Multiple sclerosis (MS) is a chronic, progressive autoimmune disorder affecting the CNS. Common age of onset is 20-50, with some cases occurring in pediatrics and older onset MS. Affecting 2.3 million individuals worldwide, MS is characterized by common symptoms such as fatigue, weakness, visual disturbances, dizziness, and sensory loss.

**Purpose**

Compare student led Tai Chi program to student instructed home exercise program (HEP) and their effectiveness on improving balance and gait.

**Background**

- Participants: Tai Chi
  - 30 individuals recruited from DFW area
  - 25 completed study
- Participants HEP
  - 33 individuals recruited from DFW area
  - 25 completed the study
- Location:
  - MindSet Assisted Personal Training
  - TWU/Dallas campus/participant’s home
- Pre and post-testing including:
  - Berg Balance Scale (BBS)
  - MiniBEST (MB)
  - Timed Up and Go (TUG)
  - Dynamic Gait Index (DGI)
  - Activity-specific Balance Confidence Scale (ABC)
  - Fatigue Severity Scale (FSS)

**Interventions**

- Tai Chi
  - 6-form, led by PT students
  - 2x/week for 6 weeks for 1 hour
  - HEP
  - 7 balance exercises, taught by PT students
  - 3x/week for 8 weeks
  - Written and video instructions provided
  - Contacted by phone week 4-5 to allow participants to ask questions and monitor adherence

**Methods**

**Results**

**Comparison of Community Based Tai Chi Program and Home Exercise Program on Improvement in Balance, Gait, and Fatigue in People with Multiple Sclerosis**

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**Discussion**

- Both Tai Chi and HEP groups showed statistical significant improvements in balance
- HEP group improved significantly more on the ABC. This group was younger, less disabled, and were self motivated to perform the HEP
- Tai Chi group improved significantly more on the TUG, and Tai Chi class included standing and weight shifting activities
- The Tai Chi group improved more on the FSS (independent samples t-test). The class taught in a group format, where participants might receive psychological benefit from the group. The activity was more physically demanding which might lead to decreased perception of fatigue

**Future Research**

Continue the use of community based exercise programs in people with MS; next phase of the study will compare Tai Chi, HEP, to assisted personal training in people with MS.