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RESEARCH ARTICLE

DOCTOR OF PHYSIOTHERAPY PROGRAM IN ETHIOPIA

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ABSTRACT

Background: Beginning in 2012, the Government of Ethiopia implemented the Human Resource Development (HRD) program to enhance capacity building in the Ethiopian healthcare system. Through this program, physiotherapy residency program at Addis Ababa University (AAU) was started. The aim of this presentation is to describe Physiotherapy residency program in Ethiopia.

Methods: We performed a descriptive analysis of the physiotherapy residency program in Ethiopia after initiation of the first cohort group of Doctor of Physiotherapy residents.

Results: Through this cohort program, faculty from USA institutions and private companies supplement the existing Ethiopian Physiotherapy educational infrastructure to increase the teaching capacity, manpower and skilled professionals. In the process of conception of Physiotherapy trainees more than half of them were joined from Addis Ababa region with sponsorship letters. Service-based Physiotherapy residence has been conducted for two years as Advanced Physiotherapy Courses'. Then a year later class-based
training program was started through lectures, E-learnings and data-based educational systems. Lectures remain a foremost part of the educational program, but more focus is placed on clinical practice and peer-education. Shortage of academic staffs, mentor instructors and advanced teaching equipment's overwhelm learning-teaching process posing a challenge towards providing residents with a broad spectrum of clinical experiences, especially advanced Physiotherapy services.

Conclusion: Through this program, the Doctor of Physiotherapy residency program must be expanded throughout different Universities of Ethiopia. Mean a while, the quantity and quality of physiotherapy residency program is expected to offer scholarship chances to physiotherapists working in African continent.

INTRODUCTION

Many countries in Sub-Saharan Africa (SSA) struggle with a shortage of Rehabilitation workers, including Physiotherapists. It is difficult to accurately quantify the unmet need of Physiotherapists in Sub-Saharan African region, though different studies have shown that there is a high need with relatively limited access to (Chartered Society of Physiotherapy, 2008; Aamir Memon, 2013). To counteract this shortage of rehabilitation workers many countries are expanding different local and national training programs both at the undergraduate and post-graduate levels (Lucy *et al.,* 2006; History of development of physiotherapy in Nigeria, 2016; Cadotte *et al.,* 2012).

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One such example is the Doctor of Physiotherapy Residency Program at Addis Ababa University, which in partnership with the Regis University, Colorado and the Jackson Clinics llc, Virginia, USA, developed a physiotherapy residency program with a general practitioner title. The program is administered through a volunteer instructor from different Universities in USA. Advantages of developing local residency program decreased risk of "brain drain," teaching trainees about locally relevant pathology and providing evidence based physiotherapy care to the local populations (Lucy *et al.,* 2006). Through collaboration with universities, private companies and relevant stakeholders from high-income countries (hics) may help local training programs to grow. Partnerships with universities and professional societies in hics provide a quality control element, increased faculty presence and supervision, access to learning resources and oftentimes an external funding source (History of development of

physiotherapy in Nigeria, 2016). While the nature of such type of partnership varies considerably based on goal of funding agencies and funded organizations, many of the experiences are similar. Ethiopia is a land locked, oldest independent and second populous country in Africa. Projections from the 2007 population and housing census estimate the total population for the year 2010 to be 79.8 million. It is the home of a mosaic nations, nationalities and peoples varying with more than 80 different spoken languages. The Government of Ethiopia follows a market based and agricultural-led industrialization economic policy for the development and management of the economy. The major health problems of the county remain largely preventable communicable diseases and nutritional disorders. Despite major progresses have been made to improve the health status of the population in the few decades, Ethiopia's population still face a high rate of morbidity and mortality and the health status remains relatively poor. Figures on vital health indicators from DHS 2005 show a life expectancy of 54 years. Ethiopia has worked tirelessly to transform this and today reports improved health statistics in all fields. Despite these advances, there remains a shortage of physiotherapists and other trained healthcare staffs with 1 physician per 20,970 populations (Cadotte *et al.,* 2012; Frantz, 2007). The recently implemented Business Processing Re-engineering (BPR) of the health sector has introduced a three tiered structure with 16,251 health posts, 3,335 health centers and 156 Hospitals (1, 4). Health care system characterized by a first level of a Woreda/District health system comprising a primary hospital, health centers and their satellite Health Posts that are connected to each other by a referral system. A Primary Hospital, Health center and health posts form a Primary Health Care Unit (PHCU) with each health center having five satellite health posts. This is augmented by the rapid expansion of the private for profit and Non-Governmental Organizations (NGOs) sector playing significant role in boosting the health service coverage and utilization thus enhancing the partnership in the delivery of health care services in the country. The FMOH and RHBs focus more on policy matters and technical support, while Woreda Health Offices have basic roles of managing and coordinating the operation of a district health system under their jurisdiction (Armstrong and Ager, 2006).

The patients initially present to local health posts or to the health centers staffed by Health Officers, Nurses and Health Extension Workers. They are then referred to district hospitals staffed primarily by General Practitioners, Midwifes and other health care workers. From there, they are referred to regional or referral/specialized hospitals[6,7]. In total, there are approximately around 350 full time Physiotherapists working in Ethiopia with most of them are working at referral hospitals conceal serious geographical differences as well as differences between the public and the private health sectors [8]. Physiotherapy training program in Ethiopia started in 2002 at University of Gondar (UoG) in an effort to increase the number of physiotherapists by volunteer physiotherapists from Netherland. The supporting team of Ethiopian physicians who believed that physiotherapy could improve the quality of life, making the University pioneer of physiotherapy in Ethiopia. They do have both undergraduate and postgraduate programs with recruited local and international oversea staffs from University of South Australian, Netherlands and India. They produced a total number of 303 undergraduate physiotherapists to date. Before this time, physiotherapists and other rehabilitation technicians were trained outside of Ethiopia, in places such as South Africa, and Europe (Higgs, 2001). On the other hand, Mekelle University started both undergraduate and postgraduate physiotherapy training in 2015. They enrolled 20 regular, 25 extension undergraduate students and 5 fellow post-graduate students. They recruited academic staff from Europe and India as a permanent employ. It is seen that compared to many other countries, the physiotherapy residency program started very late in Ethiopia. Even though, Ethiopia is struggling to produce qualified physiotherapist at Doctorate level, other countries have already evolved in producing highly qualified physiotherapist at Masters or PhD level. Physiotherapy residency program should reflect the health and society priorities of the nation [10]. With the developments and rapid changes of education worldwide, Ethiopia needs to keep in line the development and recent advances in the education to augment a quality physiotherapy education and services to the nation. To improve the health outcomes, it is important that physiotherapists have the best advanced residency and training to work in health care teams. In order to provide a quality residency program, it is important to look into the challenges and lessons learned in physiotherapy residency program in Ethiopia (Frantz, 2007). In 2010, the Federal Ministry of Health (FMoH) embarked on a strategy to fill the human resource development for health gap to improve access to health care for the growing population. A special collaborative, the Ethiopian Human Resource Development (HRD) Program, was initiated in 2010. The main objective of improving the staffing level at various levels, as well as to establish implementation of transparent and accountable human resource management at all levels (Frantz, 2007). Among other aims, the program goal is to increase the number and capacity of training institutions, use health institutions as a training center trough establishing a platform for the effective implementation of CSRP and introducing incentive packages. Through this program, faculty from various partnering are recruited to twin with local Ethiopian colleagues to strengthen the educational systems. In physiotherapy, the ultimate goal is to staff a professional physiotherapist in each district hospitals. Specialized physiotherapists will work primarily at referral and specialized hospitals. As more collaborations and twinning programs should be developed between low and middle income countries (lmics) and hic universities, it is important to learn from these experiences (Acharya *et al.,* 2015). So, the main objective of this study is to describe the experiences and lessons learned from the residency program in the first cohort group of Doctor of Physiotherapy residency program in Ethiopia (Frantz, 2007).

METHODS

We performed a descriptive analysis of the residency program in the first cohort group of Doctor of Physiotherapy. The domains analyzed include the structure of the residency program, teaching faculty, patient care, education strategies and clinical experiences. We provide a description of the experiences, challenges and lessons learned through scaling up the physiotherapy residency program in Ethiopia (Table 1).

Table 1. Challenges, Recommendations and Key lessons learned

Challenges	Recommendations and lessons learned
Residency structure	
Residency program	Increase resident exposure at district hospitals Increase reimbursement Waive/modify internship requirement
Large increase in junior residents with Fewer senior residents	More focus on basic physiotherapy principles in initial years' residency program
Academic Staff	
Shortage of educational faculty	Supplement with visiting and guest faculty
Competing demands on local faculty	Educational coordinator Modify employment terms for teaching faculty Compensation for teaching time
Defining a twinning partnership	Local and visiting faculty twinned via firms Firm curricula defined
Adaptation of visiting faculty to the local environment	Long term commitments and/or returning faculty Hospital/program orientation Clear goals and expectations set
Multiple visiting teams	Create mechanisms to improve communications and relations between various departments
Clinical care	
Organization of patient care	Specialized firms Patient lists Daily interdepartmental and departmental ward rounds with faculty member
Measuring outcomes	Development of case management database Attend morning, journal club Develop systems to monitor quality improvement processes Prepare platform for Monitoring and evaluation
Service- Based and Clinical Education	
Variations in success of self-directed learning	Modular curriculum with outline and objectives Reading schedule Core lecture series
Additional educational opportunities	Weekly academic days with journal club, morning, radiology review, etc Basic physiotherapy skills course Peer-reviewed education
Access and availability of information and resources	Development of program website
Resident assessment	Modular exams Annual exams Qualification exam
Medical and Health Science students' education	Faculty-led bedside teaching Resident peer-teaching
Clinical Placement	Placement on rehab centers, district hospitals, etc

RESULTS

Structure of the Physiotherapy Residency Program

Before

Prior to the class-based Doctor of Physiotherapy (DPT) residency program, service- based program was initiated and run for two constitutive years with collaboration of the Jackson Clinics. Then the academic dean of AAU canceled the program due to personal interests and after a year later another group of residents was recruited and started the program. This program is a 4 and half-year undergraduate physiotherapy program without a thesis upon completion. The subject material was broad-based covering of Pediatrics, orthopedics, neurological rehabilitations, manual therapy, exercise physiology, exercise therapy, electrotherapy, dry-needling, cardiopulmonary-rehabilitation, and injections. After completion of the training program, some graduates began practice immediately on their sponsored hospitals, academician will be recruited by AAU, whereas others pursued further physiotherapy specialty training outside Ethiopia. Despite the fact that there were only places for 18 residency positions per year, an average of 2-4 residents was enrolled annually in each region of Ethiopia.

After

The initiation of the residency program brought about a debate and re-structuring on College of Health Sciences, Addis Ababa University, with the aim of increasing both the number of faculties and advanced physiotherapists in Ethiopia. AAU now offers a physiotherapy residency program for only one batch because of shortage of academician and lecture centers. Curriculum was developed for this program and approved by Senate of Addis Ababa University. Curricula were locally developed, but modeled on curricula from other programs found in USA, focusing on topics deemed relevant to Ethiopia. Doctor of Physiotherapy residency program is expected to be completed on 4 years. All residents attend basic courses from different departments with special reference to basic sciences; like, Anatomy, Exercise

Physiology, Embryology and Kinesiology. This is followed by 2-3 years of specific training courses on physiotherapy. Residents practice on patients with close follow-up by instructors in Black Lion Hospital (BLH). The Academic Dean plans to attach them at BLH; in neurology referral clinic, orthopedic clinics, pediatric ward, cardiothoracic units and as well in different rehabilitation centers around Addis Ababa. The initial focus has been directed towards basic physiotherapy principles and managements in the first 2 years of program inception. Over the next 1-2 years, further program development will focus on more advanced training targeted towards more advanced clinical concepts and evidence based physiotherapy treatment strategies. A total of at least 18 physiotherapy resident positions are available for each academic year. The majority of physiotherapy residents are male, with a male: female ratio of 18:4. However, in the past three years, there was no second or third batch residents due to shortage of academic staffs and lack of supporting agents. For the second batch, AAU tried to take at least 20 residents. Shortage of applicants has been seen due to a potential reasons include the requirement of sponsorship, lack of interest in the field, heavy workload, and work-life balance (better job, better pay and better quality of life) during the training and remuneration after training (Federal Democratic Republic of Ethiopia, 2010). Further studies will need to be performed to determine the exact causes of not accepting new residents and low recruitment. Suggestions for accepting new residents the university must recruit permanent academic staffs and try to find sister universities for bilateral agreements, where as to increase the number of physiotherapy resident applicants include stretched the selection criteria and accepting self-sponsored residents. The dramatic increase in the interest of physiotherapists to upgrade themselves is the backbone of the program. This program will be continued until two-third of the professional physiotherapists became DPT holder. Then, AAU will accept undergraduate students directly from Ministry of Education after completion of Higher Education Entrance Examinations. This will make the program sustainable and with improving supervision and mentorship, the junior residents will become more experienced and will begin to model behavior for incoming residents.

Department of Physiotherapy Faculty

Before

There were 30 American Physical Therapists teaching faculty in the first service- based residency program in 2012. Only one were AAU academic staff, while the remaining 29 were volunteers who came for only two weeks by the Jackson Clinics and Regis University with limited teaching responsibilities. They were selected and sponsored by Jackson Clinics Ethiopia Foundation based on their specialty.

After

With the introduction of class-based residency program, local faculty were supplemented from Anatomy, Physiology, Orthopedics, Radiology, Neurology, Neurosurgery and related departments of AAU for basic science courses. Local faculty is engaged in clinical, administrative and educational responsibilities. Whereas, most of the PT instructors are coming from Regis University and affiliated institutions. In future years, it is anticipated that the current trainees will become the future generation of educators. Visiting faculty, many from USA (especially; Richard Jackson and Cherry Footer), provide additional support through resident and student supervision. They also participated in curriculum development and educational activities. However, there is a lag of two years before this can be realistically achieved. There is no responsible institutional controlling body for this residency program. The AAU and FMoH must come up with proposals to stem this challenge, by reorganizing the structure of the teaching hospitals to include physiotherapy on the case team lists with respective educational coordinator, review of the employment terms to emphasize educational output and compensation of teaching time by clinicians. These initiatives are still on the ground and on early stages but promise an improved structural and educational model. Visiting Physical Therapists are employed for a minimum of two weeks. This can provide support for ongoing projects and promoted the initiation of new projects. Sub- specialists will be consumed with international standards. Given the complexities of adjusting to a new system, visiting faculty are most beneficial when they are long -term and/or recurrent and accommodation, transportation and some related compensation methods must be adjusted. The visiting faculty member is given an orientation before arrival to enhance integration. As it can take a significant amount of time to understand and adjust to the local systems in place, new faculty should be briefed on the challenges and limitations of the hospital system prior to arrival. Visiting faculty may not anticipate the limitations in the rehabilitation departments which can range from material and staffing resources machine availability. In addition to the Regis University faculty through Paragon Physiotherapy Specialized clinics, Addis Ababa, additional visiting physiotherapists through other organizations who contribute to the AAU, DPT residency program should be contacted. Developing strong communication links between the various organizations represented is critical.

Clinical Care

Prior to inception of the service-based residency program, residents were providing service during a morning session and attend class in the afternoon. When the class-based residency program was started, they spent most of their time on class and practical sessions. They have been attached to different wards and out-patient departments with specialist's supervision. Through firm organization, there has been a subjective increase in ward rounds and patient care on the ward. Patients were more closely rehabilitated more efficiently and complications prevented (Girma *et al.,* 2007). Unfortunately, at this point, there are no objective measures of these data points. In future years, more focus will need to be placed on data collection and quality improvement measures. Regulatory bodies need to be established a strong policy, and standards of physiotherapy education and profession for a better education, service and good health outcome in Ethiopia (Armstrong and Ager, 2006).

Education

Physiotherapy training program in Ethiopia has historically been comprised by lack of local academician. Self-motivated

residents were able to guide their learning whereas other residents struggled to manage time well and identify appropriate study materials. Didactic programs were limited by the number of books available and absence of senior experienced staffs. Beginning in 2010, a modular curriculum was developed and provided for service- based residents for two years with an outline and learning objectives. To supplement the modular curriculum, a series of core lectures must deliver by guest lecturers for residents in a coordinated manner. The modular curriculum has been hard to implement for programs with limited AAU faculty. Additional support is needed to ensure the success of the modular curriculum in these programs. Visiting and guest lecturers could potentially support local faculty in administering modules. Progress in module learning is evaluated by modular exams. Maintaining clear and consistent goals and expectations both in patient care and in the educational curriculum has made it easier for residents to meet those goals. In addition, trainees take annual written and objective structured clinical exams. For practical exam a more formal and standardized evaluation tools must be prepared to minimized subjective bias (Higgs *et al.,* 2001). Additional educational activities such as conferences, journal clubs, research meetings and radiology reviews are conducted independently at different departments in BLH. AAU has devoted to build a new world class tertiary care hospital, which is used for training purposes by College of Health Sciences. In addition, a website was developed with the goal of augmenting the educational program with supplemental resources (Serela, 2009). However, this remains a work in progress with the primary challenge being ongoing maintenance and regular updates to the website. With the increase in the number of residents, there has been greater opportunity for teaching interactions between senior and junior residents. As every firm has a specific curriculum, the clinical teaching is more focused with an increase in the amount of faculty- led bedside teaching. In addition to their responsibilities towards patient care, residents have been given the task of teaching junior residents both formally and informally. This allows an increase in educational sessions without overburdening faculty with teaching responsibilities. This form of peer-education is advantageous to the trainees for many reasons (Ernstzen, 2014). As many physiotherapists will continue as educators, it is important to teach educational skills early in their career. Also, the instructor learns by preparing for the teaching session. Finally, students may learn best from those near in age to themselves. Incorporating junior and senior residents into the teaching process facilitates learning while lessening the strain placed on faculty.

Clinical Experience

Residents would practice on each other with a mentor instructor supervision, similar to an apprenticeship model. They have access for patients to practice on them freely after asking a consent. Clinical experience was defined by the physiotherapy cases of the mentoring instructor and practical examination. They will have both written and practical exams for accessing the performance of residents. However, a well-trained, well-balanced physiotherapist needs a wide breadth of experience in both primary and tertiary hospitals. Referral hospitals are occupied by different advanced cases, including cancer with relative lack of well-equipped rehab centers. These cancer rehab centers must be implemented in each Oncology canters. This is compensated by rotations at other rehab centers where equipment's are available and accessible. After a few years later number of DPT residents will be increased, finding sufficient opportunities for clinical placements and experience remains a challenge. Other innovative strategies can be employed to increase residents' exposure to different cases while not compromising services to the patient. Efforts thus far have focused on increasing the rehab centers at different hospitals and expanding the number of teaching sites. Other mechanisms to increase the breadth of physiotherapy practices should focus on the placement of residents outside the country where advanced rehab centers are available for better exposure and experience. Tutors should be exposed to new teaching methods, to continue bringing in expert faculty, to consider exchange programs or sending faculty abroad for short time periods to other university programs, so that they can see other aspects of running courses/programs (administration, group work, clinical placements, etc.). Education needs to be provided as same quality as the international universities, but ensuring the students are taught in a way that their clinical practice matches the needs of the Ethiopians patient population. As the residency program continues to grow and expand in different universities across Africa, the HRD Program of FMoH and Ethiopian Physiotherapists Association will need to provide additional specifications and supporting documents to teach these advanced physiotherapy skills. However, additional resources (including practicing time and space) will need to be in place to take advantage of clinicians. Another option is to offer rotations in other countries where advanced rehabilitation facilities are available.

DISCUSSION

There is a great demand for physiotherapy service in poor and resource limited countries and an overall shortage of professional physiotherapists (History of development of physiotherapy in Nigeria, 2016). To counteract this, Addis Ababa University has scaled up physiotherapy residency program through the assistance of the Regis University and other relevant stakeholders. This is a complex process requiring restructuring and organization at Federal Ministry of Health, Ministry of Education, Federal Food Medicine and Health Care Authority, Addis Ababa University and respective hospitals. We tried to described our experiences in this processes, including the challenges experienced and lessons learned. The curriculum was developed based on the curriculum of other alliance Doctor of Physiotherapy residency programs in USA (Ernstzen, 2014). It is anticipated that Addis Ababa University, Doctor of Physiotherapy residents will be qualified based on the curiosity of Federal Ministry of Health and will took national qualification examinations after completion of the residency program. Curriculum development is a complex and multi-level process with different skills and expertise needed in different sector organizations. Defining a curriculum that adequately trains a physiotherapist to work in a country without equipped hospital is different from a physiotherapist who work at a sophisticated and advanced referral hospitals (Lucy *et al.,* 2006; History of development of physiotherapy in Nigeria, 2016; Fact sheets). While there is a goal to staff all district hospitals with a professional physiotherapist, there is also a need for international certified physiotherapist at the

specialized hospitals and academic staffs too. On the contrary, community-based physiotherapy practice in under-resource areas was under-emphasized in the curriculum in relation to practice opportunities within hospital and institution-based settings. The curriculum was found not to advance the role of physiotherapists as socially responsive agents and appeared to pay insufficient attention to knowledge underpinning socio-cultural and inter-professional relations. Physiotherapy academic knowledge should be adequate to support novice physiotherapists within under resource communities in their multiple roles as clinician, manager of physiotherapy department, member of multi-disciplinary teams, health educator and advocate for social justics (Ernstzen, 2014). To join the residency program, it's necessary to obtain an accredited undergraduate degree (BSc) in physiotherapy, must be an active member of Ethiopian Physiotherapists Association and register with the health professionals council (Higgs, 2001). As the Physiotherapy residency program continuous, a new unpredicted challenges will continue to be faced. The number of intake of residents must be increase over the next few years based on interest of respective stakeholders and hospitals. By the 2025 academic year, the number of health care facilities and functional departments will be tripled, while the number of specialized physiotherapist may not increase. To full fill this gap, this residency program must be expanded to other higher institutions and health sector development plane (HSDP) should incorporate such type of innovative programs to accelerate rehabilitation programs.

In addition to this, the number of undergraduate physiotherapy professionals are projected to increase, and post graduate program is conducting at University of Gondar and Mekelle University. To narrow this differences, the University of Gondar, Mekelle University and Addis Ababa University Academician must work together jointly to come up for a common goal and agenda. For the next two decades, number of universities, hospitals and rehabilitation centers will be expanding in Ethiopia. Newly graduated physiotherapy residents will be tasked with both clinical and teaching responsibilities at these new sites. Keeping this in mind, the Doctor of Physiotherapy residency program at AAU will need to focus on re-structuring and setting responsible academic bodies, efficient mechanisms of teaching methods, stressing the importance of service-based training program and expanding different advanced and up-to-dated teaching methods like; E-learning and simulation models. Ethiopia has already a restricted health care system with priority given to communicable diseases[6]. As the transition of disease dramatically shifting from communicable to non-communicable diseases, the health care system will progress overtime and give emphasis on rehabilitation (Cadotte *et al.,* 2012). It is important to anticipate the growth and expansion of rehabilitation programs mainly including physiotherapy professionals in Ethiopia. While advanced physiotherapy machines are not available in Ethiopia, strategies must be implemented to manufacture locally to make it more accessible in primary and referral hospitals. As the health care system advances, the physiotherapy curriculum will need to incorporated within it. Responsible persons, institutions, organizations, political leaders and international NGOs will be invested in the Ethiopian Physiotherapy communities to evaluate and anticipate changes and guide the residency program to align with the future vision of Ethiopia. Clear academic programs should be settled, and systems should be put in place to revise these goals as the needs of the peoples and country changed. Curriculum of the residency and specialty programs must be developed based on the context of Ethiopian environment. However, the leader of respected institutions and higher-managerial leaders must be open-minded, broad-based and work jointly with physiotherapy professionals to up-grade the profession with this pioneer program in Africa. Generally, to make the residency program sustainable and credible, curriculum must include public health initiatives by valuing prevention and promoting quality of life rather than medley survival, involvement in primary health care, communication with policy makers, fidelity to social counteract (lay person put their faith in the profession), assurance of adequate training and keeping up-to-date with political, social and health changes with a solid scientific base (Acharya *et al.,* 2015). Priority should be given for creating Awareness on each segment of the society, leadership of governing body, job opportunity, retention of staff, and continues professional development and mentoring. On the other hand, there must be a clear identity and purpose on the society and should not be isolated from other professions and professionals (Higgs, 2001).

Limitations

There are numerous limitations for this particular study. With the introduction and cancelation of the service-based residency program, there have been widespread changes within the class-based learning programs. Each year brings new structural changes, administrative interests and different challenges. This makes it difficult to measure the impact of any single intervention on the outcomes. There are numerous factors impacting the physiotherapy residency program including continuous and unpredicted changing of administrative bodies, availability and access to new technologies, and socio-economic factors. Due to faculty shortage, it is difficult to implement changes in syllabuses and assessments. Clinical practice is impacted by variability in access to resources, mentor instructors, patient presentations, and accessibility of advanced rehab equipment's at Black Lion Hospital. Gathering data to accurately measure and evaluate outcome is difficult in a low- resource setting, where there are minimal resources for patient care and limited advanced research papers. As a result, most of the data are from developed countries and have different approaches for our settings. With increased in demands of physiotherapy, outcome evaluation is not based on the contexts of the country and clinical evaluations platform not available.

Conclusion

The Addis Ababa University, Doctor of Physiotherapy Residency program can able to increase the quantity of enrolled professional physiotherapists by using advanced and innovative approaches. Partnerships from different middle and high-income countries in the globe can provide a mechanism to increase physiotherapy training program in the resource limited countries like, Ethiopia. Momentous changes in resident's intake required stressing the importance of advanced system of teaching for limited teaching capacities. Understanding the ultimate goals of respective hospitals, Regional Health Bureaus, Federal Ministry of Health and the

country in general can help to guide curriculum and program development.

Authors Contribution

Substantial contributions to conception and design of, or acquisition of data or analysis and interpretation of data, (b) drafting the article or revising it critically for important intellectual content, and (c) final approval of the version to be published.

Conflict of Interest

The authors declare that they have no conflict of interest.

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