Yoga Treatment for Refugee Torture & Trauma Survivors

Danielle Begg, Co-Founder Refugee Yoga Project
Background

- Refugees at risk of psychological complications due to high levels of cumulative trauma (Fazel & Stein, 2002)
- PTSD & depression among the most common mental health problems (Fazel, Wheeler & Danesh, 2005; Steel et al., 2009)
- Increasing recognition of the importance of brain & body in development & maintenance of symptoms (van der Kolk et al., 2014)
- Increasing interest in mind-body therapies as part of multi-modal treatment for PTSD (Metcalf et al., 2016)
Little published research on the use of yoga with refugees

Promising findings in other traumatised populations:
- Reduced PTSD symptoms in US women (Mitchell et al., 2014; van der Kolk et al., 2014)
- Reduced PTSD symptoms & depression in male Vietnam veterans (Carter & Byrne, 2004; Johnston et al., 2015)

Other suggested benefits for trauma survivors:
- Physical symptoms & general health
- Sleep
- Stress
- Resilience (Brown & Gerbarg, 2005; Jindani, 2015; Jindani & Khalsa, 2015; Staples, Hamilton & Uddo, 2013)
Mechanisms of effect yet to be determined. Hypotheses include:

- Reduced hyperarousal via nervous system regulation (Johnston et al., 2015; Pradhan et al., 2016; Staples et al., 2013)
- Increased psychological flexibility (Dick et al., 2014)
- Improved body awareness and tolerance of physical sensations (van der Kolk et al., 2014)

Hackney Yoga Project (UK):

- Good acceptability of yoga to refugee participants
- Anecdotal reports of reduced anxiety, improved physical health & well-being, increased confidence & resilience (Ourmala, 2016)
Pilot Program

- Two month pilot conducted with 64 refugees & asylum seekers in Sydney in collaboration with:
  - STARTTS
  - SydWest Multicultural Services
  - Settlement Services International
  - Asylum Seekers Centre
  - Villawood Immigration Detention Centre

- Attendance records support feasibility

- Qualitative feedback
  - Relaxation
  - Improved mood
  - Reduced pain

- Feeling very good, relax and my body is easy.

- It's so relaxing.

- 9am feeling completely peace and positive.
STARTTS Yoga Program Design

- Innovative program design bringing together multi-disciplinary team
- Biopsychosocial model
- Qualified Yoga Instructor
  - Tailors the class to the needs of the group
- Counsellor
  - Participate in the class with clients modelling self care
  - Observe individual clients in the class and integrate breathing and/or movement into sessions where appropriate
  - Provides feedback to the yoga teacher
  - Yoga classes can act as a ‘soft entry’ point for counselling
- Interpreter
  - Qualified interpreter present to ensure participant safety and depth of understanding
Weekly one hour yoga classes offered to groups of refugees

Referrals come from STARTTS & affiliated organisations

Classes held in Western & South Western Sydney

Classes consist of

- Breathing exercises
- Gentle yoga poses
- Guided relaxation
Program aims

- Inspire psychological calm through focus on breath
- Improve physical well-being, body awareness & relaxation through movement
- Improve mind-body connection by providing a safe place for participants to explore themselves
STARTTS Yoga Groups
STARTTS Yoga Groups
Yoga Groups (Adult)

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Age Group</th>
<th>Language</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blacktown SydWest Men*</td>
<td>19</td>
<td>Adult</td>
<td>Nepali</td>
<td>Bhutanese</td>
</tr>
<tr>
<td>Blacktown SydWest Women</td>
<td>27</td>
<td>Adult</td>
<td>Nepali</td>
<td>Bhutanese</td>
</tr>
<tr>
<td>Carramar STARTTS</td>
<td>40</td>
<td>Adult</td>
<td>Arabic</td>
<td>Chaldean</td>
</tr>
<tr>
<td>Liverpool Mandaean Centre</td>
<td>22</td>
<td>Adult</td>
<td>Arabic</td>
<td>Mandaean</td>
</tr>
<tr>
<td>Liverpool Refugee Health</td>
<td>16</td>
<td>Adult</td>
<td>Arabic</td>
<td>Mandaean</td>
</tr>
<tr>
<td>Mt Druitt Com. Health*</td>
<td>10</td>
<td>Adult</td>
<td>Arabic</td>
<td>Mixed</td>
</tr>
<tr>
<td>Toongabbie Com. Centre</td>
<td>35</td>
<td>Adult</td>
<td>Tamil</td>
<td>Tamil</td>
</tr>
</tbody>
</table>

* Shorter group: Data was only collected at two time-points
Refugee Yoga Teaching Principles

- Cultural Awareness and Sensitivity
- Choice
- Slowly, Slowly
- Emphasis on Safety
- Importance of Breath
- Messages Simple and few
- Language encouraging a focus on internal experience
- Explanation of evidence base behind techniques
- Silence
- Importance of Practice

(Begg, 2017)
Evaluation Measures (1)

- Process measures (weekly)
  - Attendance records
  - Satisfaction ratings

- Psychological questionnaires
  - Harvard Trauma Questionnaire: Part IV (HTQ) (Mollica et al., 1992)
  - Hopkins Symptom Checklist (HSCL) (Parloff et al., 1954)
  - Freiburg Mindfulness Inventory* (FMI) (Walach et al., 2006)

* Selected groups only
Evaluation Measures (2)

- Physiological measures
  - Fitness Assessment
    - Hand grip (Roberts et al., 2011)
    - Reaction time (Eckner et al., 2009)
    - Standing balance (Springer et al., 2007)
  - Heart Rate Variability (HRV) (emWave)

- Qualitative evaluation
  - Counsellor interviews
  - Participant focus groups
Data Collection Schedule (Feb-Oct 2016)

Baseline
- Fitness & HRV
- HTQ & HSCL

Midpoint
- HRV
- HTQ & HSCL
- FMI
- Qualitative

Endpoint
- Fitness & HRV
- HTQ & HSCL
- FMI
- Qualitative
## Participants

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>(n=188)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>90%</td>
</tr>
<tr>
<td>Age (years)</td>
<td>$M$ (SD)</td>
</tr>
<tr>
<td>Country of birth</td>
<td></td>
</tr>
<tr>
<td>Iraq</td>
<td>49%</td>
</tr>
<tr>
<td>Bhutan</td>
<td>27%</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>19.5%</td>
</tr>
<tr>
<td>Other*</td>
<td>4.5%</td>
</tr>
<tr>
<td>Years in Australia</td>
<td>$M$ (SD)</td>
</tr>
<tr>
<td>Residential status</td>
<td></td>
</tr>
<tr>
<td>Permanent resident or citizen</td>
<td>80.5%</td>
</tr>
<tr>
<td>Asylum seeker or TPV holder</td>
<td>19.5%</td>
</tr>
<tr>
<td>Clinical levels of mental health</td>
<td></td>
</tr>
<tr>
<td>PTSD</td>
<td>46%</td>
</tr>
<tr>
<td>Depression</td>
<td>49%</td>
</tr>
<tr>
<td>Anxiety</td>
<td>58%</td>
</tr>
</tbody>
</table>

* Other countries of birth: Indonesia, Iran, Morocco, Pakistan, Syria
Percent attendance of those enrolled

Average number of sessions attended by

- Mid-point: 4.7 (SD= 2.6)  Range = 0-11
- End-point: 6.2 (SD=4.1)  Range = 0-17
Satisfaction was predicted by
- Gender ($t=-2.599, p<0.05$)
- Poorer balance at baseline ($r=0.52, p<0.05$)

It was **not** associated with baseline psychological results or attendance.
PTSD Symptoms

This relationship was still found if FMI scores was held constant, but not if baseline HRV score was held constant.

- Number of yoga sessions attended was a significant predictor of end-point HTQ score*
  
  - Model: $F_{3,13} = 17.819$, $p < 0.001$   Adjusted R square = 0.759
  - Predictor: Unstandardised $\beta = -0.11$, $p<0.01$

* Controlling for baseline HTQ score & age
Number of yoga sessions attended was a significant predictor of end-point HSCL Depression score*

- Model: $F_{3,19} = 10.143$, $p < 0.001$  
  Adjusted R square $= 0.555$
- Predictor: Unstandardised $\beta = -0.08$, $p < 0.05$

* Controlling for baseline HSCL Depression & age
Qualitative Findings: Perceived Benefits (2)

<table>
<thead>
<tr>
<th>Category</th>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>Improved ability to perform poses/flexibility, Reduced pain/pain management, Improved sleep</td>
</tr>
<tr>
<td>Psychological</td>
<td>Feeling calm, &amp; relaxed, Able to cope with stress/anxiety, Anger management, Increased insight/awareness</td>
</tr>
<tr>
<td>Social</td>
<td>Enhanced confidence/self-concept, Sense of pride &amp; belonging in group, Having fun/enjoyment</td>
</tr>
</tbody>
</table>

“In the past, I used to be very anxious all the time and feel nervous. I used to not be able to breathe as I do now. And now I am much better. Like, when I go to sleep, I practice breathing in and out. I am practicing my breathing every single night… and it helps me relax and calm down.”

(Mandaeann group)

“Yoga helped to improve communication, relationship, improvement in memory… We built a close relationship, we are like a family now. Through this program, relationship became stronger. Yoga helps us with all aspects…”

(Mandaeann group)
Challenges

- Meeting the variety of physical, psychological and cultural needs within and between groups
- Group establishment
  - Minimum of 8 participants in each group
  - Initially easier for groups already culturally familiar with yoga
- Home Practice
Conclusions

- Feasible and appropriate treatment for refugees
  - Importance of tailoring classes to the cultural and health needs of participants
- Attending more yoga sessions predicts lower PTSD and depression symptoms
  - Not attributable to age or baseline symptoms
  - No evidence for mindfulness as mechanism of effect
  - Baseline CNS regulation may play a role
- Participants and counsellors perceived a range of benefits
  - Physical
  - Psychological
  - Social
Acknowledgements

STARTTS

Jorge Aroche
Mariano Coello
Jasmina Bajrakterevic-Hayward
Helen Bibby
David Perez
Kedar Maharjan
Tonet Ortega
Kat Mikhailouskaya
Demiana Mangaryos
Adriana Seifertova

Marcel Abdelmasieh
Pearl Fernandes
Harini Mayuran
Katherine Theodor
Yvette Aiello
Hee Zee Lu
Sanja Stefanovic
Rocio Martinez
Winnie Kamakil

Vasudhara

Tanya Nelson Carnegie
Matt Singmin

Lucy Barkl
Nik Dawson
Yoga program at STARTTS was funded by the Vasudhara Foundation.

The Foundation supports early-stage, innovative and creative social impact projects.

Broad range of interests including:

- Yoga
- Meditation
- Projects that support refugees in Australia

http://www.vasudharafoundation.org/


References (3)


