PT education and standards in Korea

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### History of Physical Therapy in Korea

- In 1945, right after the end of World War II, physical therapy was introduced in Korea by American physical therapist Geraldine Lindberg, who worked in the US Army hospital in Korea until 1949.

- In 1949, American Methodist missionary and physical therapist Thelma Maw (Korean name: Maw Woo-sook) was dispatched to Korea, and the first physical therapy practice in Korea began in Severance Hospital.

- On June 25, 1950, the Korean War broke out, which resulted in many injured soldiers who required rehabilitation by physical therapists.

- Physical therapy education was started in Korea 50 years ago, and Korean physical therapy has made rapid progress since that time.

- Korean physical therapy first began by missionaries dispatched from other countries like America and Canada during the Korean War (1950).

- Korea became a full member of the World Confederation of Physical Therapy (WCPT) in 1974 and held the 2nd Asia Pacific Confederation of Physical Therapy assembly in 1984 and WCPT assembly in 2005.
Due to this need, physical therapists were trained with the medical technology support of America, Canada, Denmark, and Sweden as well as positive activities of foreign physical therapists.

As the war ended in 1953, physical therapy was actively being performed at Severance Hospital with Thelma Maw as the center of it.
At the same time, Dr. RA Torry established the Korean Amputee Rehabilitation Center in Daejeon and opened a Seoul branch in Seoul Severance Hospital, supplying prosthetic arms and legs for many amputees.

In October 1958, the National Medical Center opened in Seoul under the cooperation between the Korean government and the technology of Norway, Sweden, and Denmark.
At that time, the first physical therapists to come to the department of physical therapy were Miss Martha K. Bencher (Sweden) and Miss Kirstein Schemist (Denmark). Since then, foreign physical therapists took turns coming to Korea and propagated physical therapy in Korea.

The Korean Physical Therapy Association (KPTA) was founded October 1, 1965.

In 2010, there were about 35,000 licensed physical therapists, there are physical therapy departments in 74 universities, and 17 universities have master's or doctor's degree courses.

There are more than 10 academic journals related to physical therapy that are published.

Many Korean physical therapists are working in various countries like America and Australia, and they are acknowledged with excellent treatment technology and academic performance.
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
</table>
| 1960 | Hosted the first general meeting for organizing KPTA  
Approved of a corporation as KPTA  
Associate degree in physical therapy at Health Science Junior College (1963) |
| 1970 | Renewed medical assistant certification to medical technician certification  
Initially joined the 8th WCPT conference and 7th international meeting  
Hosted the first KTPA general meeting |
| 1980 | Bachelor degree at Yonsei University (1979)  
Second Asia Pacific Confederation of PT assembly in 1984  
WCPT, 2005 |
| 1990 | The 15th nation-wide scientific conference  
Joined the 4th Asia-Oceania meeting and Asia-Pacific international meeting  
Hosted the 7th tentative representative conference. |
| 2000 | The 45th overall scientific conference (Participants : Sandra Moore, a president of WCPT, and about 1000 other PTs)  
The 4th Asia-Western Pacific of WCPT conference and the 9th ACPT conference |
The number of members of KPTA working at hospitals and institutions is currently about 35,000, and is expected to increase rapidly in non-surgical neuro-musculo-skeletal care each year.

We expect that the role of physical therapists will become more important due to an increase in the elderly population.

Now, there are 38 colleges available with a three-year-course, 37 with a four-year-course, 20 graduate schools, and 5 doctoral degree courses, which raise about 2020 students every year.

- Medical institutions (general hospitals, private hospitals, traditional oriental hospitals, dental hospitals, hospitals for medical treatment, etc)
- Sports facilities (professional sports club medical offices, exercise treatment offices, sports research institutes, etc)
- Rehabilitation research institutes, medical instrument companies, government agencies for rehabilitation, etc
PT Scope (3)

- Overseas employment (after obtaining American physiotherapist certification)
- Institutions for rehabilitation, health center for the disabled, special schools teacher (must complete a course of teaching)

PT school (1)

University:
- Department of Physical Therapy, Korea University
- Department of Physical Therapy, Yonsei University
- Department of Physical Therapy, Catholic University of Pusan
- Department of Physical Therapy, Taegu University
- Department of Physical Therapy, Sahmyook University
- Department of Physical Therapy, Chung-Ang National University
- Department of Physical Therapy, Yongin University
- Department of Physical Therapy, Inje University
- Department of Physical Therapy, Hannam University
- Department of Physical Therapy, Samsung University
- Department of Physical Therapy, Daejeon National University
- Department of Physical Therapy, Dongguk University
- Department of Physical Therapy, Keimyung University
- Department of Physical Therapy, Jeju University
- Department of Physical Therapy, Gachon Medical School
- Department of Physical Therapy, Kyungjeson University
- Department of Physical Therapy, Youngdong University
- Department of Physical Therapy, Junju International University
- Department of Physical Therapy, Namseoul University
- Department of Physical Therapy, Catholic University of Daegu
- Department of Physical Therapy, Daegu University
- Department of Physical Therapy, Ewha Womans University
- Department of Physical Therapy, Kookmin University
- Department of Physical Therapy, Daegu Hanyang University
A Subdivision Society of KFTA

- Korean Eastern-Western Physical Therapy Approach (KEWPTA)
- Korean Bilhath Association (KBA)
- Korean Society of Sports Physical Therapy (KOSPT)
- Korean edition Kinesio Tape Academy (KEATA)
- Korean Movement Release Physical Therapy (KMRPT)
- Korean Academy of Orthopedic Manual Therapy (KOMIT)
- Korean Federation of Orthopedic Manual Therapy (KFOMT)
- Korean Proprioceptive Neuromuscular Facilitation Association (KPNFA)
- Korean Oriental Energy (KOE) Physical Therapy Association (KOEPTA)
- Korean Traditional Foot Reflexology Association (KFRFA)
- Korean Academy of Biomechanical Physical Therapy (KABPT)
- Korean Academy of Taping Physical Therapy (KAPT)
- Korean Association Study of Pain (KASP)
- Korean Academy of Spinal Manipulative Physical Therapy (KSMPT)
- Korean Society of Ergometrics Physical Therapy (KSGPT)
- Korean Academy of Medical Training Therapy and Prescription (KAMTT)
- Health Management Physical Therapy (HMPT)
- The Korean Academy of Acupuncture Physical Therapy (KAAPT)
- Korean Academy of Family Physical Therapy (KAFTP)
- Muscle and Energy Monitoring Physical Therapy (MEMPT)
- Korean Physical Therapy Needle Tens (KPTNT)
- Korean Mobile Care Society (KMC)
- Korean Obesity Tomatope Speciality Physical Therapist (KOSTPT)
KU Motion Lab Publications (After 2008)

1. Sung P*, Three dimensional kinematic lumbar spine motion analyses of trunk motion during axial rotation activities. Journal of Spinal Disorders & Techniques (In Revision)
4. Song AY, Jo HJ, Sung P*, Kim YH. A three dimensional kinematic analysis of pelvic and lower extremity differences during trunk rotation in subjects with chronic low back pain. Physiotherapy (In Print)
Publications (Before 2008) - International Journals


INTRODUCTION

Low Back Pain (LBP)
Prevalence of 60% ~ 80%
85% of LBP → Nonspecific or Functional causes

Rehabilitation and Converged Research Development

Enhance QUALITY OF LIFE
Relative holding time (RHT) = \frac{\text{Successful holding time}}{\text{Requested holding time}} \quad Eq. 1

Relative standstill time (RST) = \frac{\sum \text{Standstill time}}{\text{Successful holding time}} \quad Eq. 2

R_{xyz} = \sqrt{(R_x - R_{x\_mean})^2 + (R_y - R_{y\_mean})^2 + (R_z - R_{z\_mean})^2} \quad Eq. 3
Figure 2. Identification of successful holding time and standstill time for computing the stability index.

Figure 3. Distribution of stability indexes of core spine and corresponding 3D rotation angle ($R_{xyz}$) from control group (◇) and LBP subjects (O).
Comparing Kinematic and Force plate stability in upper trunk between groups

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<th>Kinm stability</th>
<th>Patient Right (Blinded * and unblinded o)</th>
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<tr>
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</tr>
<tr>
<td>0.4</td>
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<tr>
<td>0.6</td>
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<table>
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<th>0.5</th>
<th>1</th>
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<tr>
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<tr>
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<tr>
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<tr>
<td>Spine2</td>
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</tr>
<tr>
<td>Spine3</td>
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<tr>
<td>SpineRoot</td>
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Comparing Kinematic and Force plate stability in lower extremity between groups

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<td>0.6</td>
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<td>0.6</td>
</tr>
<tr>
<td>R.Foot</td>
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<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>L.Thigh</td>
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<tr>
<td>L.Shank</td>
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<td>L.Foot</td>
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<td>R.Foot</td>
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</tr>
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</table>
A

Rotation to the left

Initial Position

Rotation to the right

B

L. Shoulder  CT  R. Shoulder

T9

L. PSIS  Sacrum  R. PSIS

ROM (Degree)

-10 0 5 10 15

Rotation from left to the right

Rotation from right to the left

Time (% rotation)

Control  LBP
## PHYSICAL THERAPY

### Syllabus and Exam Organizational Template

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<td>PRACTICAL EXAMS:</td>
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**Future direction**

- Quality of Education and Research
- Preparation for global Standards of Physical Therapy Association
- Introduction of Korean Board of Physical Therapy Specialties
- Achievement of Private Practice
- Establishment of Direct Access
- Doctor of Physical Therapy Program

"Physical Therapy In Korea"