Management of Undergraduate Community-Based Rehabilitation Programmes in the Philippines: A Cross-Sectional Survey

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ABSTRACT

Purpose: *The survey aimed to identify common strengths and weaknesses regarding the characteristics, management and implementation of Community-Based Rehabilitation (CBR) training in the undergraduate curriculum of Schools of Physical Therapy in the Philippines, and make recommendations for improvement.*

Method: *A survey was conducted with the academic heads of CBR departments in 10 Physical Therapy schools. The institutions were selected through cluster sampling according to regional location. Nine of these were private institutions. Data was collected through a 24-item self-assessment survey distributed to the heads of the participating colleges /departments.*

Results: *A number of strengths and weaknesses were identified. The strengths were: all schools had a 1 to 2-month clinical CBR course integrated into their undergraduate curriculum; CBR courses were supported by a course syllabus, learning outcomes, student assessment and clinical training manual; 80% of institutions had implementing policies and guidelines governing management of the CBR programme(s); at least one physiotherapist was involved in the management of the CBR programme(s); and, CBR activities were delivered in coordination with key stakeholders management, with emphasis on delivery of physical therapy services, disability prevention, health education, participation of persons with disabilities and community awareness. The weaknesses were: no head/programme coordinator for 30% of CBR programmes; 40% did not have clinical coordinators as designated management positions in the CBR programme; only 50% of academic staff received formal CBR training, of which*

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80% was provided through CBR summits and professional interaction with other physical therapists; and, only 50% of schools adopted a multidisciplinary approach to service delivery which was focused on the Health domain of the CBR Matrix.

Conclusion: *The CBR component of the undergraduate physical therapy curriculum in the Philippines can be improved. A shift in the teaching to transdisciplinary care and inter-professional learning is recommended. Regular review of the CBR indicators should be done by the schools, including the key stakeholders. Challenges for CBR implementation were recruitment of community volunteers as CBR workers, availability of indigenous resources and finances to support CBR activities, and family participation in the rehabilitation of a relative with a disability. Each school should determine whether current human resources and training are adequate. Schools must be encouraged to jointly identify common problems in CBR education and share solutions.*

Key words: *Asia-Pacific region, persons with disabilities, global health, implementation.*

INTRODUCTION

In the Philippines, approximately 1.5 million Filipinos live with some form of disability, with an overwhelming majority of these individuals above 60 years of age (UN ESCAP, 2016). Access to rehabilitation services is a major problem particularly in developing countries due to factors such as scarcity of resources for primary healthcare services, shortage of trained personnel, cost of rehabilitation treatment, and difficulty in transport and accessibility (World Health Organisation, 2019). In recognition of these limitations, the WHO (2010) has previously advocated the provision of Community-Based Rehabilitation (CBR) with the aim of enhancing the quality of life for people with disabilities through community initiatives that focus on the 5 components of the CBR Matrix: health, education, livelihood, social and empowerment. The impact of CBR is still debated (Bowers et al, 2015), but has shown to be effective in low and middle-income countries in the Asia-Pacific region (Cayetano & Elkins, 2016). In the Philippines, CBR services are delivered by physical therapists, occupational therapists and speech therapists, depending on the needs of the client (Lopez et al, 2000; Magallona & Datangel, 2011).

Effective contribution to and impact of any CBR programme relies on development and training in management, practice, teaching and research skills by service providers (Carrington, 2007). These skills are important for technical and programme planning tasks (Thomas & Thomas, 2003). Physical therapists must also be knowledgeable and aware of the organisational set-up of CBR management. Positions in the CBR management normally include: programme head, CBR manager, supervisor, and rehabilitation worker (Thomas & Thomas, 2003; Bury, 2005). In CBR settings where physical therapists actively participate, different roles emerge depending on the community's circumstances. Therapists must be highly flexible, exhibiting a wide range of skills required in community health rehabilitation. Although, training mostly focused on workers already in the community, several authors have highlighted the benefits of incorporating CBR training into undergraduate programmes for health professionals including physical therapists (Twible & Henley, 2000; Magallona & Datangel, 2011; Como & Batdulam, 2012; Karthikeyan & Ramalingam, 2014). The training of such physical therapists during the undergraduate years requires development of a client-centred community-oriented education programme (Nualnetr, 2009).

In the Philippines, human resources for CBR services typically have been provided by undergraduates in Schools for Physical and Occupational Therapy who include CBR as a component of the clinical training (Magallona & Datangel, 2001). This training involves participation in CBR activities within selected communities where there is provision of rehabilitation services. In 2006, the Commission on Higher Education (CHED) released for implementation an enhanced physical therapy curriculum that formalised the inclusion of CBR as a separate preparatory course offered prior to physical therapy clinical internship in the Philippines. The latest memorandum order issued in 2017 further enhanced its integration in the physical therapy curricula (CHED, 2017) and all academic physical therapy programmes are required to comply with the directive.

Effective implementation of the CBR guidelines requires CBR workers to have a broad range of skills including disability knowledge, clinical competence, communication skills, management skills, cultural competence and higher level cognitive skills (Jansen-vanVurren & Aldersley, 2018). Clearly, an important goal of CBR training is the manner in which these are achieved (Ojwang & Hartley, 2001). Enhancement of any undergraduate physical therapy curriculum which includes CBR training should be based on evidence (Futter et al, 2003).To date, there is little evidence of the effectiveness of CBR training however it has been

provided, and indeed what methods are best for this evaluation (Cornielje et al, 2008; Kusuwo et al, 2017). In the Philippines, there is a need to collate (baseline) information regarding the implementation of undergraduate CBR integrated courses, in order to identify best practice as well as areas for improvement. This should involve key stakeholders including undergraduate degree programme leaders, professional groups and government planners, in order to ensure sufficient coverage of topics that are important during students' participation in CBR activities. Likewise, training institutions should take steps to inform stakeholders that CBR courses are offered in educational institutions such as physical therapy schools, prior to participation in CBR activities, in order to minimise distrust (Ojwang & Hartley, 2001).

Objective

The objective of this study was to study the characteristics, management and implementation of CBR training in the undergraduate physical therapy curriculum in the Philippines. Of particular interest were:

(i) The nature of the institution (public or private), the location and longevity of the CBR programme;

(ii) Characteristics of the staff involved in its management;

(iii) Awareness and training of staff in CBR;

(iv) The team approach adopted for CBR as well as the included activities; and,

(v) The strengths and weaknesses of the CBR training.

METHOD

Study Setting

The study sample was selected from a national database of private and public colleges, as well as universities, that offer an accredited Bachelor of Science in Physical Therapy degree programme.

Inclusion criteria:

- Academic institutions with evidence of active, current and existing CBR course/clinical training, and
- Managed by the physiotherapy department.

Exclusion criteria:

- Institutions with discontinued CBR courses, or
- With CBR programmes managed by third parties (e.g., non-governmental organisations - NGOs, local government units - LGUs) other than the physical therapy department-in-charge of implementation, or
- Physical therapy departments lacking evidence of current CBR programme implementation.

Sampling

Ten schools were randomly selected through cluster sampling according to geographical region, to ensure proper sampling distribution. They were selected from the database of 80 schools (consisting of 77 private and three state schools) provided by the Philippine Regulatory Commission (PRC, 2017)

Questionnaire Design

The items in the questionnaire were derived from two key CBR references: Magallona (Manual of CBR Workers and Caregivers, 2005), and Thomas and Thomas (Manual for CBR Planners, 2003). The first part consisted of 17 items, which gathered information on institutional profile, integration of the CBR programme within the physical therapy curricula, the CBR programme, and CBR activities and services included in the physical therapy curricula. The second part consisted of 6 items, which obtained information regarding CBR academic management and implementation. All the 24 items were identified by a panel of authors, based on the level of implementation of current CBR programmes in undergraduate physical therapy programmes. A checklist was used to collect data on the following areas as identified by the panel: awareness of concepts, principles, aims and objectives of CBR prior to implementation; CBR training among faculty members and programme planners; and, training on team approach used in CBR programmes. The description of transdisciplinary care used was "going beyond one's chosen profession" (Magallona & Wirz, 1994; Magallona, 2005). In this model, the therapist-in-charge functions as either a generalist and/or specialist depending on the service needed by the person with disability. For some of these services, the therapist is expected to consult other specialists and learn from them. A physical therapist is therefore expected, for example, to be able to deliver some speech training or counseling to a person with disability who needs it (Magallona, 2005). The term multidisciplinary was described as

various professionals working together to address common needs and problems of the person with disability, but within their own professional limits (Momsen et al, 2012; Van Bewer, 2017). Interdisciplinary team was described as professionals working collaboratively in setting rehabilitation goals and individualized treatment plans, as well as assessing progress (Sander and Constantinidou, 2008). The above description and reference for transdisciplinary care was used also by institutions during training sessions for faculty members. During these sessions, the terms multi- and inter-disciplinary care were informally described to differentiate them from transdisciplinary care, but without direct reference to published literature. In questions 17 and 18, 'sufficient training' was defined as faculty members undergoing extensive immersion in CBR seminars/training conducted for CBR faculty members of different universities/colleges, undertaken by designated trainers at the University of the Philippines-Manila, the University of Santo Tomas and at the CBR Congress organised by the CBR Special Interest Group of the Philippine Physical Therapy Association, in 2016. Faculty members also participate in the CBR Special-Interest-Group (SIG) trainings/seminars. The CBR training focused on the different team approaches and their implementation, providing participants and representatives from all schools with the information needed to choose the appropriate team approach for their institution depending on resources available.The CBR-SIG is a core educational group under the Philippine Physical Therapy Association. Lastly, a single item inquired about perceived strengths and weaknesses of the host CBR programmes in terms of CBR activities that students conduct in their respective communities through the use of a checklist. The panel had identified these perceived strengths and weaknesses based on a focus group discussion they conducted with five faculty members each from different schools who had CBR teaching experience and insight into the challenges encountered with CBR implementation. discussion.

The questionnaire was piloted with schools randomly selected through cluster sampling using the database of the PRC. Schools were clustered according to the different geographical/administrative regions and one specific cluster was randomly selected. Upon selection of the geographical region, simple random sampling was done to select the institutions in that cluster for the pilot study. After the piloting, face validity was checked by experts using a Likert scale to determine suitability of items intended for the CBR research. The final draft was prepared and distributed accordingly.

Data Collection

At the time of this study, one of the researchers - Napoleon R Caballero - was an ex-President and a current member of the Board of Directors of the Philippines Physical Therapy Association (PPTA). He was also a member of the CBR Special Interest Group of the PPTA and remains in this role to the present day. The Deans, Heads and Chairpersons of the Physical Therapy Departments are all members of the PPTA. Napoleon R Caballero contacted them in his capacity as a member of the CBR Special Interest Group, informed them about the objectives of the survey and, once consent was obtained, a copy of the questionnaire was sent by email, or personally given to respondents who were the Heads of the CBR programmes. Respondents were given one week to return the questionnaire. A 100% response rate was obtained from the sample of schools that had been selected.

RESULTS

Characteristics of Institutions

The sample consisted of more private (90%) than public academic institutions, randomly selected, with all institutions fully integrating CBR within their respective physical therapy curriculum (Table 1). Sixty percent of these schools were located in the major cities of the country. An equal percentage of schools had either incorporated CBR programmes within the last 5 years (30%), or had integrated it in their physical therapy academic programmes in the past 6-10 years (30%). Three schools (30%) had implemented their CBR programme for more than 12 years. CBR programmes managed by these institutions were primarily located in rural communities (80%).

Table 1: Characteristics of Academic Institutions

	Variables	N (%)
Location of academic institutions	Urban	6 (60.0)
	Rural	4 (40.0)
Type	Private	9 (90.0)
	Public	1 (10.0)

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	Variables	N (%)
Integration of CBR in PT curriculum	Yes	10 (100.0)
	No	0 (0.00)
Years of CBR integration in PT curriculum	1-5	3 (30.0)
	6-10	3 (30.0)
	11-15	2 (20.0)
	15>	2 (20.0)
Years of CBR implementation	0-3	2 (20.0)
	4-6	2 (20.0)
	7-9	1 (10.0)
	10-12	2 (20.0)
	12>	3 (30.0)
Site of CBR implementation	Urban	2 (20.0)
	Rural	8 (80.0)

N= number of institutions; PT=Physical Therapist; CBR=Community-based Rehabilitation

Management of CBR Programmes

The percentage of physical therapists involved in their departments' CBR programmes was high (100%) (Table 2). The number of people within the department directly involved with the CBR management was generally between 1 and 3 (in 60% of institutions). CBR academic programmes were managed primarily by physical therapists (45%), and physicians (23%), and assisted by other health professionals. Among those who managed the programmes, 70% were designated as CBR /programme coordinators and 60% CBR clinical coordinators. However, 30% of programmes did not have a CBR programme coordinator, 40% did not have clinical coordinators and 90% did not have community leaders involved in the programme management.

Table 2: Characteristics of Personnel involved in CBR Programmes

	Variables	N(%)
Personnel in-charge of CBR programme	MD	5 (50.0)
	PT	10 (100.0)
	OT	2 (20.0)
	Lab. Technician	3 (30.0)
	Nurse	1 (10.0)
	Community Leader	1 (10.0)
Number involved in CBR programme management	1-3	6 (60.0)
	4-6	2 (20.0)
	7-9	0 (0.0)
	9>	1 (10.0)
	No response	1 (10.0)
Designated management position	CBR Head/Programme Coordinator	7 (70.0)
	Clinical Coordinator	6 (60.0)
	CBR Staff	2 (20.0)
	PT Faculty Member	1 (10.0)
	Community Leader	1 (10.0)
	PT Technician	1 (10.0)
Number of PT staff involved in CBR management	1-3	6 (60.0)
	4-6	2 (20.0)
	7-9	0 (0.0)
	9>	1 (10.0)
	No response	1.(10.0)

N= number of institutions; PT=Physical Therapist; OT=Occupational Therapist; CBR=Community-based Rehabilitation

CBR Curriculum

Seventy percent of institutions had specific vision and mission statements for the CBR programmes, and 80% had implemented specific guidelines and policies for this programme. Across all the schools, the CBR course syllabus contained Intended Learning Outcomes (ILOs), and a specific CBR clinical training manual for students, with the corresponding student assessment (Table 3). Half of all respondents felt that their respective CBR programme's mission and vision were aligned with their department's programme implementation. Eighty percent of respondents perceived that current policies regarding the CBR programme were significantly aligned with their academic institution's CBR programme implementation (Table 4). Seventy percent of institutions provided a separate introductory professional course on CBR, prior to the clinical rotation. The duration of the clinical rotation in CBR varied between 1 and 2 months, and took place during the third or fourth year of the undergraduate physical therapy degree programme (Table 5).

Table 3: Components of Integrated CBR Programme in Physical Therapy Curriculum

	Variables	N(%)
Mission/Vision	Available	7 (70.0)
	Unavailable	2 (20.0)
	No response	1 (10.0)
Implementation of Guidelines and Policies	Available	8 (80.0)
	Unavailable	2 (20.0)
Intended Learning Objectives	Available	10 (100.0)
	Unavailable	0 (0.0)
Course Syllabus	Available	10 (100.0)
	Unavailable	0 (0.0)
CBR Clinical Training Manual	Available	10 (100.0)
	Unavailable	0 (0.0)
Student Assessment	Available	10 (100.0)
	Unavailable	0 (0.0)

N= number of institutions; CBR=Community-based Rehabilitation

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Table 4: Alignment of CBR Programmes

	Strongly unaligned	Unaligned	Neither aligned nor unaligned	Aligned	Strongly aligned
Mission	-	-	10.0	50.0	30.0
Vision	-	-	10.0	50.0	30.0
Policies	-	10.0	-	80.0	-

Table 5: Integration of CBR Programme into Physical Therapy Curriculum

	N	%
Taken as separate professional course prior to Clinical Internship only	0	0.0
Discussed within a professional course only	0	0.0
Specific clinical rotation during Clinical Internship with required clinical hours only [a]	3	30.0
Discussed within a professional course and as specific clinical rotation during Clinical Internship	0	0.0
As separate professional course [b] and as specific clinical rotation during Clinical Internship [c]	7	70.0

[a] Schools require CBR clinical rotation of 2 mos; [b] 5 schools offer CBR during 3rd year with 2 schools during 4th year level; [c] 5 schools require 2 mos. clinical rotation with 2 schools requiring 1 mo. rotation; CBR=Community-based Rehabilitation

Training Provision

In 90% of institutions, faculty members responsible for overseeing the programme reportedly had a high level of awareness of CBR concepts, principles and aims. In 50% of institutions, faculty members received formal CBR training that was related to implementation. Only one institution provided this training to its faculty members. In the remainder, training was received via professional interaction with other CBR physical therapy professionals (one institution) or through CBR summits (three institutions). Irrespective of how faculty members received

training, respondents reported that the training was sufficient and appropriate for the team approach (i.e, inter-, multi- or transdisciplinary care) adopted by the respective institutions for physical therapy undergraduate education. After training when faculty members (sample group of this study), returned and taught and trained their students, sixty percent of all respondents perceived that students received proper and sufficient training from faculty members on the selected team approach used during CBR clinical rotation (Table 6).

Table 6: Training of Faculty Members for CBR Implementation

	Variables	N (%)
Awareness of CBR concepts, principles, objectives	Yes	9 (90.0)
	No	1 (10.0)
Formal CBR training	Yes	5 (50.0)
	No	5 (50.0)
Source of CBR training	Organisation	1 (10.0)
	CBR Summit	3 (30.0)
	PT professionals	1 (10.0)
Sufficiency of CBR training	Sufficient	5 (50.0)
	Insufficient	5 (50.0)
Sufficiency training on team approach used	Sufficient	5 (50.0)
	Insufficient	0 (0.0)
Perceived proper team approach taught to PT students	Yes	6 (60.0)
	No	4 (40.0)

N= number of institutions; CBR=Community-based Rehabilitation; PT=Physical Therapy

Team Approach to CBR Delivery

Fifty percent of respondents who attended the CBR training chose to adopt the multidisciplinary approach for the delivery of CBR services by their school based on the resources they had available. These 50% of respondents were only a fraction of t the total number of participants in the training which include faculty members. The remainder respondents took an interdisciplinary (30%) or transdisciplinary (10%) approach. CBR activities among these schools focused mainly on three

important areas: a) delivery of physical therapy services; b) disability prevention; and, c) health education for clients, family and the community at large. Notably, there was a low percentage (20%) of student participation in a major activity involving the training of community volunteers as CBR workers (Table 7).

Table 7: CBR Programme, Activities and Services

	Variables	N (%)
Team care	Multidisciplinary	5 (90.0)
	Interdisciplinary	3 (30.0)
	Transdisciplinary	1 (10.0)
	Others	1 (10.0)
CBR activities and services undertaken by students	Coordinating with local government units in planning and management of CBR activities	7 (70.0)
	Delivery of :	
	Physical Therapy services	9 (90.0)
	Occupational Therapy services	2 (20.0)
	Others:	0 (0.0)
	Health education for clients, families and community	9 (90.0)
	Family training	7 (70.0)
	Disability prevention	9 (90.0)
	Training community volunteers as CBR workers	2 (20.0)

N= number of institutions; CBR=Community-based Rehabilitation

Strengths and Weaknesses of CBR Implementation

Three key strengths were identified by institutions with respect to CBR Implementation: (i) participation of persons with disabilities in CBR activities (90%); (ii) community awareness about the role of CBR (70%); (iii) coordination with stakeholders for sustainability of the CBR programme (70%).

In addition, four key weaknesses were identified: (i) recruitment of community volunteers as CBR workers (100%); (ii) financial allocation for CBR activities; (iii) availability and utilisation of indigenous resources for CBR training and use; and (iv) participation of family in rehabilitation of a family member with disability.

An equal number of the schools identified accessibility for persons with disabilities as a strength or as a weakness (Table 8).

Table 8: Problems in CBR Implementation by PT Academic Institutions

	Strengths		Weaknesses	
	N	%	N	%
Participation of family members in rehabilitation of family member with disability	4	40.0	6	60.0
Accessibility of persons with disability	5	50.0	5	50.0
Participation of persons with disability in CBR activities	9	90.0	1	10.0
Financial allocation for CBR activities	3	30.0	7	70.0
Community awareness on role of CBR	7	70.0	3	30.0
Recruitment of community volunteers as CBR workers	0	0.0	10	100.0
Availability and utilisation of indigenous resources for CBR training and use	4	40.0	6	60.0
Coordination with stakeholders such as LGUs and NGOs for sustainability	7	70.0	3	30.0

N= number of institutions; CBR=Community-based Rehabilitation; LGU= Local Government Units; NGOs= Non-Governmental Organisations

DISCUSSION

To the authors' knowledge, this is the first survey of physical therapy academic institutions in the Philippines, regarding the governance, management, staff training, sustainability, and delivery of CBR services in their undergraduate programmes. These aspects of CBR services are important for determining effective contribution to and impact of any CBR programme (Carrington, 2007).

A CBR programme has been offered at the University of the Philippines since 1973, as part of its Comprehensive Community Health Programme (Magallona & Datangel, 2011). This historical leadership and implementation of CBR by the physical therapists in Manila and Bay, Laguna, may explain why several schools sampled in this study have been implementing CBR ahead of other institutions and countries. Preparing trainee physical therapists in CBR at undergraduate level is an important part of the drive to provide a comprehensive service in the community (Nualnetr, 2009).

All physical therapy schools sampled in the current survey had a clinical course of CBR, of 1-2 months duration, integrated into their undergraduate physical therapy programme during the 2nd or 3rd year, as per national mandates (CHED, 2006, 2017). The CBR courses were supported by a course syllabus, learning outcomes, student assessment and clinical training manual, as would be expected of any curriculum. One school did not have an overarching vision and mission for the CBR programme and this was associated with a mismatch of policies against the institution's CBR mission and vision; the reason for this was unclear. In addition, 80% of institutions had implementing policies and guidelines governing management of the CBR programme(s). Comparison of the content of these documents between institutions was beyond the scope of this study. However, evidence from other studies suggests that each institution is likely to have gaps in its CBR curriculum and programme management (Mostert-Wentzel et al, 2013).

The benefits of a separate module on CBR to prepare students prior to their clinical placement have previously been reported at the University of Cape Town (Futter et al, 2003). Seventy percent of institutions provided a separate theory course on CBR, prior to the clinical training; in this regard it is important for students to have an understanding of key concepts in CBR as well as their professional role in community practice. For the remaining 30% of institutions, it is possible that theory

sessions were blended into the clinical training (Karthikeyan & Ramalingam, 2014), but it may also indicate that students were at risk of being insufficiently prepared for their experience in community rehabilitation. Key knowledge areas for practice to be included are the CBR Matrix, the biopsychosocial model and multidisciplinary approaches to health and care and management (Twible & Henley, 2000; Ramklass, 2009; Cayetano & Elkins, 2016). Indeed, 50% of the physical therapy schools followed and adopted the multidisciplinary team approach for training in the delivery of CBR services; the remainder took an interdisciplinary (30%) or transdisciplinary (10%) approach. The clinical component of CBR is primarily for the further development of physical therapy skills and behaviours, but should also develop attitudes, social and cultural competence, socioeconomic awareness, values and processes for reflective practice (Norris & Allotey, 2008; Ramklass, 2009; Madden et al, 2013; Ziebart & McDermid, 2019). Whether this training of students is done prior to or blended into the clinical placement, there should be an emphasis on a regular review of CBR programme indicators, i.e., the learning outcomes (Futter, 2003), against the health policies and priorities in the Philippines, with the aim of identifying gaps in the curriculum (Mostert-Wenzell et al, 2013). Such a review should incorporate feedback from key stakeholders (including students, health professionals, community workers, organisations for people with disabilities, persons with disabilities themselves and their families) as well as external examiners, degree programme reviewers and external advisory boards. This approach can often identify whether the learning opportunities provided are sufficient to address the learning outcomes (Ernstzen et al, 2014). An ideal opportunity for conducting this review is as part of the regular 3-5 year cycle of degree programme review.

Typically, around 1 to 3 professionals were involved in the management of the CBR programmes, of which one was always a physiotherapist and 50% were physicians. However, 30% of programmes did not have a CBR Programme coordinator and 40% did not have clinical coordinators as designated management positions in the CBR programme. In this regard, there may have been overlapping roles and functions for physical therapists being teachers on the CBR theoretical course and at the same time clinical training coordinators. This may reflect inadequate financial provision for CBR by the institutions, which is often a barrier to successful implementation (Cayetano & Elkins, 2016). Alternatively, it may be due to the preferred practice by physical therapists to work in sports clubs, hospitals, private clinics and private practice, since these offer better career opportunities (Gotlib et al, 2010; Narin et al, 2018). Aside from

academic responsibilities, physical therapists may have roles in CBR settings that include being a CBR programme manager, a programme implementer, a team leader, manager, trainer, and adviser to local governments and communities (Bury, 2005; Nualnetr, 2009).

Ninety percent of institutions reported that faculty members involved in the CBR programme were aware of CBR concepts, principles and objectives prior to implementation. Only 50% of academic staff received formal CBR training, of which 80% was provided through CBR summits and professional interaction with other physical therapists. This training was perceived to be sufficient, and focused on the team-approach adopted in the CBR curriculum. However, the researchers did not review details of these undergraduate CBR training modules. The Philippine CBR manual provides context- specific information for the Philippines and focuses on implementation (McGlade & Mendoza, 2009). Despite these shortcomings, several studies have reported positive effects of the training on knowledge and skills, although details on the methods of evaluation are limited (Shamrock, 2009; Magallona & Datangel, 2011; Rule, 2013; Raj & Thomas, 2015).

Fifty percent of physical therapy schools adopted a multidisciplinary approach to service delivery and this is characterised by various professionals working in parallel or sequentially from disciplinary-specific frames to address together common needs and problems of the person with disability, but within their own professional limits (Momsen et al, 2012; Van Bewer, 2017). One of the reasons for the popularity of this approach may be its familiarity amongst the staff. The adoption of a multidisciplinary approach in CBR was reported in the Philippines thirty years ago (Periquet, 1989). Although considered an effective approach for rehabilitation, it has the limitation that each professional treats the same person, but without knowledge about each other's practices (Monsen et al, 2012). More recently, the University of the Philippines Manila introduced a CBR programme based on a transdisciplinary approach involving student physiotherapists, occupational therapists and speech therapists (Magallona & Datangel 2011). In this approach, professionals cross the border into another team member's professionalism, as well as sharing a conceptual framework (Momsen et al, 2012; Van Bewer, 2017). One advantage of the transdisciplinary approach with regard to CBR is that the rehabilitation professionals work together with the family and persons with disabilities as active participants to achieve holistic goals (Van Bewer et al, 2017). However, a limitation of the approach by Magallona

and Datangel was that they did not include service providers with expertise in mental health and social issues (World Confederation for Physical Therapy, 2016); their approach was focused on the health domain of the CBR Matrix only. Focusing on the health domain only during undergraduate education, whether through a multi- or transdisciplinary approach, has a number of consequences. First, it may fail to address the benefits of shifting to a more social disability model with its consequences for service delivery if this is restricted to the health doain only. Within such a paradagim one can expect that interventions remain limted to treatment only, in spite of broader goals in which a variety of CBR workers including grassroots workers, mid-level rehabilitation workers and other professionals have to play a role (Jansen-van Vuuren & Aldersley, 2019). Therefore, there is a risk that graduates have knowledge and skills gaps in relation to the other components of the CBR Matrix: education, livelihood, social and empowerment (WHO, 2010). Secondly, as graduates from these programmes take up professional positions in CBR they are likely to continue practising these outdated approaches, possibly leading to a reduction in the efficiency and impact of CBR interventions in the long term (Thomas & Thomas, 2003; Madden et al, 2013). In this regard, there is a further need to explore those aspects of CBR training that require a team approach. It is important that undergraduate training not only addresses the skills/competencies required by physical therapists, but also understand and appreciate the large variety of needs of people with disabilities and thus the consequences of these requiring a client-centred, interdisciplinary approach to service delivery (Thomas & Thomas, 2003; Nualnetr, 2009). Although educational, livelihood and social aspects of the CBR Matrix are important (Rule et al, 2013), it would be fair to say that these have traditionally been beyond the scope of a physical therapy undergraduate curriculum. Here, there are clearly opportunities for inter-professional learning across undergraduate curricula in CBR relevant areas of health, education, social studies, economics/finance and law through, for example, seminars, case-based learning, role-play, simulation and community-based learning (Rhoda et al, 2016; Pettignano et al, 2017). This approach to CBR education could be dovetailed by incorporating training in advocacy into the professionalism training of undergraduate physical therapy students as well, in order to further emphasise the break away from a traditional health focus of CBR (Kelland et al, 2014). It should be emphasised that these approaches would require changes not only to the current undergraduate curriculum but may also require appointment of staff specialised in education, healthcare education and in the various CBR domains, and/or for current staff

to undergo related training and personal development in such other domains. This approach may also address another important issue in the CBR literature. Till now, evidence for the efficacy of CBR on the CBR domains has been limited and of low quality, partly due to methodological issues, and there is a need to explore those aspects of CBR training that have an impact on the choice of team approach (Robertson et al, 2012; Patel et al, 2013; Bowers et al, 2015). In the future, it would be interesting to asses whether the efficacy of CBR improves following the introduction of a transdisciplinary approach and inter-professional learning to the CBR undergraduate curriculum.

The institutions focused CBR activities in four important areas: (i) coordinating with stakeholders such as local government units and NGOs in planning and management; (ii) delivery of physical therapy services; (iii) disability prevention; (iv) health education for clients, family and community. However, only 20% of institutions trained community volunteers as CBR workers. This information shows an emphasis on the health domain of the CBR Matrix (WHO, 2008), and this may simply reflect the biomedical foundations of CBR. Improved access to health and medical services through CBR programmes is important for promoting improved health and functioning (Nualnetr & Sakhornkhan, 2012). Delivery of physical therapy services through CBR compares favourably with hospital-based treatment in promoting independence and quality of life (Balasubramanian et al, 2012).

The CBR programme managers perceived several key strengths of their CBR programme implementation, including participation of persons with disabilities in CBR activities, community awareness of the role of CBR and coordination with local stakeholders. These perceived strengths are supported by evidence that CBR programmes result in improved use of assistive devices and increased inclusion of people with disabilities, as well as changing attitudes in the community, reducing prejudice and exclusion, and improving knowledge and skills (Lopez et al, 2000; Magallona & Datangel, 2011; Mauro et al, 2014; Bowers et al, 2015). Physiotherapy students are in a unique position to visit families and explain the availability of CBR services in the community. Clearly, CBR undergraduate programmes must be implemented in cooperation with stakeholders in the community in order to enhance their impact. These stakeholders include local government units (LGU), organisations for and of people with disabilities, and associations of the parents of children with disabilities (Kandyomunda et al, 2002). Previously it has been shown that a university-led CBR programme in the Philippines improved

collaboration among governmental and non-governmental organisations due to greater involvement in advocacy for persons with disabilities; whether the CBR should be led by an LGU or by an LGU in collaboration with an NGO was less clear (Magallona & Datangel, 2011). It is crucial that the role of CBR is clearly defined, otherwise community members and people with disabilities may perceive the programme as an extension of an ongoing activity organised by other agencies or confused with other healthcare delivery systems operating at the community level.

The CBR programme managers also identified four key weaknesses of their CBR programme implementation: recruitment of community volunteers as CBR workers, financial allocation for CBR activities, availability and utilisation of indigenous resources for CBR training and use, as well as family participation in the rehabilitation of a relative with disability. Lack of resources and finance for CBR activities, if substantiated through further investigation, would be of concern because this may affect its scope and impact in communities where awareness is low and demand for rehabilitation services is high (Lee et al, 2013). To compound this problem, there is already evidence that persons with disabilities face a number of barriers that limit their access to primary healthcare. These include finance, environmental factors such as lack of transport, long distances to access good quality care, as well as stigmatising behaviour of family and community (i.e., social environment) (Weiss et al, 2006; Wasti et al, 2012; Van Hees et al, 2014). It is important that physiotherapists receive training regarding these barriers faced by persons with disabilities as well as approaches to enable them at community level (Van Hees et al, 2014). Physical therapy students are under training and the scope of activities they are able to provide are limited in part by the CBR curriculum (Twible & Henley, 2000; Madden et al, 2013). Such training should be delivered within the context of the CBR Matrix, as well as the International Classification of Functioning, Disability and Health (WHO, 2001) and, as already mentioned, this provides an ideal opportunity for inter-professional learning. Additionally, key stakeholders should be invited to join these learning activities in order to provide students with insight, and to participate in role-play and/or simulations. Universities should ensure that the CBR curriculum is reviewed regularly in order to identify gaps (Futter, 2003; Mostert-Wentzel & Van Rooijen, 2013) in the students' training as well as the quality and scope of the service provided to the community. Since these weaknesses were common across the physical therapy schools, it would be ideal if representatives from all schools were to meet together to discuss progress in achieving their learning outcomes

within the context of national policies and to identify common problems and share solutions.

Limitations

This study focused primarily on the management of the CBR programme within the physical therapy curriculum. However, the actual CBR programme content/ curriculum was not evaluated. Also, private universities were predominant in the study sample and these have more resources than public universities. The data collected only reflects information gathered from physical therapy department heads and this may introduce some bias. For example, it is not surprising that the head of a department would say that they needed more finance and resources. This does not make the information any less valuable, rather it should be interpreted with caution and other evidence should be considered to support this conclusion. Regarding the issue of resources, 30% of CBR programmes did not have a programme coordinator and 40% did not have clinical coordinators as designated management positions.

CONCLUSION

To the best of the authors' knowledge, this is the first survey of academic heads of mainly private physical therapy schools in the Philippines regarding aspects of the management, implementation and integration of CBR into the undergraduate physical therapy curriculum. From the responses, a number of common strengths and weaknesses have been identified. Based on these, several recommendations are proposed for institutions to improve the CBR component of the undergraduate physical therapy curriculum.

Strengths

All physical therapy schools sampled in this survey had a clinical course of CBR, of 1 to 2 months duration, integrated into their undergraduate physical therapy programme, either as a standalone module or blended into the clinical training. Seventy percent provided a separate theory course on CBR, prior to the clinical training. The CBR courses were supported by a course syllabus, learning outcomes, student assessment and clinical training manual, and 80% of the institutions had implementing policies and guidelines governing management of the CBR programme(s). Typically, at least one physiotherapist was involved in the management of the CBR programmes. The CBR activities were delivered

in coordination with stakeholders such as local government units and NGOs in planning and management and with an emphasis on delivery of physical therapy services, disability prevention, health education for persons with disabilities, family and community, participation of persons with disabilities and community awareness of the role of CBR and coordination with local stakeholders.

Weaknesses

Thirty percent of CBR programmes did not have a programme coordinator and 40% did not have clinical coordinators as designated management positions in the CBR programme. There may possibly have been an overlapping of roles and functions for physical therapists acting as teachers on the CBR theory course and at the same time as clinical training coordinators. This could be a strength insofar as it may ensure that the theory component of CBR is aligned with practice; on the other hand it could indicate inadequate human resources. Only 50% of academic staff received formal CBR training, of which 80% was gained through CBR summits and professional interaction with other physical therapists. Fifty percent of physical therapy schools adopted a multidisciplinary approach to service delivery which was focused on the health domain of the CBR Matrix. Challenges for CBR implementation were recruitment of community volunteers as CBR workers, availability of indigenous resources and finance to support CBR activities, and family participation in the rehabilitation of a relative with disability.

Recommendations

- Each physical therapy department should conduct a review of their human resources and staff training for the CBR component of the curriculum. Where appropriate, consideration should be given to appointing staff specialised in education, health education and the various CBR domains, and/or current staff to undergo related training and development.
- There should be a shift from focusing mainly on the health domain of CBR and multidisciplinary care into a model of transdisciplinary approaches to CBR education and provide inter-professional learning in CBR-relevant areas of health, education, social studies, economics/finance and law through, for example, seminars, case-based learning, role-play, simulation and community-based learning.

- Each physical therapy department should conduct regular reviews of CBR programme indicators against the health policies and priorities in the Philippines, as well as the quality and scope of the service provided to the community, with the aim of identifying gaps in the undergraduate physical therapy curriculum. This review should incorporate feedback from key stakeholders (including students, health professionals, community workers, organisations for people with disabilities, persons with disabilities and their families) as well as external examiners, degree programme reviewers and external advisory boards. An ideal opportunity for conducting this review is as part of the regular 3-5 year cycle of degree programme review.
- The representatives from the various physical therapy schools should be encouraged to meet together regularly to discuss their progress in reviewing CBR programme indicators, in order to identify common problems and share solutions. This cooperation could also include investigating the lack, or otherwise, of availability of indigenous resources and finances to support CBR activities, and then, if appropriate, developing a list of actions.
- In the future, it would be interesting to investigate whether the efficacy of CBR improves following introduction of a transdisciplinary model, inter-professional learning and advocacy to the CBR undergraduate curriculum.

ACKNOWLEDGEMENT

This study did not receive any funding. The authors declare no conflict of interest.

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