

FCM Instuctorship Training Level 1 Part 1 (FCM 1)

Main Objective of FCM 1 :

1. To introduce the awareness of 2 approaches in rehabilitation :
 - a. Functional
 - b. Structural
2. To show the comparison of the 2 approaches with the emphasis of looking at SYSTEM/Concept instead of STRUCTURE/Technique alone.
3. To give an understanding of the key words :
 - **Bio-psychosocial Model**
 - **Sensorimotor System** (Proprioception, feedback and feedforward mechanism)
 - **Functional Joint Centration**
 - **ISSS & IAP** (ONLY to INTRODUCE the term and brief meaning. Relate it to CNS motor control of subcortical/automatic level).
 - **Body Awareness** in Posture and weight bearing for stabilization
 - **Movement** in GLOBAL perspective.
4. To present the 5 Keys of the Functional Approach **STRATEGY**
 - Motor Learning knowledge
 - Motor Control Application
 - Therapeutic Exercise Understanding (TE principles : COG, BOS, Amount of Resistance, Repetition, Planes of movement S,F &T)
 - Motor Development Guideline (Developmental Kinesiology)
 - Task/Functional Orientation to Movement Re-education/ Empowerment (INTEGRATING the Lifestyle of the person- BPS)
5. Introduce the Concept of Five Core Movement (5 areas involved and 5 floors involved).
6. Introduce the DNS Approach.
7. Inspire the participants to :
 - a. Learn from Concepts and not Techniques (Thinking level – Concept/Strategy, Principles/Tools, Technique/Plan)
 - b. To see themselves becoming Specialized/Consultants – Being MOVEMENT Specialists in their areas of Interest.
8. Practical session to let them discover their own body perception and Body Awareness and the effect it has on their different muscle groups.

Important slides to emphasize.

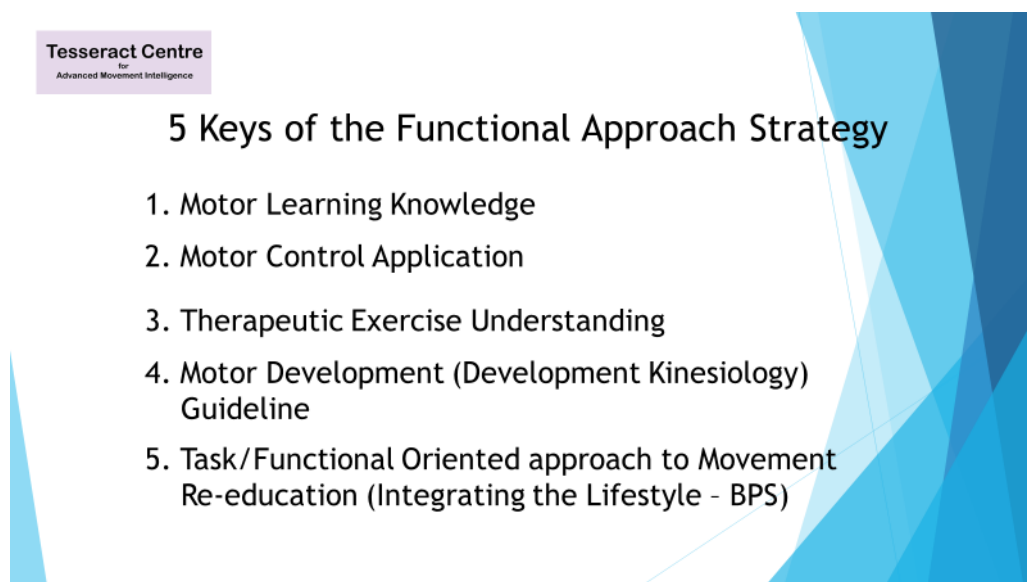
A. Slide 5-7

Tesseract Centre for Advanced Movement Intelligence	Key Concepts to Define
Functional Approach	Structural Approach
Bio-psychosocial Model	Bio-medical Model
Sensorimotor System	Structural Flexibility and Strength
Integrated Spinal Stabilizing System & good IAP regulation	Core stabilization
Body Awareness Emphasis in balance, joint and posture care	Balance, joint and posture care
Movement : segmental movement viewed in and with global movement (Importance of CNS control/programme in brain)	Movement: subluxation, dislocation, decentration, centration (Importance of orthopaedics viewpoint)

1. Give examples of a patient case that reflects a BPS model in the management instead of a pure biomedical approach. Use the same scenario/example and show how the management will differ with the 2 approaches.
2. Emphasize, explain and give example of what is the feedforward mechanism.
 - It is based on memories and experience information stored in CNS.
 - Example can give is how they do the training for ice hockey players in USA. They train them to recognize instantly the ideal distance of putting the hockey stick in front of the hockey putt. It trains the feedforward mechanism to 'lock' in this memory so that they will mainly hit the putt into the goal if it is at this distance.
 - Emphasize the anatomy physiology of receptors in our body ie muscular receptor, mechano receptors, extero receptor for skin/fascia area. All these afferent adds up to integrate with the proprioception and feedback mechanism.
3. Emphasis for ISSS & IAP is that it is an automatic(subconscious) motor control level (subcortical). These regulating systems are working all the time in our Postural Stabilizing Coping Mechanism. We need these 2 systems to work in its ideal pattern to prevent injuries and wear and tear to the body.
You can mention that there are 3 levels of motor control – spinal, subcortical & cortical .
** Do NOT spend too much time in elaborating this as this is the main part of FCM 2A. You can promote the FCM 2 A at this point to tell them that they will learn more about this and some DNS movement test/treatment for this **

4. Body Awareness. Relate this component to help your participants view their bodies in :
 - The 3 planes of sagittal, frontal and transverse
 - The 5 core areas
 - The 5 floors in the FCM
 - Conduct a short DNS Body perception test as below:
 - i) Visualize in your mind the width of your shoulders without touching your shoulders now.
 - ii) Ask that they will need to show this width in a HORIZONTAL manner with their hands stretched forward palms facing each other with their EYES CLOSED on when you say 'SHOW' or count 1,2, 3(they show on the 3rd count).
 - iii) Ask them to open their eyes and check their width if they think it is correct.
 - iv) Ask them to put down their hands. Then repeat the same but now with their hands showing the width in a VERTICAL manner with their EYES CLOSED. Repeat point 'ii' above.
 - v) Ask them to open their eyes to see if it is the correct width.
5. For Movement in a global aspect, you need to have in your mind a chain of muscle synergy for a movement pattern to describe to them in some detail how the muscles link to the different 2-3 core area and ISSS + IAP. Actually name the muscles. (This will be included in your FCM Instructorship level 1 Part B exam).

B. Slide 12



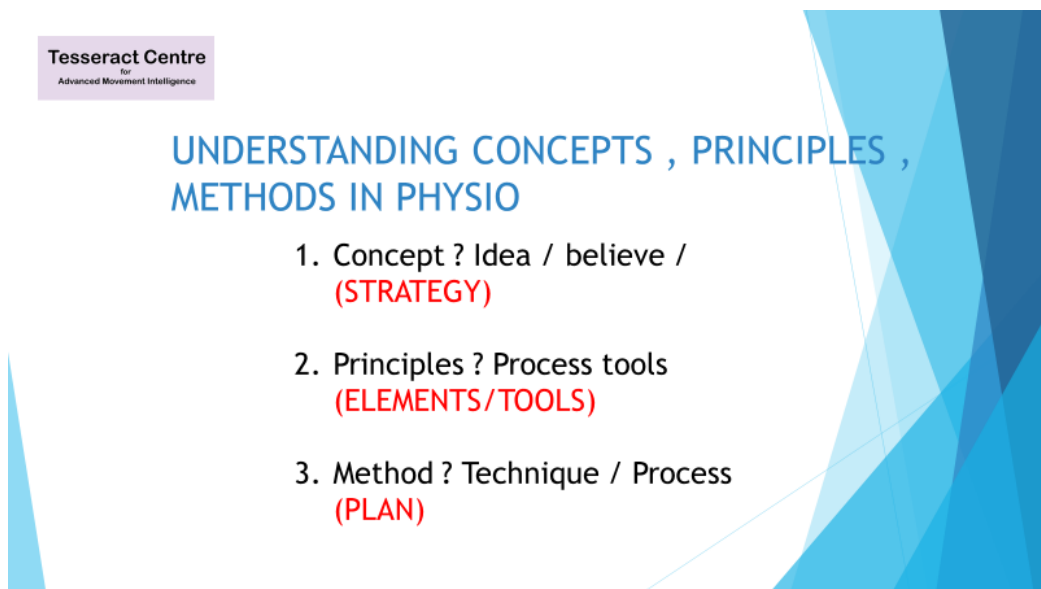
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5 Keys of the Functional Approach Strategy

1. Motor Learning Knowledge
2. Motor Control Application
3. Therapeutic Exercise Understanding
4. Motor Development (Development Kinesiology) Guideline
5. Task/Functional Oriented approach to Movement Re-education (Integrating the Lifestyle - BPS)

1. Explain what the concept of Motor learning is. Relate it to patient ownership and neuroplasticity activity.
2. Explain what the concept of Motor control is. Relate it to CNS involvement for body schema and integration of afferent elements.
3. Give a brief summary of the difference between motor learning and motor control.
4. Explain the importance of using their therapeutic exercise principles in their strategy. Expound a little of the principles .(TE principles : COG, BOS, Amount of Resistance, Repetition, Planes of movement S,F &T)
5. Explain that there is the element of development milestone and development kinesiology in Motor development. Explain the difference and similarities of these 2 elements and why as a Movement Specialist, our strategy and prescription of exercises must have this guideline.
6. Explain or give an example of how we integrate the treatment to be oriented to the patient's exercise programme in relation to the BPS model.

C. Slide 13



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UNDERSTANDING CONCEPTS , PRINCIPLES , METHODS IN PHYSIO

1. Concept ? Idea / believe /
(STRATEGY)
2. Principles ? Process tools
(ELEMENTS/TOOLS)
3. Method ? Technique / Process
(PLAN)

1. Give an example of an approach to show the differences between Concept , Principle and Method. Eg : PNF or Mulligan...etc.
(** You will need to present to the examiner how you will teach B, C in your FCM Instructorship Level 1 Part B Exam. You will be given 15 mins to present the 2 slides with the above guidelines to the examiner.)

D. Slide 15-18

Dynamic Neuromuscular Stabilization

1. It is an overall **strategy (Approach)** to **Movement** and **Stabilization**, not just a technique.
2. Aims to better understand the neurophysiological principles of the locomotor (**MOVEMENT**) system.
3. **DNS Concept** is based on scientific principles of **development kinesiology**(Movement development of approximately 1st year of life). It relates all movement to 2 BASE Patterns : **IPSILATERAL & CONTRALATERAL**.
4. Developed by Prof. Pavel Kolar (Physiotherapist with a Doctorate in Paediatrics and Physiology) in Prague, Czech Republic.

D N S

Diagnosis Method :

Compare the patient's **stabilizing pattern** with the stabilization developmental pattern of a healthy baby. It uses specific **MOVEMENT TESTS**.

Eg : The diaphragm test : Inspiration & Expiration

Treatment Strategies :

Aims to train IDEAL/PHYSIOLOGICAL patterns as defined by development kinesiology. Emphasizes **joint CENTRATION**.

D N S

Treatment Strategies :

1. Evoke the **ideal pattern of stabilization** – usually requires the Subconscious Activation Approaches, Example : Reflex Locomotor(Vojta Method), Sensori-motor or proprioceptive neuromuscular facilitation principles.
2. Patient activates the same **quality of stabilization voluntarily** under clinician's supervision(exercises based on **developmental positions**).
3. Self treatment techniques.
4. Integration of ideal pattern of stabilization in daily activities.
5. Includes a set of exercise, mobilization techniques based on developmental positions and body awareness training.

1. In FCM 1, the aim is only to introduce the concept of DNS(Dynamic Neuromuscular Stabilization by Kolar).
2. Start with the Concept overview from the name, DNS .
Explanation : Prof. Kolar believes that Movement patterns is in our DNA(Genetic). We/Humans are born to Move/Dynamic.
In order to Move Well, you need to have IDEAL/ Good Stabilization Strategies.
DNS believes that we will need to use the neuromuscular system(not just musculo-skeletal system to achieve this Ideal Stabilization Strategies in all movements.
3. Emphasize that DNS is not teaching about certain techniques but more of giving us a more systematic understanding of how this Movement System should be or can improve. It Gives the user of DNS the important 'points/dots' they will need in order to improve and/or inhibit a dysfunction.
4. The tests are movement tests to let us see what pattern is non-ideal, where is the muscle imbalance, what is the 1st gap/dysfunction you will need to address as a first step.
5. DNS categorizes all movement patterns into Ipsilateral and contra-lateral pattern. Link this pattern to the support and phasic/moving function of the UL & LL.
6. Emphasize the concept of Functional Joint Centration in the concept support and phasic function. You need to give examples how a muscle will need to work in concentric for a certain function, and how the same muscle will need to work in an eccentric manner for a certain function. This will reflect the support and phasic function.
7. Emphasize again the importance of facilitating the SUBCONSCIOUS/SUBCORTICAL Activation in the DNS Approach .This encompasses the ISSS, IAP regulation and the importance of the Sensori-Motor System.

E. Conclusion Emphasis

1. Relate Movement to a crucial element of Healthy Lifestyle – WELLNESS . Let your participant see that improving movement is not just from a Rehabilitation Perspective.
2. Inspire your participant to see that their Role as a Movement Specialist is to influence their community and profession to see head towards Movement Care, Movement Performance and finally Movement Intelligence .
Give an example to illustrate this. (I will use nutrition as an illustration).
3. Explain the concept and meaning of Tesseract.
What is it?

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