

Holistic services for people with advanced disease and chronic breathlessness: a systematic review and meta-analysis – Supplementary material

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APPENDIX 1: MEDLINE search strategy

- 1 exp Palliative Care/
- 2 exp Terminal Care/
- 3 exp Terminally Ill/
- 4 exp Hospices/
- 5 ((advanc* or progressiv* or agresiv* or end) adj2 (diagnos* or diseas* or illnes* or cancer* or malignan* or stage* or dementia* or failure* or heart*)).tw.
- 6 (last adj3 life).tw.
- 7 (Advanced disease or Cancer or Intrathoracic malignancy or Lung cancer or Chronic obstructive pulmonary disease or Non-malignant disease).tw.
- 8 1 or 2 or 3 or 4 or 5 or 6 or 7
- 9 exp nursing/
- 10 exp physical therapy modalities/
- 11 exp occupational therapy/
- 12 (Multiprofessional or Multidisciplinary or Holistic or Complex intervention or Non-pharmacological intervention or non-pharmacological management or non-pharmacological or physiotherap* or Nurs* or Occupational therap*).tw.
- 13 dyspn?ea.tw.
- 14 (short* adj2 breath).tw.
- 15 (urge* adj2 breath*).tw.
- 16 breathless*.tw.
- 17 ((labo?red or difficult* or small) adj3 breath*).tw.
- 18 ((respirat* or breath*) adj3 (distress* or comfort* or discomfort*)).tw.
- 19 (air adj3 (hunger or starve* or need* or gasp* or pant*)).tw.
- 20 suffocat*.tw.
- 21 unsatisf* inspiration.tw.
- 22 exp Dyspnea/
- 23 (breathlessness intervention service or breathlessness support service).tw.
- 24 9 or 10 or 11 or 12
- 25 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22
- 26 24 and 25
- 27 23 or 26
- 28 8 and 27

TABLE S1: Outcomes measured in controlled studies

Outcomes	Studies												Total
	Barton et al. (2010) ¹	Bredin et al. (1999) ²	Corner et al. (1996) ³	Farquhar et al. (2014) ⁴	Farquhar et al. (2016) ⁵	Higginson et al. (2014) ⁶	Johnson et al. (2015) ⁷	Pearce et al. (2006) ^{8,a}	Yates et al. (2007) <i>Quasi-Exp</i> ^{9,a}	Yates et al. (2007) <i>RCT</i> ^{9,a}	Yates et al. (2011) ^{10,a}	Yorke et al. (2015) ¹¹	
Breathlessness													
Intensity (Best/worst/average)	x	x	x			x	x	x	x	x	x	x	10
Distress	x	x	x	x	x		x		x	x	x	x	10
Mastery				x	x	x	x	x					5
Other Symptoms													
Anxiety/Depression	x	x	x	x	x		x	x			x	x	9
Cough												x	1
Fatigue								x	x			x	3
General		x				x						x	3
Functioning		x	x	x	x	x							5
Quality of life		x		x	x	x						x	5
Service use	x			x	x	x	x						5
Survival		x				x							2
Carer distress/burden				x	x								2

^a – abstract only

TABLE S2: QualSyst Quality assessment – Quantitative

Author	1.Objective	2.Design	3.Subject selection	4.Subject characteristics	5.Random allocation	6. Blinding investigators	7.Blinding subjects	8.Outcomes	9.Sample size	10.Analysis	11.estimate of variance	12.confounding	13.Results	14. conclusion	Total Score
Barton et al. (2010) ¹	Yes	Yes	Yes	Yes	Yes	No	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	92%
Bredin et al. (1999) ²	Yes	Yes	Partial	Yes	Yes	No	NA	Yes	Yes	Partial	Yes	Yes	Yes	Partial	81%
Corner et al. (1996) ³	Yes	Yes	Yes	Yes	Partial	No	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	88%
Farquhar et al. (2014) ⁴	Yes	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
Farquhar et al. (2016) ⁵	Yes	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
Higginson et al. (2014) ⁶	Yes	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
Johnson et al. (2015) ⁷	Yes	Yes	Yes	Yes	Yes	No	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	92%
Pearce et al. (2006) ^{8,a}	Partial	Yes	No	No	Partial	No	NA	Yes	Partial	Partial	Yes	Partial	Partial	Yes	54%
Yates et al.(2007) ^{9,a}															
-Quasi-experimental study	Yes	Yes	No	No	No	No	NA	No	Partial	Partial	No	No	Partial	Yes	35%
-RCT	Yes	Yes	No	No	Partial	No	NA	No	Partial	Partial	No	Yes	Partial	Yes	46%
Yates et al. (2011) ^{10,a}	Yes	Yes	Partial	Partial	Partial	No	NA	Partial	Yes	Partial	Yes	Yes	Partial	Yes	69%
Yorke et al (2015) ¹¹	Yes	Yes	Yes	Yes	Yes	No	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	92%

^a – abstract only

TABLE S3: Measures of breathlessness intensity in controlled studies:

Descriptor	Scale	Timeframe	Studies								
			Barton et al. (2010) ¹	Bredin et al. (1999) ²	Corner et al. (1996) ³	Higginson et al. (2014) ⁶	Johnson et al. (2015) ⁷	Pearce et al. (2006) ^{8a}	Yates et al. (2007) ^{9a}	Yates et al. (2011) ^{10a}	Yorke et al. (2015) ¹¹
Best	VAS	Past week			X						
	Unknown	Unknown		X					X	X	
Worst	VAS	Past week			X						
	NRS	Past 24 hours	X	X		X	X				X
Average	NRS	-	X					X			X
	Unknown	Unknown				X				X	
On exertion	Borg	-							X		
	NRS	Past 24 hours				X					
At Rest	Borg	-							X		
Now	NRS	-	X								

^a – abstract only; NRS – numerical rating scale, VAS – Visual analogue scale

TABLE S4: QualSyst Quality assessment – Qualitative

Author	1. objective	2. design	3. Context	4. Connection to literature	5. Sampling	6. Data collection	7. Analysis	8. credibility	9. Conclusions	10. Reflexivity	Total Score
Booth et al. (2006) ¹²	Partial	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	84%
Corner et al. (1996) ³	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	No	60%
Farquhar et al. (2014) ⁴	Yes	Yes	Yes	Partial	Yes	Yes	Yes	Yes	Yes	No	85%
Farquhar et al. (2016) ⁵	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	80%
Farquhar et al. (2010a) ^{13,a}	Yes	Yes	Partial	Partial	No	Partial	No	No	Partial	No	40%
Farquhar et al. (2010b) ¹⁴	Partial	Partial	Yes	Yes	Partial	No	No	No	Yes	No	45%
Gysels et al. (2015, 2016) ^{15 16}	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	80%
Hately et al (2003) ¹⁷	Partial	Yes	Yes	Partial	Partial	Partial	Partial	No	Partial	No	50%
Higginson et al. (2014) ⁶	No	Partial	Yes	Partial	Yes	Yes	Yes	Yes	Yes	No	70%
Reilly et al. (2016) ¹⁸	Yes	Partial	Yes	Yes	Yes	Yes	Partial	No	Yes	No	70%
Wood et al. (2013) ¹⁹	Yes	Yes	Yes	Yes	Partial	Yes	Yes	Yes	Yes	No	85%

^a – abstract only

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