**Supplementary material**

S2. Quality Appraisal of the included studies according to the Mixed Methods Appraisal Tool12

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Study** | **Question 1** | **Question 2** | **Question 3** | **Question 4** | **Question 5** | **Quality scores (number of ‘yes’)** |
| **Trials** | **Is randomization appropriately performed?** | **Are the groups comparable at baseline?** | **Are there complete outcome data?** | **Are outcome assessors blinded to the intervention provided?** | **Did the participants adhere to the assigned intervention?** |  |
| Cohen-Mansfield, 2012 | I can’t tell | yes | yes | no | yes | 3 |
| Cohen-Mansfield, 2010 | I can’t tell | yes | yes | no | yes | 3 |
| Alessi, 2005 |  |  |  |  |  | 0 |
| Alessi, 1999 | I can’t tell | no | yes | no | yes | 2 |
|  |  |  |  |  |  |  |
| **Non-randomized controlled trials** | **Are the participants’ representative of the target population?** | **Are measurements appropriate regarding both the outcome and intervention (or exposure)?** | **Are there complete outcome data?** | **Are the confounders accounted for in the design and analysis?** | **During the study period, is the intervention administered (or exposure occurred) as intended?** |  |
| Oppikofer, 2014 | I can’t tell | no | no | no | yes | 1 |
| Ouslander, 2006 | no | yes | no | no | yes | 2 |
| Tabloski, 2006 | I can’t tell | yes | I can’t tell | yes | I can’t tell | 2 |
| Schnelle, 1999 | I can’t tell | no | no | yes | yes | 2 |
| Meyer, 1992 | no | no | yes | yes | yes | 3 |
|  |  |  |  |  |  |  |
| **Quantitative descriptive studies** | **Is the sampling strategy relevant to address the research question?** | **Is the sample representative of the target population?** | **Are the measurements appropriate?** | **Is the risk of nonresponse bias low?** | **Is the statistical analysis appropriate to answer the research question?** |  |
| Bautrant, 2018 | no | no | no | yes | no | 1 |
| Aletta, 2018 | yes | no | I can’t tell | no | yes | 2 |
| Jao, 2015 | yes | no | yes | yes | yes | 4 |
| van Hout, 2014 | yes | I can’t tell | I can’t tell | yes | I can’t tell | 2 |
| Garre-Olmo, 2012 | yes | yes | yes | yes | yes | 5 |
| Joosse, 2012 | yes | no | yes | yes | yes | 4 |
| Ho, 2011 | no | no | yes | yes | yes | 3 |
| Joosse, 2011 | yes | no | yes | yes | yes | 4 |
| Algase, 2010 | yes | I can’t tell | yes | I can’t tell | yes | 3 |
| Bharathan, 2007 | yes | no | no | yes | yes | 3 |
| Hicks Moore, 2005 | no | yes | yes | yes | no | 3 |
| Webber, 2004 | yes | no | no | yes | yes | 3 |
| Remington, 2002 | yes | yes | yes | yes | yes | 5 |
| McClaugherty, 2000 | yes | I can’t tell | I can’t tell | I can’t tell | I can’t tell | 1 |
| Cruise, 1998 | yes | yes | yes | no | yes | 4 |
| Gentili, 1997 | yes | yes | yes | yes | yes | 5 |
| Ragneskog, 1996b | yes | no | yes | yes | yes | 4 |
| Tabloski, 1995 | no | no | yes | yes | yes | 3 |
| Goddaer, 1994 | yes | yes | yes | yes | no | 4 |
| Schnelle, 1993 | yes | yes | yes | yes | yes | 5 |
|  |  |  |  |  |  |  |
| **Qualitative studies** | **Is the qualitative approach appropriate to answer the research question?** | **Are the qualitative data collection methods adequate to address the research question?** | **Are the findings adequately derived from the data?** | **Is the interpretation of results sufficiently substantiated by data?** | **Is there coherence between qualitative data sources, collection, analysis and interpretation?** |  |
| Van Vracem, 2016 | yes | yes | yes | no | yes | 4 |
| Wong, 2014 | yes | yes | yes | yes | yes | 5 |
| Götell, 2009 | yes | yes | yes | yes | yes | 5 |
| Van der Geer, 2009 | yes | no | yes | yes | yes | 4 |
| Ragneskog, 1998 | yes | yes | yes | yes | yes | 4 |
| Ragneskog, 1996a | yes | yes | yes | yes | yes | 5 |