Using telehealth for videoconference groups for health literacy and self-management skills in older people with chronic disease: Process and procedures

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17 June 2015
Background

• Nested in a high speed broadband enabled remote monitoring pilot My Health Clinic At Home (MHCAH)
• Participants aged 50+ years with one or more chronic conditions
• Daily readings and well-being responses were blue toothed to secure database and triaged by a Telehealth Nurse (THN)
• Secured videoconferencing transmitting High Definition video
Location

- Participants and 1 IT Technician at Coffs Harbour, NSW
- Course Facilitator and IT Technicians at Coolangatta, Qld
- Distance of 300 km’s
Telehealth Literacy Project

Aim

• To develop, implement and evaluate the effectiveness and acceptability of a home-based videoconference group program for older people on health literacy and self-management skills and support
Why is Health Literacy Important?

“If people cannot obtain, process and understand basic health information they will not be able to look after themselves or make good health decisions.”

Coulter BMJ 2007:335
Methods

- Mixed methods evaluation
- 5-week course content informed by participant advisory group, health professional workshop, literature review, baseline data

Data Collection

- Health Literacy Questionnaire (HLQ) (pre and post intervention)
- MHCAH Client Experience Survey
- Semi-structured interviews, focus groups, journal

Analysis

- Quantitative Data - Cluster Analysis, Descriptive statistics
- Qualitative Data - Thematic Analysis
Telehealth Literacy Project

- 9 groups comprising of 52 participants
- 44 group videoconferences lasting between 45mins to 1.5 hours
  - 30 group meetings with 1-5 participants
  - 12 group meetings with 5-7 participants

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Active self-management, Being active and Goal setting</td>
</tr>
<tr>
<td>2</td>
<td>Self-monitoring and insight, Problem solving</td>
</tr>
<tr>
<td>3</td>
<td>Communicating with health professionals</td>
</tr>
<tr>
<td>4</td>
<td>Finding, understanding and using health information, Nutrition for seniors</td>
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<tr>
<td>5</td>
<td>Being medicine wise, Advance care planning</td>
</tr>
</tbody>
</table>
## Participant Demographics

<table>
<thead>
<tr>
<th>Participants</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>Average No. of Chronic Conditions</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>28</td>
<td>54</td>
</tr>
<tr>
<td>Lives alone</td>
<td>18</td>
<td>35</td>
</tr>
<tr>
<td>No private health insurance</td>
<td>27</td>
<td>52</td>
</tr>
<tr>
<td>Not completed high school</td>
<td>19</td>
<td>37</td>
</tr>
<tr>
<td>Lives in Coffs Harbour area</td>
<td>49</td>
<td>94</td>
</tr>
<tr>
<td>Connected to high speed broadband</td>
<td>39</td>
<td>75</td>
</tr>
</tbody>
</table>
Videoconferencing Facilities
Best Use of Videoconferencing

- 1 person talking at a time
- Raise your hand when you want to talk and the leader will invite you
- Remember that everyone can see and hear you
- Please turn mobile phones off
Mean Change of HLQ Scale Scores for Participant vs Control Groups

Error bars: +1
## Client Experience Survey

### THLP participants vs MHCAH participants

<table>
<thead>
<tr>
<th>Statement</th>
<th>Odds Ratio</th>
<th>CI Lower</th>
<th>CI Upper</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am more confident in discussing my health with my doctor</td>
<td>2.58</td>
<td>1.10</td>
<td>6.01</td>
<td>0.02</td>
</tr>
<tr>
<td>My doctor has better information to help with the ongoing management of my health condition</td>
<td>2.34</td>
<td>1.07</td>
<td>5.15</td>
<td>0.02</td>
</tr>
<tr>
<td>Statement</td>
<td>Agree or Strongly Agree % (n=48)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>----------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using videoconferencing for seniors to join groups is acceptable</td>
<td>96 (n=46)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I enjoyed meeting new people via videoconferencing</td>
<td>98 (n=47)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being part of a group via videoconference was easy to do</td>
<td>96 (n=46)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meeting with a group via videoconference from home is easier than</td>
<td>86 (n=42)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>attending a group in person</td>
<td></td>
<td></td>
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Qualitative Data

- 16 semi-structured interviews
- 3 Focus Group (2 via VC)
- Facilitator journal detailing implementation and reflection of process
Key Learning

• Location of device

• Audio
  • Distortion and lagging can occur intermittently
  • Headsets isolate sounds and limits background noises
  • Splitters for couples

• Visual
  • Device near natural light or desk light in front, tablet positioned to see full face
Key Learning

• Connectivity
  • Greater difficulties with 4G and particularly those in multi-dwelling occupancies
  • Test run and pre-meeting weekly calls
    • Resolve audio or visual issues
    • Practise connecting and using headsets
    • Confirm time and attendance
  • IT technician to connect participants one-by-one to virtual room to problem solve technical issues. Connect most talkative first.
  • Connection times became quicker as course progressed
Key Learning

• VC etiquette
  • Weekly recap on confidentiality and 1 person speaking at a time, briefly raise hand to contribute
  • Mobile phones off, move away from VC if talking to others including landline calls
  • Dress appropriately
Key Learning

• Home-based VC Groups providing social connections
  • Enjoyed meeting new people particularly those living alone, mobility problems, limited transport or feared meeting new people
  • Valued connecting with others with chronic conditions
  • Feeling empathy with/from others with chronic conditions
  • Focusing on positive aspects of lives
  • Comparing themselves with others and feeling their situation wasn’t “so bad”
  • “It’s company”
Limitations

• Participants self-selected into MHCAH and the THLP
• Those who may have benefited may have dropped out
• Small sample size
Summary

• Telehealth home-based group education is acceptable to older people as long as there is consistent connectivity.

• Older people can learn to use VC and connect with others in groups. This is particularly useful for those living alone, with poor mobility and in a rural areas.

• Health literacy and self-management education can be delivered via telehealth groups to older people.