The ‘Self-Man’ Review: How effective, accessible & acceptable are self-management support interventions for men with long-term conditions?

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“Strong gendered dimension” that places men at higher risk of ill health than women...

“Infrequent use of and late presentation to health services are associated with men having reduced treatment options” (p.29)

“Men’s poorer knowledge/awareness of health points towards the need for targeted health information to be delivered to men” (p.29)

Men & Masculinities

- Masculine ideals and gender ‘normative’ behaviour for men in the UK embodied by:
  - Autonomy
  - Breadwinner
  - Strong/stoical
  - Emotional resilience
Men have an increased incidence of most serious and disabling long term conditions (LTCs)

Poor self-management and reluctance to access health services may account for a high proportion of mortality and morbidity in men.

Effective self-management can lead to improvements in health outcomes and quality of life

Men’s attendance at existing LTC support services is suboptimal

Effectiveness, accessibility and acceptability of existing self-management interventions for men with LTCs is yet to be established.
Review Question:
• How effective, cost-effective, accessible and acceptable are self-management support interventions for men with LTCs?

Review Aims:
• Establish the relative **effectiveness** of self-management support interventions in men with LTCs (quantitative systematic review)
• Identify men’s **experiences** of, and **perceptions** towards, interventions/activities aimed at supporting or promoting self-management of LTCs (qualitative meta-ethnography)
Cochrane systematic reviews of self-management support interventions

| RCTs of self-management support interventions involving both men and women, where secondary analyses had assessed the outcomes of interventions by gender. | RCTs of self-management support interventions conducted in male-only samples. | RCTs of self-management in women/mixed sex groups (comparison). |
**P**: Adults, male, 18 years or older, diagnosed with one or more of 14 ‘exemplar’ long term conditions (asthma, diabetes, depression, hypertension, heart failure, chronic obstructive pulmonary disease, arthritis, chronic kidney disease, chronic pain, HIV, testicular cancer, prostate cancer, prostate hyperplasia and chronic skin conditions)

**I**: any self-management support intervention

**C**: any comparison group

**O**: effect of interventions on health status, clinical outcomes, health behaviour, healthcare use, self-efficacy, knowledge and understanding, communication with healthcare professionals
Cochrane systematic reviews identified for screening
N=164

Excluded N=48
Reason
1. Did not include RCT's N=5
2. Did not include studies in patients with eligible LTC N=14
3. Did not investigate self-management support N=20
4. Did not include male only or mixed-sex trials N=4
5. Unobtainable N=5

Relevant Cochrane systematic reviews of self-management support identified
N=116

Individual publications screened
N=1887

Analyses by sex/gender reported:
N=22 (20 individual studies)

Excluded: N=1838
Reason
- Not an RCT N=78
- Mean age not ≥18 years N=49
- Did not include patients with eligible LTC N=449
- Not self-management support or strategy with a major component of self-management support N=222
- Not a male-only RCT N=972
- Unobtainable N=23
- Foreign language N=45

RCTs included:
N=49 (40 individual male-only studies)
• 51 distinct self-management support interventions were reported across the 40 included studies involving men alone.

• Physical activity (n=16), education (n=36), peer support (n=17) and HCP monitoring and feedback (n=25) were the most frequently reported major components of these interventions.

• Disease types in the recruited populations included prostate cancer (n=15), hypertension (n=6), chronic obstructive pulmonary disease (n=6), heart failure (n=4), diabetes type II (n=3), diabetes unspecified type (n=1), arthritis (n=1) and testicular cancer (n=1). N=1 multi-morbidity study recruited obese men with type II diabetes and chronic kidney disease.
Analysis #1

Male-only RCTs

- Physical Activity interventions
- Education interventions
- HCP Monitoring & feedback interventions
- Peer Support interventions

Outcomes
Analysis #1 example

physical activity component vs interventions without a physical activity component in male-only trials
### Analysis #2 example: Physical activity interventions on HRQOL

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>Experimental Mean</th>
<th>SD</th>
<th>Total</th>
<th>Control Mean</th>
<th>SD</th>
<th>Total</th>
<th>Weight</th>
<th>IV, Random, 95% CI</th>
<th>Std. Mean Difference IV, Random, 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.5.1 Male only</strong></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Daubenyemier JJ et al 2006</td>
<td>53.2</td>
<td>6.6</td>
<td>40</td>
<td>50.2</td>
<td>9.5</td>
<td>42</td>
<td>8.8%</td>
<td>0.36 [-0.07, 0.80]</td>
<td></td>
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<tr>
<td>Culos-Reed SN et al 2010</td>
<td>73.12</td>
<td>15.96</td>
<td>40</td>
<td>69</td>
<td>15.12</td>
<td>25</td>
<td>7.9%</td>
<td>0.26 [-0.24, 0.76]</td>
<td></td>
</tr>
<tr>
<td>Bourke L et al 2011</td>
<td>90</td>
<td>13</td>
<td>15</td>
<td>87</td>
<td>17</td>
<td>13</td>
<td>5.2%</td>
<td>0.19 [-0.55, 0.94]</td>
<td></td>
</tr>
<tr>
<td>Koulouvas G et al 2004</td>
<td>9.1</td>
<td>1.1</td>
<td>16</td>
<td>7.1</td>
<td>1.1</td>
<td>10</td>
<td>3.8%</td>
<td>1.76 [0.82, 2.71]</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td>111</td>
<td></td>
<td></td>
<td>90</td>
<td>25.7%</td>
<td>54.0%</td>
<td>0.54 [0.02, 1.06]</td>
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</tr>
</tbody>
</table>

Heterogeneity: $\tau^2 = 0.18; \chi^2 = 8.53, df = 3 (P = 0.04); I^2 = 65\%$
Test for overall effect: $Z = 2.02 (P = 0.04)$

| **1.5.2 Mixed sex**     |                   |    |       |              |    |       |         |                  |                                        |
| Cheville 2010           | 71.9             | 19.41 | 47 | 68.4 | 23.48 | 49 | 9.3% | 0.16 [-0.24, 0.56] |                                        |
| Bennett 2007            | 47.11            | 11.08 | 28 | 45.51 | 9.8 | 28 | 7.6% | 0.15 [-0.37, 0.68] |                                        |
| Adamsen 2009            | 67.2             | 20.3 | 18 | 63.3 | 22.4 | 17 | 6.0% | 0.18 [-0.49, 0.84] |                                        |
| Jarden 2009             | 90.1             | 11.9 | 16 | 78.1 | 18.1 | 13 | 5.1% | 0.78 [0.02, 1.54] |                                        |
| **Subtotal (95% CI)**   | 109              |    |       | 107 | 28.0% | 51 | 0.24 [-0.03, 0.51] |                                        |

Heterogeneity: $\tau^2 = 0.00; \chi^2 = 2.23, df = 3 (P = 0.53); I^2 = 0\%$
Test for overall effect: $Z = 1.74 (P = 0.08)$

| **1.5.3 Women only**    |                   |    |       |              |    |       |         |                  |                                        |
| Mutrie 2007             | 83.2             | 12.8 | 82 | 77.1 | 17 | 95 | 10.8% | 0.40 [0.10, 0.70] |                                        |
| Fillion 2008            | 46.76            | 9.24 | 44 | 44.64 | 11.05 | 43 | 9.0% | 0.21 [-0.21, 0.63] |                                        |
| Wang 2010               | 84.28            | 13.05 | 35 | 66.06 | 13.6 | 37 | 7.7% | 1.35 [0.84, 1.87] |                                        |
| Cadmus 2009             | 89.3             | 11.1 | 22 | 89.5 | 11.8 | 23 | 6.9% | -0.02 [-0.60, 0.57] |                                        |
| Rogers 2009             | 86.1             | 13.6 | 19 | 85.4 | 18.4 | 17 | 6.1% | 0.04 [-0.61, 0.70] |                                        |
| Donnelly 2011           | 80.19            | 16.93 | 16 | 78.71 | 19.1 | 17 | 5.8% | 0.08 [-0.60, 0.76] |                                        |
| **Subtotal (95% CI)**   | 218              |    |       | 232 | 46.3% | 75 | 0.36 [-0.02, 0.75] |                                        |

Heterogeneity: $\tau^2 = 0.16; \chi^2 = 17.87, df = 5 (P = 0.003); I^2 = 72\%$
Test for overall effect: $Z = 1.87 (P = 0.06)$

| **Total (95% CI)**      | 438              |    |       | 429 | 100.0% | 60 | 0.38 [0.16, 0.60] |                                        |

Heterogeneity: $\tau^2 = 0.09; \chi^2 = 29.76, df = 13 (P = 0.005); I^2 = 56\%$
Test for overall effect: $Z = 3.42 (P = 0.0006)$
Test for subgroup differences: $\chi^2 = 1.08, df = 2 (P = 0.58), I^2 = 0\%$
Results

- Meta-analysis suggested that physical activity, education, and peer support-based interventions have a positive impact on quality of life in men.
- However, there is currently insufficient evidence to make strong statements about whether males show larger, similar, or smaller effects in self-management support interventions compared to females and mixed-sex groups.
CINAHL, EMBASE, MEDLINE, PsycINFO and Social Science Citation Index searched in July 2013

Include: experiences/perceptions of interventions/activities aimed at supporting self-management in men with LTCs (or explicit comparison between men and women)

Exclude: focus on self-management experiences and needs of people with LTCs more generally (i.e. did not consider a support intervention or activity).
Figure 10 PRISMA flow diagram for the qualitative review

Records identified through database searching:
N=8450

Records after duplicates removed:
N=6330

Excluded in initial title/abstract screen:
N=6181 (which included 58 that were unpublished (e.g. conference proceedings, theses), review articles, or linked quantitative or methodological papers that mentioned primary qualitative research)

Not found or unprocessed:
N=0

Full text articles screened:
N=149

Excluded: N=111

Reasons (more than one may apply to each article)
Reason 1 not LTC (N=1)
Reason 2 not self-management intervention or support activity (N=89)
Reason 3 not male only or lacking explicit gender comparison (N=45)
Reason 4 not qualitative data collection and analysis (N=18)

Additional studies identified (e.g. via reference checks and searching for published literature for unpublished records):
N=4 (studies and papers identified for inclusion through other sources)

Studies and papers included in qualitative synthesis:
N=38 studies across 44 papers (although only 42 of the papers are captured in the previous boxes because an additional two were female-only and sought separately)
**Country**
- USA (n=13), UK (n=11), Australia (n=5), Canada (n=5)
- N=1 each from Denmark, France, South Africa, and Sweden.

**Conditions**
- Cancer (n=22), HIV/AIDS (n=7), cardiac (n=8), mental health (n=2), arthritis (n=1), type 2 diabetes (n=1) and multiple sclerosis (n=1).

**Support**
- Face-to-face support groups (n=12 studies), ‘lifestyle’ interventions (n=11), internet information and/or support (n=5), information (n=2), ‘psychological’ interventions (n=6) ‘various’ (n=6)
Extracted and imported into *NVivo10*:

- **Study details** (methods, quality criteria, etc)
- **Participant quotes/observations** (*first-order constructs*)
- **Study authors’ themes/concepts and interpretations** (*second-order constructs*)
- Data were synthesised using a meta-ethnography approach (Noblit and Hare 1988)
- **Third-order constructs** derived and integrated into ‘line-of-argument’ synthesis
Findings

• **Tensions** between some men’s perceived need to **fulfil roles and obligations** linked to their identity as a man, and acceptance of needing support to manage a health condition that could **potentially threaten that identity**

![Diagram showing relationships between Need for Purpose, Becoming an Expert, Value of Peers, Trusted Environments, Masculine Identities]

- **Becoming an Expert**: Having shared purpose can foster trust.
- **Value of Peers**: Peers can foster trusted environments.
- **Trusted Environments**: Valuing peers for learning can promote becoming an expert.
- **Masculine Identities**: Becoming an expert can offer structure & a sense of purpose.
- **Need for Purpose**: Trusting environments can promote becoming an expert.
1) Need for Purpose

Need to feel a **clear purpose** when accessing/continuing to use self-management support that perceived to address an **unmet need**.

Preference for structured, action-orientated support

Emotional support occurring as a ‘by-product’ of other shared activities.
1) Need for Purpose

• “We didn’t come just to discuss things” (1st order -- Adamsen et al 2001; cancer)

• “… doing the exercises we thought we were getting something out of it. Just having these talks [group discussions], is not doing a lot of good” (1st order -- Bourke et al 2012; prostate cancer)

• Receiving and sharing information could provide men with both reassurance and emotional support, and was commonly seen as more acceptable than ‘just talking’.
2) Trusted Environments

Need for men to access interventions in a safe, private, trusted space/environment apparent across literature

Especially important in activities seen as incongruous with masculine ideals and behavioural norms (e.g. group-based emotional sharing)
2) Trusted Environments

• “Men who did not want to talk could listen without worrying about being put on the spot to say something, whereas others could comfortably share questions and comments from within the group.” (2nd order - Oliffe et al 2010; prostate cancer)

• “I finally screwed up the courage to say something ... I looked around expecting people to look shocked or disapproving. ... People just nodded ... and reacted like it was no big deal. After that, I was able to talk more openly ...” (1st order - Sandstrom 1996; HIV/AIDS)

• The setting, group size & structure, processes for dealing with emotional/taboo topics, and characteristics of the facilitator, all impacted on ‘trustworthyness’
3) Value of Peers

Interaction with peers who had a shared illness experience valued across support activities (either face-to-face or online) -- sense of belonging, connectedness, and normality for many men.

Opportunities for social comparison and learning, and lead to implications for sense of community, issues of belonging, meaning and adjustment, as well as peer education and mutual motivation.
3) Value of Peers

• “you can't separate support from understanding. ... there's nothing more supportive to me than when someone says, “Yeah, I know” or “I understand” or “it's happened to me” ... that commonality” (1st order -- Trapp et al 2013; cancer)

• “... you have also created an enormous burden on others ... I belong to the support group, because ... we all understand each other. There are a few people there who are very important to me. They’re not friends. ... there’s that distance. We just get together to unburden ...” (1st order -- Bedell 2000; HIV/AIDS)

• Attendance of women can have both a positive and negative impact on men’s perception of acceptability and accessibility; may vary with condition and with activity / intervention type.
4) Becoming an Expert

Men involved in self-management support interventions often evolved into ‘experts’ and providers of information in their own right.

Developing expertise could complement a ‘need for purpose’ and offer a way to regain control and reclaim a sense of identity fractured through chronic illness.
4) Becoming an Expert

- “People [men] are hungry for information, what is the latest in research ... People are just dying to get their hands on the latest information.” (1st order -- Gray et al 1997; prostate cancer)

Although some men may place a high value on technical information and knowledge, overly complex information can also act as a barrier to learning and may also provoke anxiety or feelings of being overwhelmed.

- “Imagine being in a fast flowing river and the guy on the bank has got half a dozen different aids to help you, and he's shouting to you ‘which one do you want?’” (1st order -- Evans et al 2007; cancer)
Key Messages

• Self-management support is likely to be more accessible and acceptable to men when it takes account of valued aspects of masculine identities (independence, stoicism, and control).

• Physical activity, education, and peer support-based interventions may be particularly beneficial for improving quality of life in men with long term conditions.

• Gender-sensitising self-management support in
  – context (e.g. delivered in a trusted environment among peers)
  – content (e.g. action-orientated)
  – delivery style (e.g. a problem-solving/practical approach)
  – marketing (e.g. emphasis on purpose/tangible results)
may yield benefits.
Future research

• Consideration and/or adequate reporting of gender as a moderator of outcome data in future research on self-management support.

• Further primary research examining which models of service delivery are most effective and cost-effective in providing SMS to men.

• Primary qualitative research is also needed to develop our understanding of what makes interventions, and their ‘active ingredients’, accessible and acceptable for men with LTCs.
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