



UNIVERSITY of LIMERICK

OLLSCOIL LUIMNIGH

MSc Occupational Therapy

OT6054: Occupational Therapy Project 4

Module Co-ordinator: Dr. Judi Pettigrew

12004251

Year 2

Word count: 5000

Due Date: 23/04/2014

How are Clinical Therapy Students prepared to become Evidence Based Practitioners?

Author: Mary-Marcella Healy

Background: There is increasing impetus for evidence based practice (EBP) to be utilised within medical and allied healthcare. To integrate this clinical evidence into everyday practice, students must be equipped with the skills and knowledge required to access this information adequately and interpret and implement this evidence when shaping their practice.

Objectives: Exploration of University of Limerick's final year clinical therapy student's experiences of acquiring EBP skills, from academic modules and practice education experiences. Student's perceptions of their preparedness in becoming evidence based practitioners post-graduation are also explored.

Methods: Qualitative study of 8 final year clinical therapy students at the University of Limerick. Data was collected through focus groups using a semi-structured interview schedule. Results were analysed using thematic analysis.

Results: All participants felt prepared and equipped with the skills to become evidence based practitioners. While EBP skills are developed throughout the academic programme, there is a perception that these skills are not utilised when students transition to professional practice. Barriers reported include time constraints, limited access to research and difficulty generalising research. Participants reported a large variation of EBP during practice education. EBP culture within practice education had a positive influence on its utilisation.

Conclusions: The importance of understanding the student experience of EBP and the academic influences is central to promoting positive change in the utilisation of EBP for students. Findings suggest implications for academic institutions and professionals. Greater collaboration should be implemented between academic programmes and practice educators. Further recommendations for professionals are discussed.

Keywords: Evidence Based Practice, students

How are Clinical Therapy Students prepared to become Evidence Based Practitioners?

Introduction

Evidence based practice (EBP) has become a cornerstone in medical care and allied healthcare (Upton and Upton 2006) and is supported internationally (Stergiou-Kita 2010). EBP was developed in the 20th Century from evidence based medicine by the medical profession (Sackett *et al.* 1996). EBP now permeates throughout the work practice of allied health professionals, including Speech and Language Therapy, Physiotherapy and Occupational Therapy (Hoffmann *et al.* 2009). The use of EBP within allied health professionals practice has increased partly due to a low level usage of proven effective therapies, unexplained wide variations in clinical practice patterns, and a reliance on technologies that proved ineffective in treatment (Walshe and Rundall 2001). The practice of evidence based medicine means "integrating individual clinical expertise with the best available external clinical evidence from systematic research" (Sackett *et al.* 1996 p. 71), and is also referred to in Occupational Therapy as the 'best practice evidence triad' (Cruzas *et al.* 2011). EBP is advocated in efficacy, efficiency, accountability, transparency and offering greater consumer choice. In order to integrate this external clinical evidence into everyday clinical practice, allied health professionals and students must be equipped with the skills and knowledge required to firstly access this information adequately, and secondly interpret and implement this evidence when shaping their practice.

The University of Limerick Occupational Therapy, Speech and Language Therapy and Physiotherapy courses are now categorised under the Department of Clinical Therapies since January, 2013. Crabtree (2012) studied Occupational Therapy Masters of Science students in an American context and outlines recommendations for further qualitative data to be gathered from students in such a context to create a better understanding of student's retention of these EBP skills. Therefore, this study explored the University of Limerick's final year clinical therapy student's experiences of acquiring EBP skills, both from their academic modules and practice education experiences. This study examines student's perceptions of their preparedness to becoming evidence based practitioners.

Literature Review

The Sicily Statement on Evidence Based Practice determines that without EBP skills professionals will experience difficulties in providing best practice for patients (Dawes *et al.* 2005). EBP can also be linked to the educational standards and professional standards as set out by the Health and Social Care Professional Act (2005). Continued implementation of EBP and continued professional development across all health care professions is now, more than ever particularly important. CORU (www.coru.ie), Ireland's first multi-profession health regulator, aims to ensure high levels of professional conduct, training and competence across health and social care professions including Occupational Therapy, Speech and Language Therapy and Physiotherapy, through statutory registration. Registration demonstrates each profession's strive to continue professional development.

The AOTAs Centennial Vision envisages that Occupational Therapy is a powerful, widely recognised, science driven, and evidence based profession with a globally connected and diverse workforce meeting society's occupational needs (AOTA 2002 p. 164) and offers an EBP Project for its members, providing resources to inform practice. Additionally, the World Federation of Occupational Therapists has revised minimum standard for the education of Occupational Therapists (Hocking 2002) which makes reference to essential skills attitudes and knowledge that informs competent practice relevant to EBP.

However, there are barriers that face continued EBP for professionals. McCurtain and Roddham (2012) found that the uptake of speech and language therapists' use of research proved to be problematic due to the nature of the evidence. Iles and Davidson (2006) found that two of the main barriers for physiotherapists were time constraints and lack of access to resources, whereas Dannapfe *et al.* (2013) identified supportive conditions in the use of research within the workplace as a requirement for EBP in the workplace. Additionally, in her study of Occupational Therapists, McCluskey (2003) found barriers to EBP including large caseloads, limited searching skills, limited appraisal skills and a perceived lack of evidence to support Occupational Therapy intervention.

While current research of EBP utilisation relates largely to qualified groups (Caldwell *et al.* 2008; Dai *et al.* 2012, Dannapfe *et al.* 2013), recently more focus has been placed on developing EBP skills in educational settings and with students (Johnston *et al.* 2003; Stronge and Cahil 2012; McEvoy *et al.* 2011; Gray *et al.* 2012; Evenson 2013). Additionally, CORU aim to ensure that the relevant educational bodies deliver qualifications that prepare professionals to provide safe and appropriate care. In a study of nursing students, Brown *et al.* (2010) found that there was a high prevalence of use, and perception of continued use of EBP in those who were clinically well prepared and held high confidence in their clinical

decision making skills. Nilsagård and Lohse (2010) found that higher levels of education positively affected EBP use for physiotherapists. Stronge and Cahill (2012) examined attitudes and behaviour of final year Occupational Therapy students towards EBP and found that 80% of participants considered themselves evidence based practitioners. Again lack of time and resources were identified as being main barriers in Occupational Therapy professional practice. Additionally, Dizon *et al.* (2012) found training of same for allied health professionals significantly influenced knowledge skills and practice. This study outlines the importance of EBP skills for clinicians; hence, there is also an importance on how clinical therapy students are equipped with these skills while studying in order to bring forward this knowledge to clinical practice.

Methodology

A qualitative study design was used in this study which examines the participants' experiences of EBP and their perceptions of how prepared they are to become evidence based practitioners. Using a qualitative approach, the researcher can look more in-depth at naturally occurring data (Silverman 2011), identifying value and meaning. A phenomenological approach was taken which is concerned with the study of the experience from the perspective of the participant, that is, human experience (Denscombe 2010) and examines an individual's subjective experience or how they interpret an experience (Rubin & Babbie 2012). It allows the researcher to describe rather than categorise, explain or define answers (Hammell *et al.*, 2005). Focus groups were chosen as the method of data collection, which uses group interactions to generate data while exploring participants' knowledge and experience (Kitzinger 1995). Focus groups also allow the researcher to interact with the participants (Stewart *et al.* 2006) and explore avenues of thought or opinion thoroughly. It encourages participants to discuss their experience on the topic by building on each other's views.

The purposive sample involved final year Clinical Therapy students at the University of Limerick. Ethical approval was granted by the University of Limerick Research Ethics Committee prior to the commencement of the study. Participants were recruited from Masters of Science in Occupational Therapy (Professional Qualification), Masters of Science in Speech and Language Therapy (Professional Qualification) and Bachelor of Science in Physiotherapy. Participants were of both genders and were over the age of 18 years. Recruitment of this sample was completed by addressing each course group individually. Access to participants was sought from each of the course directors. Permission was also sought from module leaders to distribute the 'study information sheet' and the 'expression of

interest in group interview' sheet to each group during class. To ensure participation was voluntary the student researcher left the room after both sheets had been distributed, and returned after the students had left to collect same. The students who expressed interest were contacted by the researcher to organise a date for the focus group.

Data was collected through three separate group interviews, one for each discipline. The Occupational Therapy group had 6 participants, the Physiotherapy group had 2 participants and the Speech and Language Therapy group had 2 participants. Group interviews lasted approximately 50 minutes each and took place at the University of Limerick. Each participant signed a confidentiality and anonymity consent form. Participation was completely voluntary and an option to withdraw from the focus groups at any time was given before commencement.

A semi-structured interview schedule was used consisting of 12 questions. These focused on participants understanding of EBP, learning experiences both in their current and past curriculum and field work, and opinions and attitudes for future practice. Questions were devised from a previous study of Occupational Therapy students' perceived preparedness for EBP. The principal investigator having reviewed relevant literature then formulated the questions and piloted same on graduates of an MSc Occupational Therapy course in 2012.

The focus group discussions were audio taped and transcribed verbatim. Data was stored and analysed using thematic analysis; "a method for identifying analysing and reporting patterns within data" (Braun and Clark 2006 p. 79). Analysis is begun by the method of coding, when the researcher goes through the data set line by line systematically and identifies coded extracts, also known as coding schemes. A peer review of the data was completed at this stage where both the primary researcher and student researcher reviewed the codes to show invariability. These codes were collated into potential categories and then into themes. Finally, using extract examples and relating back the analysis to the literature review and research question, the student researcher generated a report of the analysis. According to Krefting (1991) credibility requires the researcher to adequately submerge themselves in the research to enable recurrent patterns to be identified and verified, which essentially leads to research trustworthiness. Each decision making process of each phase was recorded to ensure auditability. To decrease the chance of misinterpretation, analysis, interpretations and conclusions of data were checked with participants.

Findings in Qualitative Evidence

Results were extracted from key findings of transcriptions from each of the focus groups in this study. These results were categorised into 6 themes; barriers for the use of EBP, EBP develops over time, workplace culture facilitating EBP, EBP within practice education sites and role modelling, preparedness in becoming evidence based practitioners and plans for future practice.

Barriers for the use of EBP

The barriers described by participants as impacting on the use of EBP within practice education sites include time constraints, lack of access to resources and difficulty applying research results to individual clients.

All participants' felt time constraints are a barrier to EBP. Occupational Therapy participants felt there is a preference by PE's towards client based time rather than research and that only 'practical hands on work' or clinical work is respected. Speech and Language Therapy participants identified time restrictions as being dependent on the service provision and the therapist's caseload. The more diverse the caseload of clients meant the less time therapists had to research evidence. *"depending on the service provision... you are really stretched across all these different caseloads... it's very difficult for them to keep up with current practice"* (Speech and Language Therapy Participant 1). Physiotherapy participants stated they studied research in the evenings due to time restrictions at practice education.

Another barrier to EBP was the lack of access to resources. All participants agreed that most practice education sites have limited access to current research. Occupational Therapy participants agreed that this is partly due to financial restrictions. One participant described the student on placement as being a *"vehicle to access the articles"* for PEs (Occupational Therapy Participant 1).

Speech and Language Therapy participants mentioned that it was difficult to apply results from research to a specific client and that there was a lack of evidence on the different types of cases seen in the profession *"..depending on where you are and who you're dealing with, evidence published has completely different values I think"* (Speech and Language Therapy Participant 2).

EBP develops over time

All participants agreed that EBP was a skill that developed over time. They noted it as a gradual skill and that a greater understanding was developed toward the end of the course.

It is a skill that gets easier with exposure to research and practice “..you had to design your own intervention by yourself and everything had to evidence base, every element of it ... we all became a lot more competent in it and actually realised the importance of it”

(Occupational Therapy Participant 6).

Some Physiotherapy participants found EBP’s importance in practice was only realised towards the end of the course “It’s all a bit overwhelming I suppose at the start because it’s so new it’s so different to us but as I suppose as we’re expose to it more I think it’s definitely getting easier” (Physiotherapy Participant 1).

All participants reported a difference between recently graduated clinicians more frequent use of EBP, versus more established clinicians who had graduated some time ago. All participants agreed that the latter placed more focus on clinical experience rather than current evidence.

Workplace culture facilitating EBP

Occupational Therapy and Physiotherapy participants agreed there needs to be a management focus on EBP in order for it to permeate throughout a service. The culture of an organisation was seen as important by Physiotherapy participants in that if EBP wasn’t a priority from a management level there would be a negative influence on its implementation in practice.

“I suppose it was like the environment they were working in, it wasn’t as focused from management down so it would have been harder for them to keep up” (Physiotherapy Participant 1).

In contrast, one Physiotherapy participant spoke about management’s positive influence on EBP;

“It [weekly presentations] was allowed by the management and facilitated by the management so it was much more easier for them to do their evidence based practice” (Physiotherapy Participant 2).

One Occupational Therapy participant felt that the culture of organisations specifically in health care was moving towards more EBP. This is due to upcoming registration of the profession encouraging EBP within workplace culture. Occupational Therapy participants noted EBP is important to justify the merits of the profession, in particular in role emerging and non-traditional careers where the Occupational Therapy role needs to be advocated for, theoretical rational must be used to justify interventions.

Preparedness for EBP

Overall there was a general consensus that participants felt prepared, confident and equipped with the skills to become evidence based practitioners. Speech and Language Therapy participants felt uncomfortable using methods that hadn't been proven in practice and felt this was wasting time. Physiotherapy spoke about been given skills within the course to self-direct whatever learning they needed to do in future. *"I would be confident that I'd be able to go out and kind of look at the research that's available, like critically appraise it and see which treatments are working"* (Physiotherapy Participant 1).

Both Physiotherapy and Occupational Therapy participants mentioned client preference in their explanation of EBP. Client preference wasn't mentioned in the Speech and Language Therapy focus group. University of Limerick was described by all as a university with a self-directed learning approach to EBP. All participants agreed that EBP was promoted throughout each module but not taught explicitly.

"we haven't been taught explicitly how to do it but I suppose we've been told to go and do things that have helped our evidence based practice in the long run" (Speech and Language Therapy Participant 1).

Occupational Therapy participants felt that a challenge as a basic grade would be the pressure to continue using outdated interventions that have been established in an organisation, regardless of evidence base. Some participants felt that they would not be in a position to question these work practices as new graduates. Reflective practice and EBP was noted as *"the first thing to go when you begin work as a basic grade"* (Occupational Therapy Participant 4).

EBP in Practice Education sites and role modelling

A large variation of EBP was reported by all participants while on practice education. Some participants reported seeing no EBP used, while other participants described PEs who used continuous EBP in the practice education site.

"I definitely think there's a range of different practice methods out there...some practitioner would be using outdated methods or methods which maybe have no evidence base at all" (Speech and Language Therapy Participant 2).

Participants reported finding it difficult to use EBP on sites that didn't have the same focus. *"when they (practice site) didn't have as much of a focus on it , I found it hard to have as*

much of a focus on it as in other sites so yeah it was kind of difficult to keep up with it when they weren't in keeping with it also" (Physiotherapy Participant 2).

The concept of role modelling was evident in that participants felt more likely to use EBP themselves when they had witnessed their PEs doing the same. A Speech and Language Therapy participant described their PEs interest in EBP *"she loved being on top of things ...running journal clubs and all this sort of stuff and you know she was great and really encouraging in that way"* (Speech and Language Therapy Participant 2).

Plans for future practice

In order to overcome the barriers to EBP mentioned, all participants considered the following strategies for future practice:

All participants agreed they would continue to research outside of working hours to continue professional development and knowledge around current evidence. Occupational Therapy participants plan to attend AOTI conferences for resources, to attend free training, and to utilise classmates and future colleagues as a resource. One Occupational Therapy participant said she, as a basic grade clinician, could show autonomy and designate time for research *"I think as practitioners we're going to have more autonomy than we did as students, I think that if we want we can designate more time to having research to back up our practice"* (Occupational Therapy Participant 1).

One Physiotherapy participant expressed an interest in working in a larger hospital where Continuing Professional Development is common practice. *"I'd like to end up in an environment like that where they foster your learning"*. (Physiotherapy Participant 1). Speech and Language Therapy participants spoke about being evidence based, but also having a preference for a supervisor with experience to rely on.

In summary participants had experienced many barriers to EBP and a wide variation of EBP use on practice education. These barriers and variation are a concern for participants going forward. When a site and PE had an evidence based focus, this had a positive influence on their own use of EBP. In this study EBP is a skill that is developed over time and with exposure to research. Overall the participants felt prepared to become evidence based practitioners and planned to implement strategies in order to ensure it is used in their future practice as new clinicians.

Discussion

Barriers for the use of EBP:

While graduates learn the skills of EBP when in University, these skills may not always be facilitated or utilised in the workplace and practice education settings. Pressures of caseloads, lack of resources and financial restrictions in the current economic climate result in limited time being spent on research by allied health professionals. The barriers to the facilitation of EBP, as described by participants in this study, have also been identified in previous research. (McCurtain and Roddam 2012, Iles and Davidson 2006, McCluskey 2003) have identified similar barriers to EBP with time restrictions, limited access to resources, large caseloads, and difficulty with application of evidence to the patient as being reoccurring barriers of EBP for qualified therapists. Participants have identified themselves as '*vehicles*' of access to resources for PEs, which suggests a desire for more current evidence within practice education sites. The issue of limited access to current research could be alleviated through offering of subscriptions to online academic resources for practice education sites that facilitate practice education placements for University students. This would ensure that practice sites have the most up to date research to utilise. An example of this can be seen with the access that academic work sites have to current research. Dopp *et al.* (2012) found that Occupational Therapists practicing within an academic hospital held significantly more positive view of EBP in comparison to those who were not. This may have a positive influence on the use of evidence within clinical practice for both clinicians and students over time.

Development of EBP skills over time:

Working in an EBP way is something that has been identified by participants as requiring time to develop and improve. Participants' reported that they are now prepared to use EBP skills having reached the end of their respective courses. Additionally, this study has identified participants views that more experienced clinician's tend to rely on clinical experience rather than current evidence, which according to other research may be due to lack of training in this area (Zipoli and Kennedy 2005, Dawes *et al.* 2005, McCluskey 2003). Research suggests that providing ongoing support for experienced, as well as newly qualified staff members is needed to increase confidence in the use of EBP (Upton *et al.* 2014). Bennett (2003) found that Occupational Therapists who had recently graduated or had received training in EBP had a more positive attitude towards the use of EBP compared to more experienced clinicians. Providing workshops to experienced clinicians in the use of EBP may help to develop their knowledge and skills. Upton *et al.* (2014) found a higher level of educational background was seen as a predicting factor to a more positive attitude

towards, and likelihood of implementation of EBP in the workplace for nursing staff. Koehn and Lehman (2008) highlight some educational nursing programs do not require coursework in statistics and research processes to be completed. Therefore it would be useful for Universities to offer short courses on EBP for PEs, in particular to PEs who have been practicing for some time. This may help to promote consistency in EBP for PEs and consequently students on practice education.

Practice Education and Role Modelling:

Participants described practice education sites and PEs as varying widely in their use of EBP. Students experienced their educators attending journal clubs, carrying out their own research and relying on current evidence to inform their practice, while other PEs tended to rely on their own clinical experience solely. Upton *et al.* (2014), Scurlock-Evans *et al.* (2014) and McCluskey (2003) revealed similar results of variation in both qualified Occupational Therapists' and Physiotherapists' EBP. Students, who are being assessed while on practice education may feel under pressure to perform while being assessed and graded, therefore may often model what therapists are already doing in practice, regardless of evidence base. There is a view from participants that their PE's are role models and this has been mirrored in research of health and social care students (King *et al.* 2009). Therefore, it is important that PE's agree with and understand the philosophy and content of the student's academic curriculum (Musselmann 2007, College of Occupational Therapists 2007). PE's need to lead by example and know what is expected of students while on practice education. A way of overcoming this challenge may involve the University in informing PE's about expectations that students on placement should work in an evidence based way while developing their practice skills. This may also include a more comprehensive description of the student's course curriculum to develop PE's understanding of what is expected of students while on placement. Upton *et al.* (2014) put forth that greater collaborative work between practitioners and local higher educator institutions may be a means to develop and maintain EBP skills, particularly in newly graduated therapists.

Culture of EBP:

The culture of EBP in a practice education site also impacted on the students' use of EBP. There was a view in this study that only 'practical hands on work' or clinical work is respected by some PE's and that the culture of an organisation had a huge role to play on the implementation of EBP within practice. Some participants noted that when EBP was promoted from management within practice education sites, this helped to encourage staff and students to work in an EBP way. Olsen *et al.* (2013) recognised the need for an evidence based culture if students were to successfully apply EBP in future clinical

education. Upton *et al.* (2014b) also discussed the need to assess an organisations culture to identify the needs they may require around implementing EBP. The Implementation of CORU's Professional Development Standards (2013) and upcoming registration for Occupational Therapists in Ireland will have an impact on how professionals practice. There will be expectancy that standards are met by all health professionals registered with CORU to keep up their continuing professional development (CPD) and practice in an evidence based way. The establishment of CORU will also help students who are transitioning into practice to maintain and use their evidence base practice skills that they have attained at University. Management of organisations may be more responsive to the use of EBP so that practitioners can maintain their CPD which may help to elevate some of the barriers to EBP such as time restrictions and access to resources as discussed earlier. As part of the CPD points scheme established by CORU, points could be accessed for short workshops and courses offered from Universities on skills development in EBP. Dopp *et al.* (2012) found that support from management was associated with an increased perceived capability to make changes in treatment using research evidence for practicing Occupational Therapists.

Interestingly, client preference was mentioned in descriptions of EBP by Occupational Therapy and Physiotherapy participants, which coincides with the definition of the evidence based triad (Cruzas *et al.* 2011), however Speech and Language Therapy participants did not focus on the client in their definition. Client centeredness is a key element to EBP. As University of Limerick's teaching methods of EBP skills has been described as self-directed, perhaps more of a focus on client centeredness could be incorporated into the teaching methods across disciplines. Until 2013, the research methods module was taught to each individual discipline within the Clinical Therapies Department. More recently, disciplines of Physiotherapy, Occupational Therapy and Speech and Language Therapy are being taught together. This may result in all three disciplines receiving a broader focus on EBP, including client preference. Also, with the notion of the patient or client being a consumer of a service, clients are now being more empowered and informed about the services they are receiving (Hammell 2001). This client consumerism in turn will help to improve standards of health care services being provided and ensure that both experienced and newly graduating clinicians are practicing in an evidence based way.

Implications for Practice Settings and Education:

Findings of this study show that participants feel prepared to become evidence based practitioners once they begin work as qualified therapists. They demonstrated a positive attitude towards the skills and knowledge they have gained from the University of Limerick and also while on practice education. What is evident from this study is the need for

professionals across disciplines to work in a more consistent, evidence based manner. Huge variations currently exist in knowledge, skills and attitudes towards EBP for both newly graduated and experienced clinicians who are PEs. This in turn will affect how students perceive EBP is to be applied within the clinical workplace.

The barriers to use of EBP found in this study are not new and have existed for a number of years. A greater collaboration between universities and other educating bodies and clinical practice education sites must to be implemented. These educating bodies must share their knowledge and skills needed for PEs, in particular those who have graduated some time ago, to be proficient in EBP. Universities must also allow access to resources and current evidence that is so often required, perhaps through access to online journals. Access to education for PE's may be facilitated through offering of online courses. This will address the barriers such as the cost of access to resources and the time required to travel to courses for clinicians. The request for courses around EBP is likely to increase with implementation of CORU's standards. This will make the offering of these courses economically viable for universities, and will positively impact practice education settings across disciplines.

It is evident that while clinical therapy students are on practice education they see PE's as role models and note how they work professionally. It may be beneficial for the academic programmes to encourage graduating students who have developed EBP skills, to become PE's in the near future for prospective students of clinical therapies. This will encourage these newly graduated therapists to maintain their EBP skills and create a more evidence based practice education experience. It may also help academic programmes to recruit PEs who are more newly graduated, as it has been highlighted from this study and other research that newly qualified PEs are more likely to use EBP (McCluskey 2003). This, in turn, will promote the use of EBP for students on practice education at these specific placement sites.

The implementation of a multi-discipline approach to the teaching of research methods module within the University of Limerick may offer opportunities to examine how EBP is been taught across disciplines. Students can also be made aware of the barriers that exist to the implementation of EBP and solutions these barriers can be taught within this module. Areas for further development and understanding of EBP that have been identified by participants can also be addressed, for example the need for a more client centred focus in EBP. Students could be expected to collate evidence or research a specific clinical area or set up a journal club while they are on their final placement to encourage interest and sharing of skills regarding EBP in practice education sites

Implications for Research:

Further research is recommended in the form of a longitudinal study, examining the same cohort post- graduation, and their perceptions of their EBP as clinicians after a 2 year period. This would show if EBP skills, attitudes and knowledge has been maintained and utilised within work practice as qualified clinicians.

Future research could also examine the PEs perspective on graduating clinical therapy students from the University of Limerick. This study would examine how PE's perceive clinical therapy students' preparedness for EBP and their view on EBP skills of the students, while on practice education.

Another area of research identified is that of experienced clinical therapists who have attended EBP skills workshops or short courses as proposed by this study. This research would identify if the clinical therapists have utilised this further training in the development of their EBP skills within their clinical practice.

Limitations to the study:

A limitation to this study is the small sample size of the cohort. This was a purposive sample of 3 focus groups. There were 2 participants in the Physiotherapy focus group and 2 participants in the Speech and Language Therapy focus group. A larger sized cohort may have allowed for more development of responses from these disciplines.

The principal researcher of this study is a lecturer at the University of Limerick. Perhaps if a neutral researcher was involved, there may have been different responses given by the cohort in the focus groups.

Conclusion:

In summary the participants of this study feel prepared and equipped with the skills to become evidence based practitioners in their future careers. It has been identified that while EBP skills are developed throughout the academic programme, there is a perception that these skills are often not utilised when graduating students join the workforce and begin their professional practice. Participants have identified a number of barriers to EBP from their experiences, which exist throughout practice education sites. Pressures of caseloads, lack of resources and financial restrictions in the current economic climate all impact on clinicians and students EBP in these workplaces.

Findings suggest implications for academic institutions; Greater collaboration should be implemented between student academic programmes, practice education sites and PEs in

order to share skills, knowledge and resources needed by PEs in becoming more evidence based in their practice, and to communicate needs and expectations of students who attend practice education at these sites. Academic sites should also examine how EBP is taught to students as well as implemented in practice education settings.

Findings also suggest implications for practice education sites and professionals who have an onus to practice in evidence based way. With upcoming registration for Occupational Therapists and other health professionals it is important that EBP skills are utilised in workplaces to inform best practice. Suggestions for this include access for clinicians to skills workshops and online courses on EBP as well as more access to online resources.

The importance of understanding the student experience of EBP and their academic influences is central to promoting positive change in the utilisation of EBP for students, graduating clinicians and experienced clinicians alike. Collectively positive academic experiences, influential role modelling by PEs and continuous professional development of EBP skills can safeguard that principles of EBP are utilised effectively within daily practice.

References

American Occupational Therapy, A. (2002) *Occupational therapy practice framework: domain & process*, American Occupational Therapy Association.

Bennett, S., Tooth, L., McKenna, K., Rodger, S., Strong, J., Ziviani, J., Mickan, S. and Gibson, L. (2003) 'Perceptions of evidence-based practice: A survey of Australian occupational therapists', *Australian Occupational Therapy Journal*, 50(1), 13-22.

Brown C, Kim S, Stichler J, Fields W (2010) 'Predictors of knowledge, attitudes, use and future use of evidence based practice among baccalaureate nursing students at two universities'. *Nurse Education Today* 30(6): 521–527.

Braun, V. & Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative research in psychology*, 3(2), 77-101.

Caldwell, E., Whitehead, M., Fleming, J. & Moes, L. (2008) 'Evidence-based practice in everyday clinical practice: Strategies for change in a tertiary occupational therapy department', *Australian Occupational Therapy Journal*, 55(2), 79-84.

College of Occupational Therapists (2007) *Professional Standards for Occupational Therapy Practice*, 2nd ed., London: COT.

Crabtree, J, Justiss, M, & Swinehart, S (2012), 'Occupational Therapy Master-Level Students' Evidence-Based Practice Knowledge and Skills Before and After Fieldwork', *Occupational Therapy In Health Care*, 26, 2/3, pp. 138-149

Crausaz, J., Chard, G. and Savage, E. 'Collaboratively designing a module with students as co-researchers'. available: http://www.nairtl.ie/documents/CrausazJanice_UCC.pdf [accessed 03/02/2014]

Dai, H., Burke, J. P. & Thomas, A. (2012) 'Occupational therapists' involvement views, and training needs of evidence-based practice: a rural perspective.....including commentary by Burke JP and Thomas A', *International Journal of Therapy & Rehabilitation*, 19(11), 618-628.

Dannapfe, P., Peolsson, A. and Nilsen, P. (2013) 'What supports physiotherapists' use of research in clinical practice? A qualitative study in Sweden', *Implementation Science*, 8(1), 1-13.

Dawes M, Summerskill W, Glasziou P, Cartabellotta A, Martin J, Hopyian K, Porzsolt F, Burls F, Osborne J (2005). 'Sicily statement on evidence-based practice'. *BMC Medical Education* 5(1): 1–9.

Denscombe, M. (2010) *The good research guide: for small-scale social research projects*, Open University Press.

Dizon, J. M. R., Grimmer-Somers, K. A. and Kumar, S. (2012) 'Current evidence on evidence-based practice training in allied health: a systematic review of the literature', *International Journal of Evidence-Based Healthcare*, 10(4), 347-360.

Döpp, C. M. E., Steultjens, E. M. J. and Radel, J. (2012) 'A Survey of Evidence-Based Practise among Dutch Occupational Therapists', *Occupational Therapy International*, 19(1), 17-27.

Du Toit, S. H. J., Wilkinson, A. C. and Adam, K. (2010) 'Role of research in occupational therapy clinical practice: applying action learning and action research in pursuit of evidence-based practice', *Australian Occupational Therapy Journal*, 57(5), 318-330.

Evenson, M. E. (2013) 'Preparing for fieldwork: Students' perceptions of their readiness to provide evidence-based practice'. *Work: A Journal of Prevention, Assessment and Rehabilitation*, 44(3), 297-306.

Gray, M., Clark, M., Penman, M., Smith, J., Bell, J., Thomas, Y., & Trevan-Hawke, J. (2012) 'New graduate occupational therapists feelings of preparedness for practice in Australia and Aotearoa/New Zealand'. *Australian occupational therapy journal*, 59(6), 445-455.

Hammell, K. W. (2001a) 'Using qualitative research to inform the client-centred evidence-based practice of occupational therapy', *The British Journal of Occupational Therapy*, 64(5), 228-234.

Hammell, K. W., Carpenter, C. and Dyck, I. (2005) *Using qualitative research*, Churchill Livingstone.

Health and Social Care Professionals Council (2013) '*Continuing Professional Development: Standard and Requirements Framework Document*'. CORU.available:
http://www.coru.ie/uploads/documents/Draft_CPD_Framework_Scheme_08_03_13.pdf
[accessed 12/03/2014]

Hoffmann, T., Bennett, S. and Del Mar, C. (2009) *Evidence-based practice across the health professions*, Churchill Livingstone.

Iles, R. and Davidson, M. (2006) 'Evidence based practice: a survey of physiotherapists' current practice', *Physiotherapy Research International*, 11(2), 93-103.

Johnston J, Leung G, Fielding R, Tin K, & Ho L.M (2003) 'Development and validation of a knowledge, attitude and behaviour questionnaire to assess undergraduate evidence-based practice teaching and learning'. *Medical Education* 37: 992–1000.

Kitzinger, J. (1995) 'Qualitative research: introducing focus groups'. *British Medical Journal*, 311(7000), 299-302

King, L. M., Jackson, M. T., Gallagher, A., Wainwright, P. and Lindsay, J. (2009) 'Towards a model of the expert practice educator -- interpreting multi-professional perspectives in the literature', *Learning in Health & Social Care*, 8(2), 135-144.

Koehn, M. L. and Lehman, K. (2008) 'Nurses' perceptions of evidence-based nursing practice', *Journal of advanced nursing*, 62(2), 209-215.

Krefting, L. (1991) 'Rigor in qualitative research: The assessment of trustworthiness'. *The American Journal of Occupational Therapy*, 45(3), 214-222

McCluskey, A. (2003) 'Occupational therapists report a low level of knowledge, skill and involvement in evidence-based practice', *Australian Occupational Therapy Journal*, 50(1), 3-12.

McCluskey, A. and Lovarini, M. (2005) 'Providing education on evidence-based practice improved knowledge but did not change behaviour: a before and after study', *BMC Medical Education*, 5(1), 40.

McCurtin, A. and Roddam, H. (2012) 'Evidence-based practice: SLTs under siege or opportunity for growth? The use and nature of research evidence in the profession', *International Journal of Language & Communication Disorders*, 47(1), 11-26.

McEvoy, M. P., Williams, M. T., Olds, T. S., Lewis, L. K., and Petkov, J. (2011) 'Evidence-based practice profiles of physiotherapists transitioning into the workforce: a study of two cohorts'. *BMC Medical Education*, 11(1), 100.

Musselman, L. (2007) 'Achieving AOTA's Centennial Vision: the Role of Educators', *Occupational Therapy in Health Care*, 21(1/2)

Nilsagård, Y. and Lohse, G. (2010) 'Evidence-based physiotherapy: A survey of knowledge, behaviour, attitudes and prerequisites', *Advances in Physiotherapy*, 12(4), 179-186.

Olsen, N. R., Bradley, P., Lomborg, K. and Nortvedt, M. W. (2013) 'Evidence based practice in clinical physiotherapy education: a qualitative interpretive description', *BMC Medical Education*, 13, 52-52.

Rubin, A. and Babbie, E. R. (2012) *Brooks/Cole Empowerment Series: Essential Research Methods for Social Work*, Brooks/Cole Publishing Company.

Sackett, D. L., Rosenberg, W., Gray, J. A., Haynes, R. B. and Richardson, W. S. (1996) 'Evidence based medicine: what it is and what it isn't', *British Medical Journal*, 312(7023), 71-72.

Scurlock-Evans, L., Upton, P. and Upton, D. (2014) 'Evidence-Based Practice in Physiotherapy: a systematic review of barriers, enablers and interventions', *Physiotherapy*.

Silverman, D. (2011) *Interpreting qualitative data*, Sage Publications Limited.

Stergiou-Kita, M. (2010) 'Implementing Clinical Practice Guidelines in occupational therapy practice: recommendations from the research evidence', *Australian Occupational Therapy Journal*, 57(2), 76-87.

Stewart, D. W., Rook, D. W. and Shamdasani, P. N. (2006) '*Focus groups: Theory and Practice*', Sage Publications, Incorporated.

Stronge, M. and Cahill, M. (2012) 'Self-reported Knowledge, Attitudes and Behaviour towards Evidence-based Practice of Occupational Therapy Students in Ireland', *Occupational Therapy International*. 19, 1, pp. 7-16.

Upton, D., Stephens, D., Williams, B. and Scurlock-Evans, L. (2014a) 'Occupational therapists' attitudes, knowledge, and implementation of evidence-based practice: a systematic review of published research', *The British Journal of Occupational Therapy*, 77(1), 24-38.

Upton, D., Upton, P. and Scurlock-Evans, L. (2014b) 'The Reach, Transferability, and Impact of the Evidence-Based Practice Questionnaire: A Methodological and Narrative Literature Review', *Worldviews on Evidence-Based Nursing*.

Upton, D. and Upton, P. (2006) 'Development of an evidence-based practice questionnaire for nurses', *Journal of Advanced Nursing*, 53(4), 454-458.

Upton, D. and Upton, P. (2006) 'Knowledge and use of evidence-based practice by allied health and health science professionals in the United Kingdom', *Journal of Allied Health*, 35(3), 127-133.

Walshe, K. and Rundall, T. G. (2001) 'Evidence-based Management: From Theory to Practice in Health Care', *Milbank Quarterly*, 79(3), 429-457.

Zipoli Jr, R. P. and Kennedy, M. (2005) 'Evidence-based practice among speech-language pathologists: attitudes, utilization, and barriers', *American Journal of Speech-Language Pathology*, 14(3).