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# Application of the practical-clinical guide according to the APTA model in degenerative knee joint disorders. Experience at the Luis Vernaza hospital

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**Abbrevations:** CG, control group; EG, experimental group

## Introduction

The American Physical Therapy Association (APTA) approaches the evaluation and treatment of the patient from the biopsychosocial model, which is why it considers it of utmost importance not only to recover the person from the physical point of view; but also mental and social, using its own evaluative method according to the fundamental systems of the human body, such as: musculoskeletal, neuro-muscular, cardiovascular, respiratory and integumentary.

In 2018, Ecuador is still far from this type of physiotherapeutic approach, since if a person comes for any type of musculoskeletal pathology, this will be the only system addressed by the physical therapist. Thus, separating the rest of the fundamental systems, which will also have an impact due to their kinesiopathological association.

### Objective

To compare the benefits of applying the clinical-practice guide according to the APTA model in relation to conventional physical therapy treatment based on patient satisfaction according to the EQ-3D scale for a proposed physiotherapeutic intervention.

### Hypothesis

Physiotherapeutic treatment according to the APTA model and its approach according to the fundamental systems and kinesiopathological relationship present greater satisfaction in patients than a conventional therapeutic treatment.

## Methods

The study carried out had an experimental research level, carried out at the Luis Vernaza Hospital in the city of Guayaquil (Ecuador) from March to September 2018 in patients who presented a medical diagnosis according to ICD 10 of internal knee disorder (M23), based on radiological studies.

Within a population universe of 286 people and through the inclusion criteria of patients with internal knee disorders, plus the exclusion criteria of non-neurological patients, non-trauma patients, among others; Seventy-three adults with an age range of 18-90 years were used as a sample (39 women and 34 men) who were randomly divided into two groups: control group (CG) with 49 patients and experimental group (EG) with 24. In one of them (EG) the patient was approached according to the model proposed by the APTA, while the other group (CG) underwent conventional physiotherapeutic treatment.

The follow-up was for 12 sessions carried out 3 times a week and their satisfaction with the EuroQol 3D health questionnaire was evaluated, both at the beginning and at the end of the treatment.

## Results

Both groups show improvements according to their treatment, however, 75.52% (37 patients) of the control group could not be measured correctly, therefore the real improvement of the patient decreases to an average of 3.64% (12 patients) for the remaining part that, if it was evaluated correctly, according to the EuroQol 3D health questionnaire. In contrast, the experimental group presented a patient improvement of 20.07% (24 patients).

In addition, it was found that the fundamental systems that are mostly related to each other are the musculoskeletal system, specifically the internal rotators (78.57%), external (70.83%) and gluteus medius (60.71%); and the neuro-muscular system in its L2 dermatome showed a 33% pathological decrease in sensitivity (hypoesthesia). The cardio-vascular, respiratory and integumentary systems did not show significant changes.[1–28]

## Conclusion

Patients with degenerative knee disorders report greater satisfaction with treatment based on the evaluation of fundamental systems according to the APTA model, which is why they present an improvement in all aspects evaluated, being emphatic in the result regarding pain and mobility.

This is due to the fact that there is a kinesiopathological relationship between the musculoskeletal system and the neuro-muscular system, resulting in that the muscles most affected in such pathologies are the rotators (internal and external), mainly the gluteus medius, since it maintains these functions both in static and in dynamic, apart from being a hip abductor and being in the dermatome (L2) more affected.

Based on the statistics obtained, there is an approximate 5: 1 ratio between the treatment of the control group versus the experimental group; that is to say that for each patient that recovers satisfactorily with a traditional treatment, five patients approached according to the model proposed by the APTA.

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## Conflicts of interest

The author states there are no conflicts of interest.

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