

Bendall AL¹ and Pickering DM²

Junior Physiotherapist, University Hospital of Wales, Heath Park, Cardiff 1; Lecturer in Physiotherapy, Cardiff University, Tŷ Dewi Sant, Cardiff, CF14 4XN. Email: PickeringDM@cf.ac.uk Tel 029 2074 4604²

Introduction

Children with Cerebral Palsy (CP) present commonly with spasticity which provides physiotherapists with the management challenge of maintaining alignment during growth and minimising the long term effects of this sensory/motor disorder (Edwards, 2002). The involvement of the paediatric physiotherapist in linking specialist knowledge to their treatments is paramount and a wide range of treatment principles have evolved to manage CP and the associated spasticity in the UK (Scrutton, 1984).

In the literature there is common agreement that early intervention is the most beneficial and the motivation of the child and family involvement is of paramount importance in determining the outcome (Levitt, 2004; Bower and McLellan, 1994).

There have been periodic calls for the scrutiny of the effect of physiotherapy on children with CP (Bax and MacKeith, 1970; Mead, 1968). There are limited sources of rigorous physiotherapy research that have evaluated treatment effectiveness on children with CP (Bower and McLellan, 1994; Knox and Evans, 2002). The recent Clinical Governance Agenda is driving the need for Evidence Based Practice and so physiotherapists must be able to justify their clinical reasoning on a sound basis (Jones et al, 2000).

The stronger the knowledge base upon which physiotherapists underpin their clinical practice must surely give better value for money and quality assurance (Higgs and Titchen, 2001). There is therefore a real demand to focus on the ways that physiotherapists are acquiring knowledge of treatment principles. Additionally, physiotherapists need the skills to interpret this evidence before incorporating into their clinical practice.

Aims

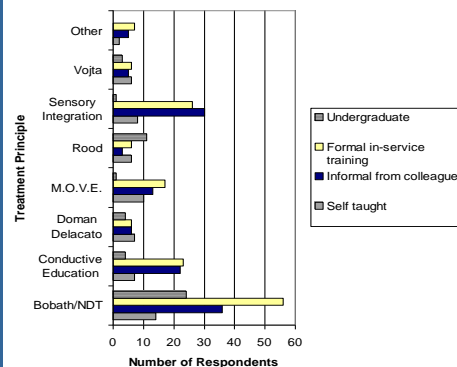
- To identify the treatment principles that are used currently by community paediatric physiotherapists.
- To identify where the knowledge and expertise was learnt for the range of treatment principles used.

Method

A literature search was conducted for evidence of treatment principles used in the management of CP. Those treatments available are Bobath/Neuro-Developmental Treatment (NDT), Conductive Education (CE), Doman Delacato, Movement Opportunities Via Education (MOVE), Rood, Sensory Integration (SI) and Vojta (Hare et al, 1988; Levitt, 2004). In addition an eclectic approach is described which uses a combination of several different principles (Levitt, 2004).

The School of Healthcare Studies Ethics committee at the University of Wales College of Medicine approved the study. A questionnaire was designed based on the evidence found of treatment approaches. The questionnaire survey was carried out : 120 questionnaires were sent to eighteen randomly selected children's centres from the Child Development Directory.

Figure 1: Bar chart of where treatment principles learnt.



Results

A response rate of 63% was achieved with 76 questionnaires being returned. All respondents were female which is a fair representation of this speciality. The mean time spent working in Paediatrics was 13.3 years with a mean of 18 children on their caseload with the spastic type of CP.

Table 1 shows the 4 most commonly used treatment principles: Bobath/NDT: (96%), SI: (36%), MOVE: (18%) and CE: (18%). In addition 4 treatment principles were reported which were not found in the literature review, namely: Brazelton, Halliwick, Nancy Hilton and Targeted Training. All of the respondents used a combination of principles and demonstrated an 'eclectic approach' to patient management.

The results were analysed by descriptive statistics looking for trends.

Figure 1 shows a bar chart of where the respondents had learnt their treatment principles which demonstrates a predominance for in-service and informal from colleagues. Of the respondents only 28% had attended post-graduate courses. There was a trend for physiotherapists to have read more about a treatment they were not currently using and less about one they used frequently.

Table 1 reports the frequencies of treatment principles chosen in order of preference.

Treatment principle	1 st choice	2 nd choice	3 rd choice
Bobath/NDT	72	1	0
CE	0	9	5
Doman Delacato	0	0	0
MOVE	1	8	5
Rood	0	4	0
SI	0	23	4
Vojta	3	0	0
Eclectic	0	2	2
Halliwick	0	1	0
Nancy Hilton	0	0	1
Targeted Training	0	2	1

Discussion

The results showed that 28% of respondents had not attended any postgraduate courses and many had learnt most of their skills from in-service training or informal from colleagues. Gosling (1997) suggests that postgraduate courses and qualifications have little relevance to patients needs and so the motivation to follow such postgraduate training is minimal.

The study demonstrated that in current practice physiotherapists are using treatment principles which have a **limited evidence base**, and there was evidence that less had actually sought literary information and read about these treatment principles. Furthermore, those respondents who had not attended postgraduate courses would not have the benefit of the present undergraduate courses where students are taught how to retrieve and appraise literature. This could suggest perhaps a **training need** for those who have not been able to learn the skills of information retrieval and critical appraisal (Bardin, 1998).

It was clear that Bobath/NDT and SI were the two most frequently selected treatment principles and the knowledge base for these came primarily from formal/informal training from colleagues. If this is a representative trend, it would suggest that quality of in-service/informal training should be of the highest standard. This on going professional development requires the resources and skill mix to ensure staff competency in the effective management of CP.

Conclusion

There is a need to demonstrate **evidence based practice** in the management of CP in children. This involves physiotherapists updating their knowledge although currently from a limited evidence base.

To give these patients the best, most cost effective treatment more rigorous evidence is needed, but then physiotherapists require the necessary skills to interpret these findings before changing practice.

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