Tai Chi Movements for Wellbeing (TMW)

Embodied Mindfulness in Mental and Physical Health – Executive Summary

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Introduction

Whilst there are many papers describing the application of Tai Chi / Qi Gong to long term health conditions, they are rarely accompanied either by a statement of the underlying principles to the approach, or a set and replicable sequence of movements. Without this it is almost impossible to compare approaches, methodologies or effectiveness across studies. TMW was developed as an evidence based, reliable and replicable approach to 'embodied mindfulness'.

One specific application is in the field of Long Term (physical and mental health) Conditions self-management. TMW offers a route into increased LTC conditions self-awareness and improved health behaviour management, exercise, balance, flexibility (reduced falls risk) and mood stabilization.

tmw tai chi movements for wellbeing

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TMW has Five 'core' understandings:

- **The body reflects the mind and vice versa:**

We can use the body to understand and heal the mind.

- **Becoming present is the first step for change:**

By being present we are no longer in habit or history - there can be a choice for something new.

- **The principle of Soft Limit, or Natural Limit:**

Allows a student of TMW to meet the movement or the challenge of life, where they are able. It is an enabling principle.

- **The principle of Mirroring:**

Instead of the weak trying to follow and catch up with the strong (thus creating striving and tension), the strong accompanies the weak (giving support and confidence).

- **The principle of Completeness:**

That the unhelpful habits come from the strategies of survival. However, in our very center, we are whole.

TMW Outline

1. **Connect and Warm up** – A sequence of 4 movements aimed at stimulating and awakening the individual. Helping them re-connect with their body / mind, and mobilise flexibility.
2. **Breathe and open** – A series of 4 movements that supports and builds on breathing, balance, greater flexibility and core strength / stability and self-awareness.
3. **Heal and Energise** – This sequence stimulates and 'grounds' energy; switching attention between the internal and external world, work on dynamic balance, core stability and 'base of support'.

4. **Return to Centre** – A short section to complete the sequence, consolidates the 'return to centre' as a daily 'mind / body' anchor gesture, stretch and warm down.

Brief Literature Review

- **Wang, Collet and Lau (2004**) reviewed the beneficial effects of Tai Chi on health outcomes and concluded that it can improve cardiovascular fitness, balance control and flexibility in patients with chronic conditions.
- **Wang, Bannuru, Ramel, Kupelnick, Scott and Schmid (2010)** reviewed the evidence and concluded that Tai Chi was associated with reduced stress, anxiety, depression and mood disturbance and increased self-esteem.
- **Gemmell and Leathem (2006)** examined the effects of tai chi on individuals with traumatic brain injury (TBI). They found that individuals with TBI reported being less tense, afraid, confused, angry and sad, and more energetic and happier after tai chi.
- **Zhang et al, 2012; Alperson, S.Y. and Berger, V.W., (2012)** Studies into these approaches have suffered from flawed methodologies including inadequate control groups, poorly defined methodology and inadequate outcome measures.

Primary Goals in Neurological Conditions

- Stimulate and balance energy
- Introduce purposeful activity, exercise and structure.
- Use 'Embodied Mindfulness' to:
    - Manage anxiety, depression anger and paranoia
    - Reduce harmful rumination
    - Introduce 'grounding in the senses' to increase pleasure by remaining present centred.
- Improve core stability, balance, 'range of movement' and 'base of support'.
- Facilitate a 'maintenance' group-based programme for families, teams and groups.

Aims for the Core Protocol

- ✓ Can be taught sitting or standing
- ✓ Can be applied across the full age range
- ✓ Can be adapted with and for people with hemiplegia
- ✓ Evidence based
- ✓ Valid, reliable and useful outcome measurement
- ✓ Cost effective
- ✓ Can be taught by any qualified practitioner with a 'core' training of 8 days.
- ✓ Parallel design to 8 week Mindfulness Based Cognitive Therapy approach.

TMW Teaching and Training

1. 8 week, 'TMW lite' group or individually based programme.
2. Fully developed teaching and training manuals, instructional DVDs (including an affordable 'prescription' version) and outcome measurements.
3. Has already been widely applied within both NHS and 3rd Sector settings.
4. Excellent patient outcomes with ongoing research programme (open to collaboration and support).
5. Levels of training available, from basic NHS practitioner to training member.
6. Active and expert supervision available.

Research Evaluation of the TMW approach in Clinical Practice

ABI – Pilot Study

Age of participants:

N= 18	minimum	maximum	mean	st.dev
	29	70	**56,85**	12,89

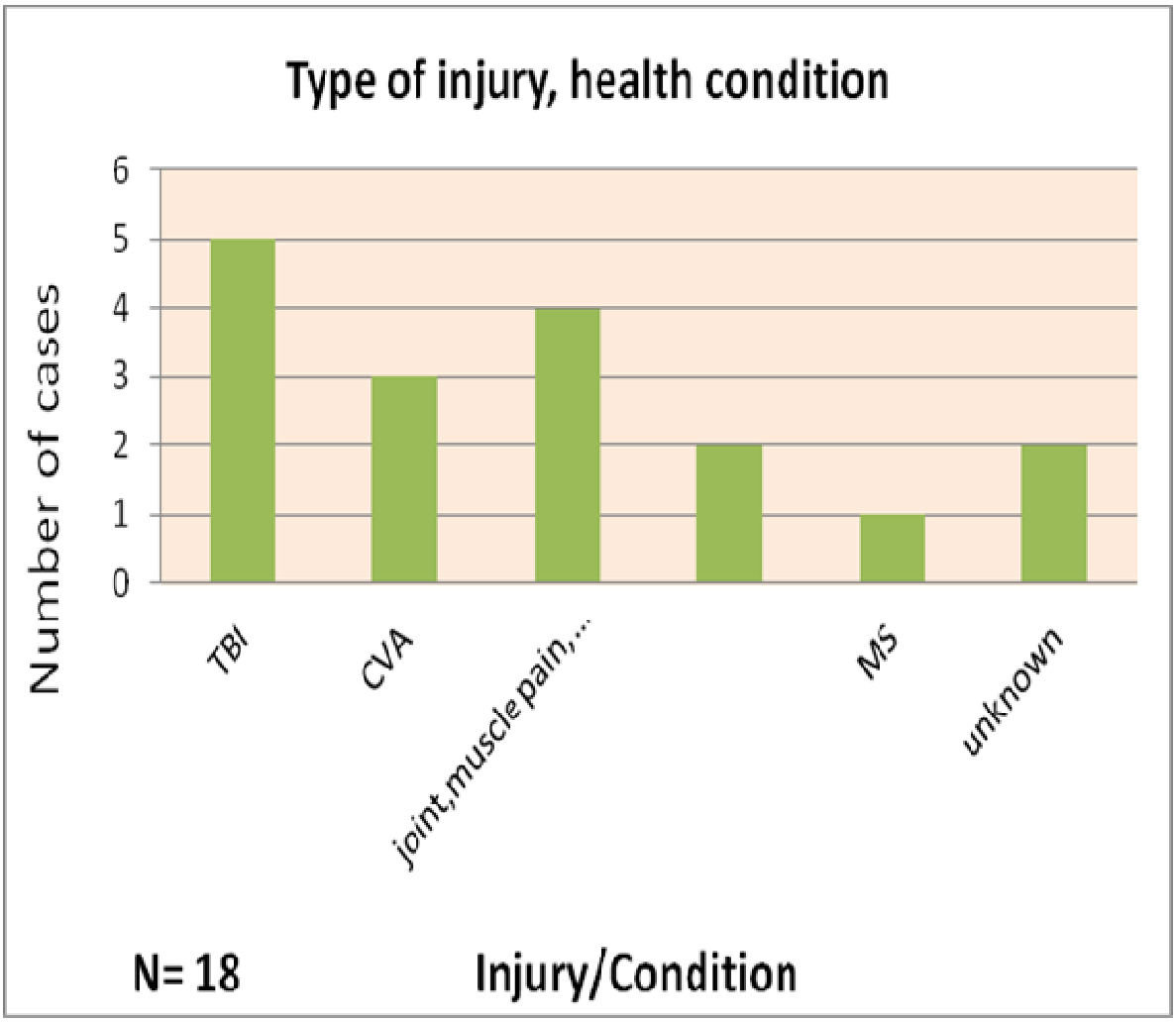
Gender mix

N=18	Male	Female
	13	5

Time from injury (years):

	average	lowest	highest	St.dev.
ABI	4	2	8	2,62
Joint, muscle pain, MS, rheumatoid arthritis	17.2	1	52	20,16
Total N=14	9	1	52	14

Type of Injury:



TBI = Traumatic Brain Injury CVA= Stroke MS= Multiple sclerosis

Outcome Results:

Pilot Study

Berg Balance Scale:
Paired t-test was made between pre- and post- outcome measure, demonstrating a statistically significant improvement
$p = 0.019$, ($p \leq 0.05$, $N = 8$).

TGUT (Timed `Get Up and Go` Test):
Pre- and post- measures (in seconds). Paired t-test demonstrating a statistically significant improvement
$p=0.012$, ($p \leq 0.05$, $N=8$).

Both measures demonstrate a statistically significant improvement in balance and coordinated movement on completion of the TMW training programme

CORE-10:
Statistically significant differences were found in the following areas:

Core 4 "..talking to people has felt too much for me.."
$p=0.009$, $p<0.05$, $N=8$
Core 9 "..I have felt unhappy.."
$p=0.01$, $p<0.05$, $N=8$
Core 10 "..Unwanted images or memories have been distressing me.."
$P=0.009$, $p<0.05$, $N=8$
Paired t-test results for Total score show a close to significant statistical improvement to mood,
$p=0.06$ ($p>0.05$, $N=8$).

The results indicate specific benefits in terms of improved social confidence, elevated mood and reduced distress.

Wellbeing 'star':

The 'Wellbeing star' is a measure of independence and participation use in a variety of health and social services settings to support people in moving into independent and self-reliant functioning. The TMW star is an initiative developed by the TMW Training service to support interdisciplinary goal setting. A score of 10 reflects the perception of full self-reliance and independence on that particular construct, a score of 1 indicates that the person feels stuck and is struggling in asking for help / support.

Participation	*pre-measure*	1	4	2,75	1,03	**p=0.04 (p≤0.05, N=8)**
	post-measure	2	5	3,37	0,91	

Extended TMW Long Term Conditions Study.

Sample = 214 Participants n=54 Males & 160 Females
Mean age = 61 (Range 23 – 88)

Reported Long Term Health Conditions:

Average time from injury = 7 years (1-36)

Traumatic brain injury	n = 8
CVA / Stroke / TIA	n = 11
Arthritis	n = 7
Pain	n = 10
Parkinson's	n = 9
MS	n = 1
Fybro-myalgia / CFS	n = 7
Anxiety / depression / mood disorder	n = 3
Diabetes	n = 3

Other participants in the study may have a long term health condition that were unreported.

The TMW Effectiveness Measure:

The TMW Effectiveness measure is made up of 14 items evaluating the effectiveness of the 'Tai Chi Movements for Wellbeing' programme. The participants have to answer on a scale of 1 (not good/poor) to 10 (very good/no problem) questions relate to their balance, energy, confidence, worry, co-ordination, participation, emotional stability, fatigue, flexibility, problems sleeping/waking early, breathing, pain, mobility and focus and concentration.

TMW Effectiveness Measure				
Participation	6.20 (2.462)	7.15 (2.231)	-3.567	**.002**
Emotional Stability	6.37 (2.362)	7.11 (1.729)	-2.800	**.012**
Fatigue	4.53 (2.294)	5.26 (2.746)	-2.111	**.049**
Flexibility	5.60 (1.903)	6.80 (2.067)	-2.897	**.009**
Sleep	6.50 (2.565)	7.20 (2.587)	-2.268	**.035**

Table 1. Paired samples t-test results with significant pre and post programme score differences in bold. **p*<.05

The results demonstrate significant reported improvements in energy, flexibility, sleep, emotional stability and overall participation in their life.

The Service User's Perspective

Tai Chi Focus Group – Women with Breast cancer:

"…We have all needed conventional medicine to some degree…
but I was looking for something away from illness and into health.
It makes other treatments better including taking all my medicines!
It's a whole philosophy of nurturing ourselves… learning to love yourself…"

"Helps at times of anxiety and stress"

"Improved posture"

"Eased trapped nerve pain"

"Non-strenuous activity that keeps me active"

"A sense of being more centered or grounded in everyday life"

"Very helpful with movement, confidence, breathing, companionship, calmness and coordination."

"[Tai chi has] taken the pain away completely from knees. I couldn't really drive a car before doing Tai chi."

"…Walking was difficult and climbing stairs very difficult. I can [do] both with relative ease now."

The following themes were identified from the TWM LTC Study post-course feedback:

- *Relaxation / calming and a sense of peace*
- *Helps prior to bedtime and with sleep*
- *It was supportive and helpful meeting others*
- *A good introduction to starting exercise again*
- *Helpful with balance and flexibility / suppleness / less 'tight'*
- *Understanding my limits and what parts of my body can actually do*
- *Helpful with my breathing*
- *Being 'mindful' and 'in the moment'*

"…I….use the Tai Chi to calm myself down and its, whether it is making a gap in your anger or taking your mind away from it all. You need to concentrate to do Tai Chi …"

…it just seems to be focused more on the way you stand and your body, your posture and your body when you do the Tai Chi …"

"…It did help with the balance problems… ….after I'd done the Tai Chi, when I'd finished the course, before I'd finished the course, my balance is a lot better …"

"…I found it was very, helped me to relax, it was very calming, and the first thing I started doing, because as I say I got a lot of stiffness in my right hand or my right hand side since my stroke and I find that would ease that…"

"…What I found with the Tai Chi was that it gave me…something to use to calm down all the panic…..I use the Tai Chi as a break and say 'OK I'm going to take 20 minutes out go through the sequence, calm myself down…'

Summary and Conclusions

- ✓ TMW present a structured, systematic and evidence based approach to the application of 'embodied mindfulness' to Long Term Conditions
- ✓ The evidence from repeated studies demonstrates both statistical and clinical improvements in terms of movement, balance, stability, fatigue, mood and overall 'participation'
- ✓ Service users self-reports and narratives indicate that this is perceived as a helpful, supportive and effective intervention
- ✓ The study demonstrates effectiveness across a wide age range with individuals presenting with very different long term health conditions

Therefore:

TMW offers an evidence based and cost-effective, clinical and psychologically significant contribution to Long Term Condition Self-Management (physical and mental health) which is valued by the service users.

The last word goes to the service users:

"…Well I think it's certainly three months since I've finished the eight week course and, yeah, it does change you, change you for the better. Yes it's good…"

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