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The Group Cohesion Factor in a Dragon Boat Race Training Programme

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Background

- Benefits of moderate intensity exercise after treatment for breast cancer
- Dragon Boat ‘paddling’
- Implications for lymphoedema
- A team sport
- Focus on the cohesion factor
Study outline

• Single cohort, longitudinal study
• Primary aim: To evaluate the effects of a 20 week training programme on upper limb volume (relevant to lymphoedema)
  – Arm circumference (multiple measurements at intervals)
• Secondary aim: To explore group cohesiveness and any other beneficial effects
  – Aerobic fitness, body composition, BMI, BP, lower back strength, exercise adherence log, focus groups and open ended questionnaires
Participants

- 13 self selected women
- 4 had mild lymphoedema
- Aged 36-72
- 3 -12 month post diagnosis
- Surgery, chemotherapy, radiotherapy, hormonal
- co-morbidities:
  - hypertension, osteoarthritis, depression, raised cholesterol

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Group cohesion in sport research

- Group cohesion is:
  - the total field of forces causing members to remain in the group (Festinger et al. 1950)
  - (or) the resistance by the group to disruptive forces (Gross and Martin 1952)

- Sport Cohesiveness Questionnaire (Martens, Landers and Loy (1972 unpublished) 7 aspects)

- Carron (1980) 3 categories as measures:
  - Individual to individual (friendship, influence)
  - Individual to group (sense of belonging, value of membership, enjoyment)
  - Group as a unit (teamwork and closeness)

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Cohesive factor assessment

- From open ended questionnaire
  - Baseline, 6 weeks, 20 weeks, 3 months post intervention
- 2 focus groups
  - Baseline, post intervention
- Adherence log, observations and comments
## Exercise training adherence

### sessions completed by group

<table>
<thead>
<tr>
<th>Phase</th>
<th>Aerobic</th>
<th>Strength</th>
<th>Flexibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (6 wks)</td>
<td>94%</td>
<td>93%</td>
<td>93%</td>
</tr>
<tr>
<td>2 (8 or 14 wks cum.)</td>
<td>86%</td>
<td>85%</td>
<td>77%</td>
</tr>
<tr>
<td>3 (8 or 20 wks cum.)</td>
<td>89%</td>
<td>79%</td>
<td>64%</td>
</tr>
</tbody>
</table>

Reasons for non-adherence: illness / work / carer responsibilities / holidays / visitors

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Questions (selection)

• Why have you joined this group?
• What do you expect/hope to get out of this group?
• What do you want to get most of this group?
• Why do you think a group will help?
• What will you bring to the group?
• Do you think you are getting what you hoped for from the group?
• What has helped you to adhere to the training programme?
• What do you want most from the group at this point?
• Why do you think a group will help (your training)?
• What was the most beneficial aspect of the group?

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Why have you joined this group? (baseline)

- To have fun and exercise
- Enjoyment of physical activity
- Shared experience with other survivors
- To challenge myself
- To do something different
- To become part of a team
- To take some control over my future
- To demonstrate to people that you CAN DO strenuous activity after being diagnosed with breast cancer
Why do you think a group will help? (baseline)

- Sharing with others
- All aiming for fitness – together
- To be part of a team will spur me on to become fitter and healthier
- Lovely ladies with similar story
- Structured exercise routine and commitment to project
- People can understand what I have experienced and listen
- Shared experience
Do you think you are getting what you hoped for from the group? (6 weeks)

- Yes, fun and fitness
- Yes, confidence in my body… and being part of such a great group of inspirational people
- Yes, having a structured training programme, recording efforts makes me feel that training is worthwhile on days when I am not motivated
- Yes, people are bonding as a team
- Friendship, commitment, exercise and belonging to a team
- More than company and teamwork – a reason for existing
Why do you think a group will help? (6 weeks)

• I don’t want to let the group down
• Motivates you to do more, support one another through difficult times and share the experience
• This group all have the experience of cancer
• Commitment to each other
• This group makes me feel comfortable and able to be myself
• Because we’re all part of something that is bigger than any of us alone – the group has a ‘vision’ that will grow and grow.
What was the most beneficial aspect of being part of the group? (3m post intervention)

- Feeling part of a group, sharing the same goals and yes to life
- The friendship and shared sense of purpose
- **Sharing the joy**, seeing people have a good laugh, meeting some wonderful friends
- Enjoyment of the paddling
- Fun
- Emotional effects – sharing the experience, being part of a team, improvement of wellbeing

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Group cohesion in sport research (2)

Sport Cohesiveness Questionnaire – 7 aspects of measurement (Martens, Landers and Loy (1972 unpublished, cited by Carron and Chelladurai, 1981))

1. friendship or interpersonal attraction among group members,
2. relative power or influence of group members,
3. The sense of belonging the individual feels to the group
4. The value the individual attaches to the group
5. The degree of enjoyment the individual derives from participating with the group
6. The level of teamwork the individual perceives is present within the group
7. The degree of closeness the individual feels is present within the group
Conclusions

• Group cohesion factor underpins the benefits received by the women in this study
• Special group due to self selection and commitment
  • Group identity at start, cohesiveness strengthened over time
• Team sports have relevance to promoting moderate intensity exercise in breast cancer survivors.

What next?
• Other team sports?
  • Basketball, Soccer (non-American style Football), Baseball, Volleyball, Badminton
  • Tennis, swimming, running