A Good Time to Dance?
Differential Effects of Dance Movement Therapy for Breast Cancer Patients During and After Radiotherapy

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Background

Dance Movement Therapy (DMT)

• Is both a form of **psychotherapy** and a form of **moderate physical activity**

• It has been found effective in:
  
  — promoting positive physical and psychological effects
  
  — improving the quality of breast cancer patients

(Bojner-Horwitz, Theorell, & Maria-Anderberg, 2003; Dibbell-Hope, 2000; Kaltsatou, Mameletzi, & Douka, 2011; Serlin, Classen, Frances, & Angell. 2000)
Significance of the Study

• A mixed-method, *exploratory study* to investigate *how* and *when* the DMT intervention can be effective for breast cancer patients, who are either undergoing and completed radiotherapy
# Methodology

| Inclusion Criteria | • Chinese-speaking women  
| • Diagnosed with breast cancer (Stage 0-4) |
| Exclusion Criteria | • Presence of secondary cancer  
| • History of severe concomitant disease or major psychiatric illnesses |
| Sample Size | • 159 participants were recruited from the oncology & radiotherapy department at 2 local hospitals, and 3 cancer patient service centers in Hong Kong, and 144 (90.6%) completed the study |
| Data Collection | • Qualitative data were collected immediately after DMT Intervention by means of a written open-ended questionnaire |
## Participants Profile

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Mean (SD) / Number of Participants (%) (N=104) All participants</th>
<th>Mean (SD) / Number of Participants (%) (n=60) Concurrent Radiotherapy Group</th>
<th>Mean (SD) / Number of Participants (%) (n=44) Post Radiotherapy Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>50 (7.9)</td>
<td>48.8 (8.1)</td>
<td>51.6 (7.5)</td>
</tr>
<tr>
<td>Cancer staging</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>9 (9)</td>
<td>6 (10.5)</td>
<td>3 (7.1)</td>
</tr>
<tr>
<td>1</td>
<td>23 (23.2)</td>
<td>12 (21.1)</td>
<td>11 (26.2)</td>
</tr>
<tr>
<td>2</td>
<td>44 (44.4)</td>
<td>27 (47.4)</td>
<td>17 (40.5)</td>
</tr>
<tr>
<td>3</td>
<td>22 (22.2)</td>
<td>12 (21.1)</td>
<td>10 (23.8)</td>
</tr>
<tr>
<td>4</td>
<td>1 (1)</td>
<td>0 (0)</td>
<td>1 (2.4)</td>
</tr>
<tr>
<td>Surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>1 (1)</td>
<td>1 (1.7)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Lumpectomy</td>
<td>57 (55.9)</td>
<td>37 (62.7)</td>
<td>20 (46.5)</td>
</tr>
<tr>
<td>Mastectomy</td>
<td>44 (42.7)</td>
<td>21 (35.6)</td>
<td>23 (53.5)</td>
</tr>
<tr>
<td>Chemotherapy</td>
<td>78 (76.5)</td>
<td>47 (79.7)</td>
<td>31 (70.5)</td>
</tr>
</tbody>
</table>
The Dance Movement Therapy Intervention Program

- The 6-session (twice a week) Program includes:

<table>
<thead>
<tr>
<th>Movements-based components</th>
<th>To facilitate…</th>
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<tbody>
<tr>
<td>Gentle upper arm movements</td>
<td>Relieving of edema</td>
</tr>
<tr>
<td>Group dance &amp; movement games</td>
<td>Enhancement of mood &amp; vitality</td>
</tr>
<tr>
<td>Improvisational movements</td>
<td>Encourage personal expression</td>
</tr>
<tr>
<td>Movement interaction</td>
<td>Communication</td>
</tr>
<tr>
<td>Sharing</td>
<td>Reflection and building mutual support</td>
</tr>
</tbody>
</table>
How Does DMT Help?
How Does DMT Help?

• Coping with the cancer, radiation treatment, and physical symptoms
  – by speeding up their recovery from the current and previous treatments
  – by making the radiotherapy process and side effects more bearable

“It seems like time passed by really quickly, it allowed me to have something to look forward to… I can have my treatment and I can dance. This anticipation helps distract me from the side effects of radiotherapy”

“Throughout radiotherapy, parts of my body and my limbs are painful and tense. But through dance and music, I realize that they can move quite freely”
How Does DMT Help?

- Mental well-being, mindfulness and self-appreciation for the self and the body
  - Feelings of alleviated stress, relaxation, and happiness
  - Enhanced self-acceptance, self-confident & mindfulness
How Does DMT Help?

- **Total functioning**
  - Enhanced quality of life, life enjoyment, and fulfillment
  - Enhanced holistic well-being (i.e. body, mind, spirit)

“Participating in this course has made me more cheerful. Having this new thing to do has made my life more fulfilling, and my quality of life has improved.”
How Does DMT Help?

• Bridging back to normal and better life
  – by encouraging physical activities
  – by commitment to a balanced life rhythm
  – by fostering future orientation

“I gained happiness from the activities and became more aware of being happy every day”
How Does DMT Help?

- Shared positive experiences
  - emotional support
  - information exchange

“I feel like I’m not facing this on my own. When my group mates reflected my feelings on the spot, I felt that I immediately gained a lot of support”
When Does DMT Help?
Differential Effects of DMT

1. Supports the ability to cope with the cancer, radiation treatment, and physical symptoms ($\chi^2 = 7.16, p \leq .01$)

2. Enhances mental well-being, mindfulness and self-appreciation for the self and the body ($\chi^2 = 4.49, p \leq .05$)

3. Improves total functioning

4. Facilitates the bridging back to normal and better life

5. Encourages mutual sharing of positive experiences
Implications
Implications

• When administered to cancer patients who are attending radiotherapy, DMT brings about additional benefits:
  – Better symptoms management
  – Enhanced psychological well-being

• Breast cancer patients find the following helpful when coping with radiotherapy:
  – self-awareness & self-appreciation
  – integrating exercise to daily life
  – the pleasurable experience of DMT
Acknowledgements

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Research Team Members
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Dr. M.Y. Luk, MBBS

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