Movement Intervention for Neurodegenerative Disease (M.I.N.D.): Dance for Huntington's Disease (HD)

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Overview

- What we have been doing at Tewksbury Hospital
- Our interest in the brain on dance
- Multiple Intelligences by Howard Gardner
- Applying the Multiple Intelligences to our dance intervention
- Movement Session
Tewksbury Hospital

www.youtube.com/watch?v=vd4xoEt4uPU
What we are interested in

Dance addresses the WHOLE person

Physical

Emotional

Cognitive

Assessment tools:
Unified Huntington’s Disease Rating Scale (UHDRS).
  • Motor Assessment
  • Cognitive Assessment
  • Behavioral Assessment
  • Independence Scale
  • Functional Assessment
  • Total Functional Capacity (TFC)
Tinetti Balance Assessment Tool
Observational Gait Analysis
The Brain on Dance

Multidimensional
- Both the brain and dance are multidimensional
- "The Neural Basis for Human Dance" (Brown, S., et al.)

Neuroplasticity
- New connections
- Synaptic plasticity
- Circumventing damaged areas
Multidimensional

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Neuroplasticity

- New connections
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DANCE IS UNIQUELY SUITED TO ADDRESS THE WHOLE BODY/MIND

Multiple Intelligences
Howard Gardner's psychological theory

Visual/Spatial
Interpersonal
Logical/Mathematical
Intrapersonal
Verbal/Linguistic
Naturalist
Musical
Bodily/Kinesthetic
Intrapersonal

- Self awareness
- Spatial
- Emotional
Interpersonal
• Mirroring System and dance
Laban/Bartenieff Movement Analysis (LMA)

- Observation
- Description
- Prescription
- Performance
- Interpretation
- Analysis

Rudolf Laban, 1879-1958
- Dance theorist and teacher

CHOREUTICS:
The art/science dealing with the analysis and synthesis of movement.

Irmgard Bartenieff 1900-1981
- Early proponent of LMA Combined Developmental principles and LMA theories
- Physical re-education.
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Dynamic Space
Let's move

**Logical/Mathematical**
- Detecting and working with patterns
- Understanding relationships among actions
- Creative problem solving

**Naturalistic**
- "Lemon/Starfish" and "Gather/Scatter"

Use of natural surroundings
Plant, animal, nature imagery
NATURALISTIC
“Lemon/Starfish” and “Gather/Scatter”

Use of natural surroundings
Plant, animal, nature imagery
LOGICAL/MATHEMATICAL

* Detecting and working with patterns
* Understanding relationships among actions.
* Creative problem solving.
Kinesthetic, Spatial, and Linguistic

**Kinesthetic**
- Muscle Memory
- Motor Control

How can dance and movement techniques influence individuals with HD to gain enough motor control to perform daily activities?

**Linguistic**
- Highly developed auditory skills and think in words
- Listening and processing instructions
- Verbal and visual cues
- Giving feedback

**Spatial**
- Space and Time

The HD patients were better at recalling objects, but not as good at recalling spatial locations (Brandt, Shprintz, Munro, Marsh, & Rosenblatt, 2005)
Kinesthetic

Muscle Memory

Motor Control

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Spatial

Space and Time

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Linguistic

- Highly developed auditory skills and think in words
- Listening and processing instructions
- Verbal and visual cues
- Giving feedback
Musical/Rhythmic

* Uses sound and rhythm
* Patterns and structure
Conclusion
Dance addresses the WHOLE person

DANCE IS UNIQUELY EFFECTIVE

Physical Emotional Cognitive
References


