and activity limitations. This lack of patient participation has been highlighted by other authors (Baker *et al.* 2001, Parry 2004), and it is worth noting that patient-led goal setting can give a sense of autonomy, shared endeavour (relatedness) and competence, the basic requirements for motivation (Young *et al.* 2008). In many ways this is an example of the ideal versus real-world practice situations as students often imbued by the ideals of patient-centred care have to negotiate a different paradigm.

Twenty four percent of students expressed the lack of interaction with real patients before clinical placement as a weak point and 48% perceived the training they received for communicating with patients' families and carers as limited. Service users' involvement in the education of healthcare professionals is gaining ground and many universities are now introducing programmes involving service users into the education of student physiotherapists (Thomson & Hilton 2012). The purpose of these programmes is to translate the academic curricula into 'real-life situations' and although they do encounter criticism both service users and the students in Thomson & Hilton's (2012) study reported that the programme was an important venture that needed to be integrated effectively into the university curriculum.

In summary universities can do much to not only ease their students' path into the clinical situation but be trail blazers in changing the way physiotherapy is practised. Processes of user involvement, patient-centred goal setting and good record keeping seek to transform the culture of healthcare.

## Limitations

All questionnaire studies have inherent limitations because of their structured standardized format. The understanding of the questions may not be the same for all the respondents

and despite a pilot study there may have been some misinterpretations of the wording. The responses only pertain to one university although it must be said that the education of physiotherapy students is similar in all universities in the UK and there is no research that indicates that this section of the population is any different from other areas of the country. It must also be noted that as participation was voluntary those students who chose not to take part in the study may have thought differently. Additionally, those students who reported being unprepared in the various domains may not have applied themselves to the pre-placement preparation and as a result reported less confidence in their personal ability. While the students understand each placement contributes a relatively small percentage to their final degree classification it is possible that those disappointed with their placement mark may have been biased in their responses. Ultimately the findings may be viewed as an opportunity for drawing into the light some issues of concern and other universities may find the questionnaire useful for their own cohorts of students about to embark on their practice placements.

## References

- Baker, S.M., Marshak, H.H., Rice, G.T. and Zimmerman, G.J. (2001) Patient participation in physical therapy goal setting. *Physical Therapy* **81**, 1118–1126.
- Bonsakesen, T., Celo, C., Myraunet, I., Grana, K.E. and Ellingham, B. (2013) Promoting academic –practice partnerships through students’ practice placement. *International Journal of Therapy and Rehabilitation* **20**, 33–39.
- Brown, T., Williams, B., McKenna, L., Palermo, C., McCall, L., Roller, L., Hewitt, L., Molloy, L., Baird, M. and Aldabah, L. (2011) Practice education learning environments: The mismatch between perceived and preferred expectations of undergraduate health science students. *Nurse Education Today* **31**, 22–28.
- Crist, P. and Keilhofner, G. (eds.) (2005) *The scholarship of practice. Academic –practice collaboration for promoting occupational therapy*. New York: The Haworth Press Inc.
- Delany, C. and Bragge, P. (2009) A study of physiotherapy students’ and clinical educators’ perceptions of learning and teaching’. *Medical Teacher* **31**, e402–e411.
- Ernstzen, D.V., Bitzer, E. and Grimmer-Somers, K. (2009) Physiotherapy students’ and clinical teachers’ perceptions of clinical learning opportunities: a case study. *Medical Teacher* **31**, 102–115.
- Garraway, J. (2010) Knowledge boundaries and boundary-crossing in the design of work responsive university curricula. *Teaching in Higher Education* **15**, 211–222.
- Hall, M., McFalane, L.-A. and Mulholland, S. (2012) Positive clinical placements: perspectives of students and clinical educators in rehabilitation medicine. *International Journal of Therapy and Rehabilitation* **19**, 549–556.
- Health and Care Professions Council (2012) *Standards of Education and Training*.
- Higgs, J., Hummell, J. and Roe-Shaw, M. (2008) Becoming a member of a health profession: A journey of socialization. In *Contexts of Physiotherapy Practice* (eds. J. Higgs, M. Smith, G. Webb, M. Skinner and A. Croker), pp58–73. Sydney: Churchill Livingstone.
- Hunt, A., Higgs, J., Adamson, B. and Harris, L. (1998) University education and the physiotherapy profession. *Physiotherapy* **84**, 264–273.
- Jones, A. and Sheppard, L. (2008) Physiotherapy education: A proposed evidence-based model. *Advances in Physiotherapy* **10**, 9–13.

- Leach, E., Cornwell, P., Fleming, J. and Haines, T. (2010) Patient centred goal-setting in a sub-acute rehabilitation setting. *Disability and Rehabilitation* **32**, 159–172.
- Miller, P.A. and Solomon, P. (2002) The influence of a move to program management on physical therapist practice. *Physical Therapy* **82**, 449–458.
- Newton, J.M., Billett, S., Jolly, B. and Ockerby, C.M. (2009). Lost in translation: barriers to learning in health professional clinical education. *Learning in Health and Social Care* **8**, 315–327.
- Oppenheim, A.N. (2001) *Questionnaire Design, Interviewing and Attitude Measurement*, p269. London: Continuum.
- Parry, R.H. (2004) Communication during goal-setting in physiotherapy treatment sessions. *Clinical Rehabilitation* **18**, 668–682.
- Phillips, A., Stiller, K. and Williams, M. (2006) Medical Record Documentation: The quality of physiotherapy entries. *Internet Journal of Allied Health Sciences and Practice* **4**, 1–17.
- Prosser, T.R., Burke, J.M. and Hobson, E.H. (1997) Teaching Pharmacy Students to Write in the Medical Record. *American Journal of Pharmaceutical Education* **61**, 136–140.
- Robinson, P. (2002) New focus on patient consent in updated professional rules. *Frontline* **8**, 17.
- Skioen, A.K., Vagstol, U. and Raaheim, A. (2009) Learning physiotherapy in clinical practice: Student interaction in a professional context. *Physiotherapy Theory and Practice* **25**, 268–278.
- Swanick, T. and Morris, C. (2010) Shifting conceptions of learning in the workplace. *Medical Education* **44**, 538–539.
- Taylor, R.R. (2011) Scholarship of Practice: Reflections on Gary Kielhofner’s legendary vision for occupational therapy. *Occup. Ther. Health Care* **25**, 3–6.
- Thomson, D. (2005) An ethnography of physiotherapy practice: A contextual exploration into the social construction of practice. *Dissertation*, University of East Anglia, UK.
- Thomson, D. and Hilton, R. (2012) Service users’ perceptions regarding their involvement in a physiotherapy educational programme in the UK: A qualitative study. *Physiotherapy* online 29 October 2012 [<http://dx.doi.org/10.1016/j.physio.2012.07.004>].
- Young, C.A., Manmathan, G.P. and Ward, J.C.R. (2008) Perceptions of goal setting in a neurological rehabilitation unit: A qualitative study of patients, carers and staff. *Journal of Rehabilitation Medicine* **40**, 190–194.