Stephanie O’Sullivan

0725226

BSc (Physiotherapy)

2011
An Exploratory Study of Veterinary Physiotherapist’s within Ireland

Stephanie O’Sullivan

0725226

Supervisor: Dr. Amanda Clifford

PY4007 and PY4008 Final Year Project

Word Count: 4,900
Authors Declaration

I, the undersigned declare that this project which I am submitting is all my own work and that the data presented is authentic.

______________________________   (Signature)

Date: 29/04/2011
Acknowledgements

Firstly I would like to sincerely thank my supervisor Dr. Amanda Clifford for her help and support with this project since the start.

A big thanks to Emma Moran communication’s officer of the CPVP clinical interest group, without her cooperation and support this study would not have been possible. A sincere thank you to the members of the CPVP group who took the time to complete the questionnaire, your responses are greatly appreciated.

Many thanks to my Mom Geraldine and all my family for their encouragement and support while carrying out this project and over the past 4 years. Thanks to Nan for all the prayers and candles lit since I started in UL, I wouldn’t have lasted as long only for her. I know Granda would have appreciated this project if he was with us, I am forever thankful to him for sharing his love of horses with me.

A special thanks to all my class, what a bunch of legends, ye made the past 4 years an unbelievable and memorable experience. Thanks to those who I have shared placements with and to my I&D group, we got there in the end! ☺ Even though there were more than a few ‘Blah’ moments along the way.

To all my housemates over the past few years, thank you for putting up with me and sharing with me some of the best moments of my life, I know it won’t end here.

To all the people I have met in UL, friends for life have been made, you know who ye are the list is too long to mention everyone.

Future starts here, I’m looking forward to having lots more unforgettable memories with ye all.
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1.0 Abstract

**Background:** Recently, there is a growing interest in the role of veterinary physiotherapy; however the concept of this speciality is still in its infancy in Ireland (Doyle and Horgan 2006). The apparent paucity of evidence within this unique profession warrants further investigation.

**Objectives:** To explore factors influencing both the transitions from human to veterinary physiotherapy and the use of evidence based Practice (EBP); among the clinical interest group, within the ISCP, Chartered Physiotherapist in Veterinary Practice (CPVP).

**Methods:** A multidimensional questionnaire was developed using SurveyMonkey®™ and sent to the members of the CPVP group via email, ensuring anonymity and confidentiality. It was piloted and modified to ensure clarity prior to distribution. A reminder email was sent to maximise responses. Descriptive, frequency and thematic content analysis was carried out to ensure accurate interpretation of the data.

**Results:** A 50% (n=10) response rate was obtained. A variety of positive and negative influencing factors were identified. Common to both objectives, barriers such as use of human based research and facilitators such as animal experience were highlighted. Musculoskeletal experience was deemed significant for both transitioning and use of EBP, with 80% of participants experienced in the area.

**Conclusion:** A variety of modifiable facilitators and barriers, which influence the way in which practitioner’s transition to veterinary physiotherapy and use EBP were highlighted. Hence, they should be addressed appropriately to aid and promote the veterinary physiotherapy profession among prospective and current graduates. The need for further animal research by veterinary physiotherapist’s is also warranted.

{**Keywords:** Veterinary Physiotherapy, Ireland, EBP, transition}
2.0 Introduction

Physiotherapy has predominantly been associated with the treatment of human conditions; however, in recent times this has diversified to involve the assessment and rehabilitation of large and small animals. Not dissimilar to human physiotherapy, veterinary physiotherapy encompasses a variety of physical approaches to promote, maintain and restore function and performance amongst animals (Paulekas and Haussler 2009; Sharp 2008; McGowan et al 2007; Buchner and Shildboeck 2006; Veenman 2006) Veterinary physiotherapy or animal physiotherapy as it is synonymously known has now emerged as a special interest area within the physiotherapy profession (McGowan et al 2007).

There is a growing interest in the role of veterinary physiotherapy particularly in the U.K. (Sharp 2008; Veenman 2006; Knowles and Mackintosh 1994) where the tradition began in 1985, when the ‘Association of Chartered Physiotherapist’s in Animal Therapy’ (ACPAT) was founded (Knowles & Mackintosh 1994). It became a recognised specialty in the U.K in response to physiotherapist’s interest in this area and concern by veterinary surgeons and chartered physiotherapist’s regarding the practice of unqualified animal therapists (Knowles and Mackintosh 1994). However, the concept of veterinary physiotherapy is still in its infancy in Ireland, this was emphasized by Doyle and Horgan (2006) when they alluded to the absence of an Irish equivalent of ACPAT at that time. A considerable amount of the veterinary physiotherapy evolution and research has been carried out in the U.K, where it can be traced back to the early 20th century (Veenman 2006). Since then, in a positive move for Irish therapists, a Clinical Interest Group (CIG) Chartered Physiotherapists in Veterinary Practice (CPVP) has been established since 2008, within the Irish Society for Chartered Physiotherapists (ISCP). This coincides with the minimal amount of research carried out in Ireland to date (Doyle and Horgan 2006).

Within physiotherapy an Evidence Based Practice (EBP) approach has now become standard (Bury and Mead 1998; Jette et al 2003; Stevenson et al 2004) It
incorporates the conscientious and judicious use of current best evidence in making decisions about the care of individual patients. This involves integrating individual clinical expertise with best available external clinical evidence from research to successfully manage patients in an individualistic manner (Bury and Mead 1998; Sackett et al 1996; Gibson and Martin 2003; Iles and Davidson 2006). As expected the application of EBP or Evidence Based Medicine (EBM) is also advocated amongst the veterinary profession (Slater 2010; Mair and Cohen 2003) yet it is clear animal based research is well behind that which is devoted to the human subject (Paulekas and Haussler 2009; Knowles & Mackintosh (1994). The current practice among veterinary physiotherapist’s has been described as the incorporation of various therapeutic interventions based on knowledge, experience and clinical success in humans, basic science research and expert opinions (Paulekas and Haussler 2009; McGowan et al 2007; Veenman 2006) However, how appropriate is this use of EBP, also to what extent is it employed in practice among veterinary physiotherapy professionals?

It is apparent there is paucity in the current evidence regarding the use of EBP within veterinary physiotherapy (McGowan et al 2007; Buchner and Schildboeck 2006; Knowles and Mackintosh 1994). An extensive search did not reveal any comparable articles that considered the transition process from human to veterinary physiotherapy. Although, various challenges associated within this newly recognised profession have been outlined by Veenman (2006), Doyle and Horgan (2006) and Knowles and Mackintosh (1994). Moreover, research is required to gain an understanding and insight to this unique transition process. As veterinary physiotherapy is an emerging discipline of the physiotherapy profession (Sharp 2008; McGowan et al, 2007), the examination of this topic is warranted. As of yet, no study has been conducted on Irish veterinary physiotherapy professionals. It is hoped this exploratory study will cast light on the practice and experience of this distinctive group of physiotherapist’s.

Hence, the aims of this study were to examine the current practice of both qualified and future veterinary physiotherapist’s within Ireland. The primary objective was to determine the type and extent of EBP employed by veterinary physiotherapy professionals. In addition to examine the factors that may influence the use of EBP
within this profession. A secondary objective was to investigate any factors that may influence the transition process from human to veterinary physiotherapy.
3.0 Methodology

3.1 Study Design

This was a pilot quasi-qualitative study. A self-report email questionnaire survey of chartered physiotherapist’s from Ireland was conducted. This method was thought to be most appropriate in order to survey this population, as it was an easy way to access such a unique population that may be dispersed in distant locations, within a short space of time (Wright 2005; Mc Coll et al 2001).

3.2 Ethics

Ethical Approval was obtained from the University of Limerick Education and Health Science Research Ethics Committee (CTREC 10-40).

3.3 Sample Selection

Purposive sampling has been used to meet the needs of the study (Boeije 2010). Participants included were all members of the CIG, CPVP. This group, which was set up by members of the ISCP has 29 members in total. The group consisted of 9 qualified veterinary physiotherapists, 11 veterinary physiotherapy students and the 9 remaining members were involved out of interest only.

At the time of distribution of this questionnaire there were 20 eligible participants identified from the CPVP group. They were deemed eligible on the basis they were either qualified veterinary physiotherapists or physiotherapists that were currently studying veterinary physiotherapy.

3.4 Questionnaire Design

The SurveyMonkey®™ (SurveyMonkey.com, LLC, Palo Alto, California, USA) website was used to create a multidimensional questionnaire in order to survey this specific population, as there was no existing survey instrument that encompassed the aims of the study.

A combination of closed, open ended questions and attitude searching statements using the 5-point Likert scale was used (Dawes 2008). The Likert type items were used to assess the strength of response to various declarative statements
(Domholdt 2005). The mix of questions was included to gain a greater appreciation of the various topics being examined. The majority of the questions also allowed for additional remarks if the participants deemed necessary which also supports the advantage of gaining a greater breadth of response (Domholdt 2005) See Appendix 8.1 for all the questions included in the questionnaire.

The questionnaire included 8 sections which incorporated a variety of questions applicable to the different sample populations. The layout of the questionnaire was formulated so that certain sections were only answered by the appropriate participants. This was done by using various ‘Page Logics’ and ‘Question Logics’ which is part of SuveryMonkey®™, this technique was utilised throughout the questionnaire.

Section 1 - Demographic profile of all participants

This section included questions to ascertain information about the participants. General questions such as age, gender, highest level of academic qualification and years qualified as a physiotherapist. All participants progressed to the next section.

Section 2 - CPVP membership information

The participants were asked about their involvement in the CPVP group and the length of time they were a member. They were then given a multiple choice question in order to identify the eligible participant’s. The process is outlined below in figure 1. It ensured only relevant and appropriate questions were answered by the participants (Hicks 2004).
Section 3 - Unqualified members

As illustrated in figure 1, the participant’s who simply had an interest in veterinary physiotherapy answered this section prior to completion of the questionnaire. They were asked if they would like to become qualified veterinary physiotherapists in the future and this was then followed by an open question giving them the opportunity to expand on reasons why they had yet to do so. They may benefit from the findings of the study in the future.

Section 4 - Student’s information

This section established information such as the course they were undertaking, the stage of studying they were at and the area of human physiotherapy they had the most experience in. A Likert scale was thought to be most appropriate here to determine how students felt (Dawes 2008; Domholdt 2005) about their human experience and how
it might influence their future practice with animals. The transition process from human to veterinary physiotherapy was also examined.

Two open questions followed allowing the students to expand on some of the benefits and barriers they may have experienced during this process (Domholdt 2005).

Section 5 - Student’s clinical placements and EBP

The students were then questioned on the amount of clinical hours carried out and their opinion on how sufficient the hours were. The most common animal treated was also established. This section integrated the EBP aspect of the study, determining their understanding of EBP, the extent to which they use EBP within their training and the type of EBP methods used. They were encouraged to comment on their experience of both the barriers and facilitators to using EBP. A combination of Likert and open questions was included (Domholdt 2005).

Section 6 - Qualified veterinary physiotherapist’s information

This section was specifically for the qualified veterinary physiotherapist members of the CPVP group. The format and type of the questions in this section were comparable to those included in section 4. An additional question was included about length of time they were qualified as a veterinary physiotherapist and what their current area of employment involved.

Section 7 - Current practice of qualified members

The qualified participants were asked about current practice. Likert scales were used to explore areas like means of referral, treatment techniques, electrotherapy and finally the most common types of injuries or conditions they manage.

Section 8 - Qualified members EBP

Similar to section 5, the EBP aspect was examined amongst the qualified veterinary physiotherapist’s. However the questions were made applicable to current practice. The various methods of EBP that could be employed were investigated, along with the participant’s opinions on quality of evidence in veterinary physiotherapy.
3.5 Procedure

The developed questionnaire was piloted amongst three lecturers from the UL physiotherapy department. Based on their recommendations and feedback minor adjustments were made to ensure readability and clarity of the questions. Content validity was also ensured as a result (Hicks 2004)

In line with ethics a recruitment email was developed (Appendix 8.2) and sent via email, to the CPVP communications officer, containing details of the study. A participant information email containing the SurveyMonkey®™ questionnaire link (Appendix 8.3) was also included. This was then forwarded via email to every member of the CPVP clinical interest group. This process, along with SurveyMonkey®™ ensured anonymity and confidentiality for all participants.

A reminder e-mail was subsequently sent via the CPVP communications officer to enhance response rate and minimise non-response bias (Domholdt 2005; McColl et al 2001). The participants were made aware from the information email that their involvement in the study was voluntary and consent was implied once beginning the questionnaire. They were also given the opportunity to contact the researcher if they had any queries regarding the study. Consequently, there were no enquires.

3.6 Data Analysis

All the data and information was downloaded and analysed using Statistical Programme for the Social Sciences (SPSS) Version 18. The SurveyMonkey®™ site allowed for excel and pdf format of raw data. Descriptive and frequency data analysis was carried out to ensure an in depth interpretation was carried out. The open questions then allowed for thematic content analysis (Rabiee 2004; Newell and Burnard 2006) of any themes that emerged.
4.0 Results

There were 11 participants in total. They were divided into 6 qualified veterinary physiotherapists and 4 veterinary physiotherapy students. The final participant was excluded as they were neither qualified nor a student veterinary physiotherapist. A 50% response rate was obtained, as from the 20 potential participants identified there were 10 valid responses.

All information gathered and presented can also be examined in greater detail in the raw data (Appendix 8.4)

4.1 Demographic background

The participant’s information has been summarised in table 1 and 2 below. The one participant that didn’t meet inclusion criteria for the main study remained involved until section 3 where the survey ended for them there. They did however state they would like to qualify in this area in future however ‘human caseload and further study in the human field’ had prevented them doing so yet.

<table>
<thead>
<tr>
<th>Participants (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Qualification</td>
</tr>
<tr>
<td>Qualified Physiotherapist</td>
</tr>
<tr>
<td>CPVP member</td>
</tr>
<tr>
<td>Qualified Veterinary Physiotherapist</td>
</tr>
</tbody>
</table>

Table 1: Demographic detail of participants
All of the students were completing their final few days of placement, as part of the ISCP course. They stated the allocated 210 hours of placement was sufficient. The most common type of animal seen on placement was varied with 50% stating an equal of both horses and dogs. 25% named horses as the most common and 25% stated a ratio of 60:40 horses to dogs. All of the veterinary physiotherapists stated they treated horses most often.

### 4.2 Experience

The majority (80% n= 8) of the participants stated their primary area experience was in musculoskeletal physiotherapy. Respiratory (10% n= 1) and Neurology (10% n=1) were the other main areas identified by the participants as primary areas of experience.

Among both groups, extra responses were selected; however for the purpose of this study the first option was taken. The other additional areas mentioned were care of the elderly, women’s health and orthopaedics. The issue of sports injuries’ was also included as an area of expertise.

The participants were asked to respond to the following statement using the Likert scale. ‘My experience in human physiotherapy has influenced my practice with animals’. From all the responses gathered 70% ‘strongly agreed’ and 30% ‘agreed’ with the statement.
4.3 Current Practice

The questions and responses from the veterinary physiotherapists within this section are displayed in graphs 1, 2 and 3 below. There is variability in the amount of responses displayed secondary to participant’s partial completion of certain questions.

Graph 1 illustrates the majority of participants received referrals from owners or trainers ‘Always’. ‘Riders’ were also identified as the ‘Other’ choice, by 1/3 of participants.

**Graph 1: Means of referrals received (Frequency)**
This graph shows that all veterinary physiotherapists used soft tissue mobilisations either ‘Always’ or ‘Frequently’. Exercise rehabilitation was also used as a treatment ‘Always’ or ‘Frequently’ by all participants. Hydrotherapy was less popular and classed as ‘Never’ or ‘Rarely’ used by 40% of participants.

**Graph 2:** Frequency of treatment techniques used in practice
In graph 3 veterinary physiotherapists state that muscle stimulation is used most commonly with all participants describing it as either ‘Always’ or ‘Frequently’ used in practice.

**Graph 3: Frequency of electrotherapy used in treatments**
Table 3 below outlines the most common injuries and conditions seen by Irish veterinary physiotherapists. In total there was a variety of 22 answers, frequency analysis was carried out and the percentages are displayed.

<table>
<thead>
<tr>
<th>Injury or condition</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Various spinal and back pathologies causing movement dysfunctions, nerve injuries/palsy and back pain</td>
<td>27.3%</td>
</tr>
<tr>
<td>2. Muscle strains – Back, neck, sacroiliac</td>
<td>22.7%</td>
</tr>
<tr>
<td>3. Tendinopathies and selected tendon injuries(STI)</td>
<td>18.2%</td>
</tr>
<tr>
<td>4. Ligament sprains</td>
<td>9.1%</td>
</tr>
<tr>
<td>5. Performance issues</td>
<td>9.1%</td>
</tr>
<tr>
<td>6. Acute injuries and cuts</td>
<td>9.1%</td>
</tr>
<tr>
<td>7. Lameness</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

**Table 3: Common injuries and conditions**
4.3 Main Findings

Transition

**Perception of transition process from human to veterinary Physiotherapy**

![Pie chart showing perception of transition process from human to veterinary physiotherapy](image)

**Figure 2: Combined data of transition process to veterinary physiotherapy**

The 5 point Likert scale was used however no participant selected ‘Very Difficult’ therefore it has not been represented on this chart.

Both positive and negative influences involved in the transition process from human to veterinary physiotherapy emerged; the data was comparable among both sets of participant’s. Both facilitator’s and barriers have been identified and three main themes along with subthemes of these are illustrated in figure 3. These concepts are supported by a selection of quotes from participants. Overall the majority of influences mentioned were positive. Even one qualified participant stated ‘*none*’ in response to the existence of barriers. Interestingly one participant even mentioned ‘*no barriers per se but my palpation skills have improved significantly when I started treating horses*’. The remaining negative influences have still been stated for the purpose of a comprehensive interpretation of the data.
Both sets of participants mentioned various aspects of education such as their lecturers and clinical practice, as positive means of transitioning to veterinary physiotherapy.

**Learning:**
- ‘Lecturers’ (S +)
- ‘Excellent tuition’ (S +)
- ‘Postgraduate courses in musculoskeletal’ (Q +)

**Clinical Practice:**
- ‘Clinical placement’ (S +)
- ‘Clinical practice’ (S +)
- ‘My apprenticeship form of training’ (Q +)
Skills
A variety of skills were highlighted as both positive and negative influences on transitioning, some of which included animal experience, human experience and communication skills.

Animal experience:
‘Own experience with animals, having competed at international level in eventing...' (Q +)
‘Previous experience with animals’ (S +)
‘Better understanding of equine athlete’ (Q +)
‘Good perception of pain in animals and analysis of animal behaviour’ (Q +)
‘Limited experience with large animals’ (S -)
‘Animal Handling’ (S -)

Human experience:
‘Experience as a human physiotherapist’ (Q +)
‘Similar Anatomy’ (S +)
‘Better understanding of human athlete’ (Q +)
‘Mostly Musculoskeletal based’ (S -)

Communication:
‘Effective communication with owner’ (Q -)
‘Self-referral from clients without prior consultation of veterinary surgeon...' (Q -)
‘Communication...’ (S -)

Knowledge
The knowledge of other professionals and prospective clients were highlighted as areas with negative connotations to transitioning from human to veterinary physiotherapy.

Awareness
‘Lack of awareness of veterinary physiotherapy’ (S -)
‘Lack of knowledge about us amongst other professionals i.e. vets’ (S -)
‘General public’s perceptions as the back man’ (Q -)
Evidence Based Practice (EBP)

All participants had a mutual understanding of EBP.

‘Keeping your knowledge and skill base up to date with the current research to make treatments as effective as possible’ (S)

‘Employing evidence to support choice of treatment for a condition’ (Q)

**Extent of use of EBP to inform Practice/Studies**

![Pie chart showing 70% frequently and 30% always](image)

**Figure 4: Use of EBP in practice**

The graph below details the responses from the two sets of participants involved, a wide array of contrasting opinions were identified.

**Quality of research in veterinary physiotherapy**

![Bar chart showing distribution of responses](image)

**Graph 4: Quality of research in the veterinary physiotherapy profession**
A selection of participants failed to fully complete this question; therefore the frequency of the actual respondent’s is detailed in table 4 above.

<table>
<thead>
<tr>
<th>Method</th>
<th>Always</th>
<th>Frequently</th>
<th>Occasionally</th>
<th>Rarely</th>
<th>Never</th>
<th>No. of Respondent’s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textbooks/Manuals</td>
<td>70%</td>
<td>20%</td>
<td>-</td>
<td>10%</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Literature/Articles</td>
<td>50%</td>
<td>20%</td>
<td>30%</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Websites/Internet</td>
<td>11.1%</td>
<td>44.4%</td>
<td>33.3%</td>
<td>11.15%</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Courses/Seminars</td>
<td>20%</td>
<td>70%</td>
<td>10%</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Discussion/Input from colleagues</td>
<td>40%</td>
<td>50%</td>
<td>10%</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Work shadowing</td>
<td>44.4%</td>
<td>-</td>
<td>33.3%</td>
<td>11.15%</td>
<td>11.15%</td>
<td>9</td>
</tr>
<tr>
<td>MDT Contact</td>
<td>30%</td>
<td>50%</td>
<td>20%</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Practical experience</td>
<td>60%</td>
<td>40%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 4: Methods used by all participants to inform practice

As with the themes identified in transitioning, common threads between both sets of participants were also identified in application of EBP. There was a combination of positive and negative influences identified regarding the use of EBP. Two main themes emerged, resources and education, these are outlined in figure 5. A barrier mentioned by one participant was ‘the wide range of presentations of one condition e.g. impinging spinous processes’. This was not accounted for in the themes.
Resources

The most prominent theme that emerged from use of EBP was resources. This theme primarily involved evidence and human based research as subthemes. These are outlined as both positive and negative influences on use of EBP.

Evidence

‘Veterinary journals and books’ (S+)
‘Journals, books, websites, magazines’ (Q+)
‘Ongoing evaluation of articles published’ (Q+)

‘Direct evidence of veterinary physiotherapy is still limited’ (Q-)
‘Lack of data collection and research’ (Q-)
‘Limited base of evidence’ (S-)
‘Lack of it’ (S-)
‘Not a lot of research carried out by qualified veterinary physiotherapist’ (S-)
‘Limited areas of research’ (Q-)

Human based research

‘Journals that are applicable can be adapted for animal physiotherapy’ (S+)
‘Transfer from human field’ (Q+)
‘Extrapolating from the evidence base in human physiotherapy’ (Q+)
‘Mostly human based studies’ (S +)
‘Where possible use human based research for treatment’ (S +)

‘Inference from animal studies to human’ (Q -)
‘A lot of information extrapolated from human area’ (S -)

Education
This was a positive theme associated with the use of EBP, not hugely dominant but important to highlight.

CPD
‘Physiotherapy and veterinary conferences’ (Q +)
‘Obtaining my MSc in veterinary physiotherapy’ (Q +)
‘Past member of RVC’ (Q +)
‘Discussion with vets and physiotherapy colleagues’ (Q +)
5.0 Discussion

This study established important background information that assisted in building a picture of the experience and opinions of the Irish practitioners as both a human and animal physiotherapists. The current practice of the veterinary physiotherapists involves receiving referrals from owners or trainers, of horses for the majority of the time. This information gathered coincides with findings from a survey carried out in Britain (Knowles and Mackintosh 1994) on members of the ACPAT group which is the equivalent of the CPVP group. Much of the findings of this UK study correspond greatly with what has been found in this current study. Manual techniques such as mobilisations were recorded as the most common treatment techniques used. These approaches to management of injuries among horses are supported by Goff (2009), Frick (2010) and McGowan et al (2007). However, throughout the majority of animal physiotherapy management approaches, there is an apparent lack of comprehensive scientific clinical data to validate the benefits of such treatment options. They are advocated more so based on the theoretical basis of physiological and cellular mechanisms. Conditions associated with spine, back and neck, along with tendon and ligament injuries were all comparable to findings by Knowles and Mackintosh (1994). Unfortunately, the apparent absence of updated studies within the U.K has made it difficult to merge the findings and support a common position on the current practice of veterinary physiotherapy within the U.K and Ireland.

5.1 Evidence Based Practice (EBP)

It was important to establish if the participants understood the term Evidence Based Practice, from the responses obtained it was clear both sets of participants shared a mutual appreciation of the concept. The participants all reported very good use of EBP within practice; this positive finding is collectively substantiated by papers by Jette et al (2003), Stevenson (2004), Bithell (2000) and Wakefield (2000).

Unfortunately the quality of the research being used, irrespective of frequency of use, has poor generalisability (Metcalf et al 2001; Jette et al 2003). This is due to the inconsistencies in the sample population of the studies i.e. Variety of anatomical and biomechanical characteristics. Human subjects being bipeds do not display qualities
similar to horses or dogs, however, quadrupeds like rodents or rabbits are considered more comparable. Veenman (2006) and McGowan (2007) support this reasoning also.

The results of this study did not identify the different types of evidence, but Bithell (2000) seems to believe an understanding of EBP which integrates clinical judgement with both quantitative and qualitative evidence is the most relevant in physiotherapy.

With regard to methods used to inform EBP, it was interesting that the method used ‘Always’ among 70% of participants, to inform practice was textbooks or manuals, followed by practical experience with 60% ‘Always’ using it and finally 50% used articles and literature ‘Always’. This differs greatly from the study carried out by Stevenson et al (2004), where ‘courses’ were deemed the most important method of informing practice and literature ranked lowest. Variability may be due to sample differences; Stevenson et al (2004) used musculoskeletal physiotherapists from the U.K. An important factor could also be the time, 7 years between the studies is significant and with EBP ever expanding there is bound to be disparity.

As highlighted within this study various barriers existed to implementing EBP in the veterinary physiotherapy profession. Some of which were resources and education. Metcalfe (2001) similarly mentioned skills barriers and relevance barriers, i.e. reliance of the results to their population. This is comparable to the resources barrier within this study, which involved the immense extrapolation of human based studies, of which are not very relevant to the animal based physiotherapy profession.

Another barrier was brought to light by Jette et al (2003) was time, it was considered one of the top rating barriers, however this was not identified within this study, possibly due to the unique nature of veterinary physiotherapy, time may not be an issue due to lack of awareness of the profession, they may not be under as much time constraints.

5.2 Transition

This novel aspect of the study revealed a number of interesting opinions and perceptions among the Irish veterinary physiotherapy professionals. Interestingly the majority (60%) of participants described the transition process as ‘Easy’ with the remaining holding broad views from ‘Very Easy’ to ‘Difficult’. Communication was an aspect that was deemed negatively and difficultly with this area influenced the transition
process. This is also shown in other studies (Knowles and Mackintosh 1994), in particular Doyle and Horgan (2006) mention that the close liaison between veterinary surgeons and animal physiotherapists is key and communication between these two professions is essential.

People are often drawn to the profession of animal physiotherapy because of a background interest and involvement with animals, mainly horses and dogs (Veenman 2006). This present study enhances this assumption, as experience with animals was a dominant facilitator established among the practitioner’s when they underwent the transition process to veterinary physiotherapy.

Hurst (2010) studied the transition process from physiotherapy clinical practice to academia. Both this study and Hurst (2010) demonstrated a similar trend for support and education strategies prior to commencing a new profession. This could be useful to address transition difficulties within the physiotherapy profession in the future.

5.3 Limitations

Response rates of 60% +/- 20 are recommended as an acceptable level by Baruch (1999). It is also important to know, low response rates do not necessarily mean bias within a study (Sax et al 2003). Nevertheless, the response rate of this study at 50% is considered almost acceptable based on Baruch (1999). Within Ireland there are currently proposed to be 20 qualified veterinary physiotherapists, this figure expanding continuously. The use of the CIG from Ireland limits the ability of the results being generalised across a wide spectrum of veterinary physiotherapists. Issues with sampling have caused this limitation. As it is not known how many other animal physiotherapists are practicing within Ireland the results should be considered with vigilance.

Response bias are evident within the results of the study, this type of bias has been recognised as a limitation of a self-report research tool (Hicks 2004) like the questionnaire used.

A final limitation would be the effect on results that this questionnaire has due to the unknown validity and standard of it as a comprehensive research tool.
5.4 Recommendations

It is clear further research is required to fill the gaps in the understanding of various aspects of veterinary physiotherapy. It is obvious this specialty is still on the periphery as an area of expertise within physiotherapy. Nevertheless, it would be appropriate to make students aware of the profession in undergraduate training, to allow them the opportunity to consider this interesting and distinctive job as a possible profession. Dissimilar to other specialties within physiotherapy such as neurology, paediatrics or respiratory, there is an absence of information available concerning animal physiotherapy at undergraduate level.

There is an absence of literature pertaining to the transition process from human to animal physiotherapy. However, this unique study has identified some modifiable aspects associated with the transition process, such as experience with animals and aspects of education. These factors should be addressed to allow for an effortless and enjoyable transition to veterinary physiotherapy (O’Brien 2001). If these issues were considered and advocated even prior to commencement of formal training, it could potentially attract more physiotherapists to this relatively unfamiliar area.

As highlighted, high quality animal based clinical trials are deficient within the profession. This is an obvious area for prospective research. As discussed by participants of this study and supported by the literature (Paulekas and Haussler 2009; Knowles and Mackintosh 1994), there is a disparity in the use of applicable animal based studies that transfer accordingly to practice. To ensure a high standard of care and ‘judicious use of current best evidence’, it needs to be made certain that the most relevant and appropriate research is applied within veterinary physiotherapy. Similar to the way it is being promoted in human physiotherapy.
6.0 Conclusion

Musculoskeletal experience has been shown as primary area of expertise and a positive influence on both transition and EBP application in veterinary physiotherapy. EBP is used in practice amongst animal physiotherapists; however, the evidence used is for the best part, dependent on basic physiological mechanisms, it is far behind the clinical trials carried out within human physiotherapy. If veterinary physiotherapy is to develop, ongoing, appropriate research is vital to increase the evidence base for efficacy of treatments used.

Transition is deemed for the most part, a positive and easy process, aspects such as communication and awareness of the profession should be addressed for future graduates. An improved effort is required by all physiotherapy professionals, in order to alleviate the ignorance of the public and even healthcare workers when it comes to this unique area of physiotherapy.

It is important to note the perceptions and opinions of the members of the CPVP CIG involved in this study cannot be thought to be representative of all veterinary physiotherapists within Ireland. The findings of this study as outlined could have possible implications for education and research opportunities among physiotherapy professionals, predominantly veterinary physiotherapy clinicians.
7.0 References:


### 8.0 Appendices

#### Appendix 8.1: Questionnaire

1. **An exploratory study of veterinary physiotherapy, an investigation of the current practice of veterinary physiotherapists within Ireland**

   Please answer all of the following questions as truthfully and openly as possible. By completing this questionnaire you are giving your consent. Your participation is greatly appreciated.

---

#### PAGE 2

**2. Physiotherapist Information**

Please answer all of the following questions

- **Q1**
  1. **Gender**
     - Male
     - Female

- **Q2**
  2. **What age are you?**
     - 20-24
     - 25-29
     - 30-39
     - 40-49
     - 50+

- **Q3**
  3. **What is your highest level of academic qualification?**
     - Diploma
     - Bachelor
     - Masters
     - PhD
     - Other (Please Specify) [ ]

- **Q4**
  4. **How many years are you qualified as a human physiotherapist?**
3. Veterinary Physiotherapy

Please answer all of the following questions

Q5
1. How long are you a member of the Chartered Physiotherapists in Veterinary Practice (CPVP) clinical interest group?

Q6
2. Are you a qualified veterinary physiotherapist (V.P)?
   ☐ Yes
   ☐ No
   ☐ Student

4. Unqualified Members

Please answer all the following questions

Q7
1. Would you like to become qualified in this area in the future?
   ☐ Yes
   ☐ No
   Comment

Q8
2. What has prevented you from becoming a veterinary physiotherapist?

5. Students

Please answer all of the following questions

Q9
1. What course are you undertaking?
MSc Veterinary Physiotherapy - RVC, London

ISCP Course

Other

Other (please specify)

Q10
2. At what stage in the course are you at currently?

Q11
3. What area do you primarily have human physiotherapy experience in?

☐ Musculoskeletal

☐ Neurology

☐ Respiratory

☐ Care of the Elderly

☐ Paediatrics

☐ Womens Health

☐ Urology

☐ Orthopaedics

☐ Palliative

☐ Other

Other (please specify)

Q12
4. My experience in human physiotherapy will influence my future practice with animals

☐ Strongly Agree

☐ Agree

☐ Undecided

☐ Disagree

☐ Strongly Disagree

Comment

Q13
5. How are you finding the transition from human to veterinary physiotherapy?

☐ Very Easy
Q14
6. What has helped you during the course to make the transition from human to veterinary physiotherapy?

Q15
7. What barriers did you encounter during the course that influenced your transition from human to veterinary physiotherapy? If any

6. Clinical Placements

Please answer all of the following questions

Q16
1. How many hours of placement do you carry out?

Q17
2. Is the allocated placement time sufficient?
   - Yes
   - No
   Comment

Q18
3. What animals have you mostly seen while on placement?
   - Horse
   - Dogs
Q19
4. What is your understanding of Evidence Based Practice (EBP)?

Q20
5. To what extent are you using EBP within your studies and placements?
   - Always
   - Frequently
   - Occasionally
   - Rarely
   - Never

Q21
6. What facilitates you in using an evidence based approach while studying veterinary physiotherapy?

Q22
7. Is there anything that limits the use of an evidence based approach while studying veterinary physiotherapy?

Q23
8. The quality of research in the area of veterinary physiotherapy area is...
   - Very Good
   - Good
   - Undecided
   - Poor
   - Very poor

Q24
9. What are the most useful databases/evidence bases you have used while carrying out the course?
Please rank in order of frequency of use e.g. 1 = Most used

Q25
10. Do the following inform your knowledge base and research during the course?

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Frequently</th>
<th>Occasionally</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>TextBooks &amp; Manuals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Literature/Articles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Websites/Internet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Courses/Seminars/Conferences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussions/Input from colleagues</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Shadowing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multi Disciplinary Team Contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practical Experience/Case Studies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other (please specify)

PAGE 7

7. Qualified Veterinary Physiotherapists

Please answer all of the following questions

Q26
1. How long have you been qualified as a Veterinary Physiotherapist?

Q27
2. Are you currently practicing as a veterinary physiotherapist (V.P)?
   - Yes - V.P only
   - Yes - V.P and human physiotherapist
   - No - Human physiotherapy only
   - No - Not practicing at all

Q28
3. Which animals do you work with most often?
☐ Horses
☐ Dogs
☐ Equal of both
☐ Other
Other (please specify)

Q29
4. What area do you primarily have human physiotherapy experience in?
☐ Musculoskeletal
☐ Neurology
☐ Respiratory
☐ Care of the Elderly
☐ Paediatrics
☐ Womens Health
☐ Urology
☐ Orthopaedics
☐ Palliative
☐ Other
Other (please specify)

Q30
5. My experience in human physiotherapy has influenced my practice with animals
☐ Strongly Agree
☐ Agree
☐ Undecided
☐ Disagree
☐ Strongly Disagree
Comment

Q31
6. How did you find the transition from human to veterinary physiotherapy?
☐ Very Easy
☐ Easy
☐ Undecided
Q32
7. What has helped you transition from human to veterinary physiotherapy?

Q33
8. What were the barriers you encountered during the transition from human to veterinary physiotherapy? If any

PAGE 8
8. Current Practice

Please answer all of the following questions

Q34
1. To what extent do you receive referrals from the following professionals?

<table>
<thead>
<tr>
<th>Professional</th>
<th>Always</th>
<th>Frequently</th>
<th>Occasionally</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veterinary Surgeons/practitioners</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Owners/Trainers</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Farriers</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Saddler</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Other</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q35
2. To what extent do you use the following techniques when treating animals?

<table>
<thead>
<tr>
<th>Technique</th>
<th>Always</th>
<th>Frequently</th>
<th>Occasionally</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint Manipulation</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Soft Tissue mobilisation</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Trigger Point release</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Massage</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Stretching</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
### Q36
3. If you have used electrotherapy, to what extent do you use the following?

<table>
<thead>
<tr>
<th>Therapy</th>
<th>Always</th>
<th>Frequently</th>
<th>Occasionally</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasound</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscle Stimulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electromagnetic Therapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extracorporeal Shockwave Therapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other (please specify)

### Q37
4. What are some of the most common conditions or injuries you treat?

- [ ]
- [ ]
- [ ]

### PAGE 9
9. Evidence Based Practice

Please answer all of the following questions

### Q38
1. What is your understanding of Evidence Based Practice (EBP)?

- [ ]
- [ ]

### Q39
2. To what extent are you using EBP to inform practice as a veterinary physiotherapist?
3. What facilitated you in becoming an evidence based practitioner in the area of veterinary physiotherapy?

4. Is there anything that limits the use of EBP within the veterinary physiotherapy profession?

5. The quality of research in the area of veterinary physiotherapy area is...
   - Very Good
   - Good
   - Undecided
   - Poor
   - Very poor

6. What are the most useful databases/evidence bases you have used to inform your practice as a veterinary physiotherapist?
   Please rank in order of frequency of use
   e.g. 1 = Most used

7. Do the following inform your current practice and Continuing Professional Development (CPD)
   - Always
   - Frequently
   - Occasionally
   - Rarely
   - Never
Thank you for taking time to complete this survey.
Your response is greatly appreciated.
Appendix 8.2: Recruitment email

Dear Emma Moran (Communications - CPVP),
I am a final year Physiotherapy student in the University of Limerick and as part of my degree; I am required to carry out a Final Year Project (FYP)
I have a huge interest in the area of veterinary physiotherapy and one day hope to become a qualified veterinary physiotherapist. In an effort to find out more about this relatively new area I am undertaking a study which involves the completion of an online questionnaire by the members of the veterinary physiotherapy clinical interest group (CPVP) part of the ISCP.
I hope to learn more information about the area of veterinary physiotherapy and the current practice of veterinary physiotherapists, specifically in the equine field.
The members of the clinical interest group will be able to express their opinions and knowledge about the area of veterinary physiotherapy anonymously and confidentially. Once all the information is gathered and analysed, it will be made available to the participants and other members of the ISCP through future conferences. This will hopefully increase and widen the knowledge base of all involved on this recent and relatively unexplored area of physiotherapy.
I would be extremely grateful if you would forward on the attached email with questionnaire link to all the members of the CPVP group and encourage participation. Ethical Approval has been granted for this project.
If you have any further questions on this study please do not hesitate to contact us.
Many Thanks,
Stephanie O’Sullivan (4th Year Physiotherapy)                  Dr.Amanda Clifford (Supervisor)
0725226@studentmail.ul.ie                        Amanda.clifford@ul.ie
Appendix 8.3: Information/Questionnaire Email

An exploratory study of Veterinary Physiotherapy, an investigation of the current Practice of Veterinary Physiotherapists within Ireland

This survey aims to discover more information about the area of veterinary physiotherapy and the current practice of veterinary physiotherapists.

I hope to increase and widen the knowledge base of all involved with the project, the CPVP group and the ISCP through future conferences on this recent and relatively unexplored area of physiotherapy.

The completion of the online questionnaire below should take approximately 20 minutes.

Completion of the questionnaire implies you are giving consent to take part. Anonymity and confidentiality is secured and the information will be used for research purposes only.

http://www.surveymonkey.com/s/GG3333S

If you have any queries relating to this study please feel free to contact me:
Stephanie O’Sullivan (Researcher) - 0725226@studentmail.ul.ie
Dr. Amanda Clifford (Supervisor) - Amanda.clifford@ul.ie

If you have concerns about this study and wish to contact someone independent, you may contact The Chairperson of the EHS Faculty Ethics Committee

Prof Alan Donnelly
PESS Dept
University of Limerick
Limerick
061-20280
Appendix 8.4: Raw Data