

The Present State of Physiotherapy and the Development Direction of a Curriculum for Physiotherapy Educational Program in Swaziland

Ji-whan Park

Dept. of Physiotherapy, Daejeon Health Institute of Technology

Swaziland의 물리치료 현황과 물리치료 교육프로그램 개발방향

박지환

대전보건대학교 물리치료과

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ABSTRACT

Background: The purpose of this study was to search the present state of physiotherapy and the development direction of a curriculum for physiotherapy educational program, especially in field of orthopedic manual therapy, in Swaziland. **Methods:** The developed curriculum is as follows: 1. Disease and Health State in Swaziland. 2. Medical Human Resources State of Swaziland. 3. Physiotherapy Services State in Swaziland. 4. Higher Education State in Swaziland. 5. Development Direction of a Curriculum for Physiotherapy Educational Program in Swaziland. **Conclusions:** There is no a physiotherapist in Swaziland and Swaziland government which has not a physiotherapy education programme in any university of whole country. So we need to the development direction of a curriculum for physiotherapy educational program for the future of Swaziland, especially in field of orthopedic manual therapy. The reason is firstly, most of people are obesity in this country, so many people complained a lot of joint and muscle pain. And secondly, also there are many musculoskeletal disease patients now a day in Swaziland because of HIV/AIDS. Lastly, Swaziland country is in a poor and developing state, so physiotherapist it is hard to make a purchase and setting physiotherapy modalities apparatus at Swaziland country.

I. Introduction

Officially the Kingdom of Swaziland, is a sovereign state in Southern Africa. Swaziland is between Mozambique and South Africa around north and south. Swaziland was free from the England during from 1903 until 1967. It regained its independence on 6 September 1968 (Gillis, 1999).

Swaziland is a developing country with a small economy. Its GDP per capita of \$7,917 (International

Monetary Fund, 2015). The majority of the country's employment is provided by its agricultural and manufacturing sectors. Swaziland is a member of African Union.

Swaziland population has got HIV/AIDS (The World Bank, 2014), and tuberculosis are serious challenges (Swaziland Gover, 2010). As of 2013, Swaziland has an estimated life expectancy of 50 years (The World Factbook, 2014, Swaziland Demographics Profile, 2014). The present population growth rate is 1.19% (United Nations, 2014; Wikipedia, 2015).

So we need to search the present state of physiotherapy and to the development direction of a curriculum for physiotherapy educational program,

교신저자: 박지환(대전보건대학교, ymkim@ut.ac.kr)
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especially in field of orthopedic manual therapy, in Swaziland. Because all universities of the Swaziland has not a physiotherapy education programme in the whole country until now.

II. Medical human resources state of Swaziland

Medical human resources remain the biggest challenge as there were fewer across all cadres when the 100,000 per population ratio was used. Doctors, physiotherapist, laboratory, pharmacy and medical imaging personnel were particularly low when compare to nurses. The 100,000 population ratio for medical officers was found to be 23.1, an increase of 0.1 when compared to 2010; there were 102 nurses per 100,000 and 100.9 midwives per same population (SAM, 2013). But medical human resources physiotherapist including doctor that is a very serious problem in this country, because of there is no medical school or physiotherapy school in Swaziland, on present 2015 year now.

III. Physiotherapy service state in Swaziland

There is no physiotherapist in this country, but there are total 19 physiotherapists who service physiotherapy to the Swaziland's patient in here. Therefore most of physiotherapists are foreigner comes from the another country, for example South Africa, Kenya etc (SAM, 2013).

According to the EHCP (essential health care package) (SAM, 2013) physiotherapy services include registration of patients, observation and also provision of physical examinations E.g. functional activities (physiological movements). SAM 2013 found that the service, like all the allied health services, were mostly provided by privately owned physiotherapy facilities and specialist facilities and were in Manzini and Hhohho regions.

Among the 19 foreign country physiotherapist in this country, the most of work place is a owned by doctor 7 (36.8%) persons, second place is a government hospital 6 (31.6%) persons (Table 1). Availability state of physiotherapy services in this

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country is a provide physical examinations, functional activities, manual therapy (Fig 1, 2).

IV. Development direction of a curriculum for physiotherapy educational program in Swaziland

Table 1. Availability state of physiotherapy services in Swaziland (N=19)

Physiotherapists	Physiotherapy services	
Total 19 persons	Provide physiotherapy services ; E.g. Registration of patients, Observation	Provide physical examinations ; E.g. Functional activities, Manual therapy
Ownership		
Government	6 (31.6%)	25 (36.2%)
Mission	2 (10.5%)	13 (18.8%)
Industrial	4 (21.1%)	7 (10.1%)
Owned by nurse	0 (0.0%)	8 (11.6%)
Owned by doctor	7 (36.8%)	12 (17.4%)
NGOs	0 (0.0%)	4 (5.8%)
Facility Type		
National Referral Hospital	1 (5.3%)	1 (1.4%)
Referral Hospital	4 (21.1%)	4 (5.8%)
Specialized Hospital	2 (10.5%)	2 (2.9%)
Health Centre	1 (5.3%)	1 (1.4%)
Public Health Unit	0 (0.0%)	2 (2.9%)
Clinic with maternity	0 (0.0%)	3 (4.3%)
Clinic without maternity	4 (21.1%)	45
Specialized Clinics	3 (15.8%)	5 (7.2%)
Private	4 (21.1%)	6 (8.7%)
Regions		
Hhohho	5 (26.3%)	23 (33.3%)
Lubombo	4 (21.1%)	5 (7.2%)
Manzini	9 (47.4%)	40 (58.0%)
Shiselweni	1 (5.3%)	1 (1.4%)

All physiotherapists in Swaziland comes from outside countries.

Swaziland government has no physiotherapy school in higher education.

SAM (service availability mapping) report in Swaziland essential health care package, 2013.



Fig. 1. Functional activities for Left knee instability



Fig. 2. Manual therapy for Left patellar-femoral syndrome patient

As a mention above physiotherapy service state in Swaziland, there is no a department of physiotherapy in all universities in this country. So we need to the development direction of a curriculum for physiotherapy educational program, especially in field of orthopedic manual therapy for the future of Swaziland (Table 2-5). The developed curriculum is as follows reason; Firstly, most of people are obesity in this country, so many people complained a joint and

muscle pain. And secondly, also there are many musculoskeletal disease patients now a day in Swaziland because of HIV/AIDS. Lastly, Swaziland country is in a poor and developing state, so physiotherapist it is hard to make a purchase and setting physiotherapy modalities apparatus at Swaziland country.

Table 2. First year programme structure for the Bachelor of physiotherapy science degree in Swaziland

Code	LEVEL- I SEMESTER 1	Point
GEC100	English Communication Skills	3T 0
GEC101	Introduction to Computing Literacy	2T 1
GEC102	Introduction to Psychology	2T 0
GEC103	Introduction to Health	2T 0
GEC104	Clinical Music therapy	2T 1
PTS100	Primary Health Care	2T 0
PTS101	Human Anatomy and Physiology I	3T 1
Code	LEVEL- I SEMESTER 2	Point
PTS102	Foundations of Physiotherapy	3T 0
PTS103	Biology	2T 0
PTS104	Surface Anatomy	3T 2
PTS105	Human Anatomy and Physiology II	3T 1
PTS106	Neuro Anatomy	2T 1
GEC105	Medical terminology	2T 0
PTS107	Pathology	2T 0

GEC : General Education Courses,

PTS : Physiotherapy Subjects

Table 3. Second year programme structure for the Bachelor of physiotherapy science degree in Swaziland programme of physiotherapy

Code	LEVEL II SEMESTER 3	Point
GEC200	Physiotherapy Ethics	1T 0
PTS200	Clinical Kinesiology	2T 0
PTS201	Practice of Community Based Rehabilitation	2T 0
PTS202	Foundations of Therapeutic Exercise	2T 1
PTS203	Movement Science	2T 0
PTS204	Physiotherapy Evaluation	3T 2
PTS205	Physical Agents in Physiotherapy I	2T 2
GEC201	Professional Practice and Law	2T 0
Code	LEVEL II SEMESTER 4	Point
PTS206	Physiotherapy Intervention for	3T 2

Code	LEVEL II SEMESTER 5	Point
PTS207	Musculoskeletal Diseases I Physiotherapy Diagnosis for Musculoskeletal Diseases	2T 1
PTS208	Therapeutic Exercise for Musculoskeletal Diseases	3T 2
PTS209	Physical Agents in Physiotherapy II	3T 2
PTS210	Activities of Daily Living	3T 2
PTS211	Clinical Orthopedics	2T 0
PTS212	Rehabilitation Medicine	2T 0
PTS213	Field Attachment: 6 weeks during the vacation	

GEC : General Education Courses,
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Table 4. Third year programme structure for the Bachelor of physiotherapy science degree in Swaziland of physiotherapy

Code	LEVEL II SEMESTER 5	Point
GEC300	Research Methodology	2T 0
PTS300	Physiotherapy Intervention for Musculoskeletal Diseases II	3T 2
PTS301	Physiotherapy Diagnosis for Neurologic Diseases	2T 1
PTS302	Sports Physiotherapy	2T 1
PTS303	Physiotherapy Intervention for Neurologic Diseases I	3T 2
PTS304	Introduction of Manual Therapy	2T 1
PTS305	Therapeutic Exercise for Neurologic Diseases	3T 2
Code	LEVEL II SEMESTER 6	Point
GEC301	Physiotherapy Research I	2T 0
PTS306	Physiotherapy Intervention for Neurologic Diseases II	3T 2
PTS307	Psychiatric Physiotherapy	2T 1
PTS308	Manual Therapy for Musculoskeletal Diseases	3T 2
PTS309	Pain Management in Physiotherapy	2T 1
PTS310	Gynecology Physiotherapy	2T 1
PTS311	Physiotherapy Leadership and Communication	2T 0
PTS312	Pediatric Physiotherapy	2T 1
PTS313	Field Attachment: 6 weeks during the vacation	

GEC: General Education Courses
PTS: Physiotherapy Subjects

Table 5. Fourth year programme structure for the Bachelor of physiotherapy science degree in Swaziland programme of physiotherapy

Code	LEVEL II SEMESTER 7	Point
GEC400	Physiotherapy Research II	2T 0
PTS400	Manual Therapy for Neurologic Diseases	3T 2
GEC401	Case study in Physiotherapy	2T 0
PTS402	Geriatric Physiotherapy	2T 1
PTS403	Physiotherapy in Special education	2T 1
PTS404	Cardiopulmonary Physiotherapy	2T 1
PTS405	Integumentary Physiotherapy	2T 1
Code	LEVEL II SEMESTER 8	Point
GEC403	Physiotherapy Research Projects	2T 0
PTS406	Communication in Health Care	2T 0
PTS407	Physiotherapy Seminar	2T 0
PTS408	Physiotherapy Administration and Management	3T 0
PTS409	Physiotherapy Clinical Decision Making	3T 1
PTS410	Research Presentation: 1 day during the semester	

GEC: General Education Courses,
PTS: Physiotherapy Subjects

V. Conclusion

In present now 2015, there is no a physiotherapist in Swaziland and Swaziland government which has not a physiotherapy education programme in any university of whole country. So we need to the development direction of a curriculum for physiotherapy educational program for the future of Swaziland, especially in field of orthopedic manual therapy.

1. The reason is firstly, most of people are obesity in this country, so many people complained a lot of joint and muscle pain.
2. And secondly, also there are many musculoskeletal disease patients because of HIV/AIDS now a day in Swaziland .
3. Lastly, Swaziland country is in a poor and

developing state, so physiotherapist it is hard to make a purchase and setting physiotherapy modalities apparatus at Swaziland country.

Therefore we search the present state of physiotherapy in Swaziland and next to the development direction of a curriculum for physiotherapy educational program, especially in field of orthopedic manual therapy, suitable to in this country.

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