

G.9.1.10 Music therapy

Music therapy versus standard care in people with dementia (post-intervention)

Full population

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Standard care	Summary of results Mean difference (95% CI)	

Cognition: MMSE – higher values favour intervention

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Standard care	Summary of results Mean difference (95% CI)	
5	RCT	Serious ⁴	Not serious	Serious ¹	Not serious	157	127	MD 1.91 (0.05, 3.78)	Low
Behavioural and psychological symptoms: NPI – lower values favour intervention									
1 (Raglio 2015)	RCT	Serious ⁴	Not serious	N/A	Serious ²	80	40	MD 0.72 (-4.38, 5.82)	Low
Depression: CSDD – lower values favour intervention									
1 (Chu 2014)	RCT	Serious ⁴	Not serious	N/A	Not serious	49	51	MD -7.25 (-10.55, -3.95)	Moderate
Depression (standardised mean difference): CSDD or GDS – lower values favour intervention									
3	RCT	Serious ⁴	Not serious	Serious ¹	Serious ⁵	90	86	SMD -0.72 (-1.50, 0.05)	Very low
Agitation: CMAI – lower values favour intervention									
6	RCT	Serious ⁴	Not serious	Serious ¹	Serious ²	165	157	MD -4.67 (-9.67, 0.33)	Very low
Activities of daily living: Katz Index – higher values favour intervention									
1 (Ceccato 2012)	RCT	Serious ⁴	Not serious	N/A	Very serious ^{2,3}	19	15	MD -0.67 (-1.20, -0.14)	Very low
HRQoL: QoL-AD – higher values favour intervention									
1 (Sarkamo 2016)	RCT	Serious ⁴	Not serious	N/A	Serious ²	51	23	MD 1.61 (-0.31, 3.53)	Low
HRQoL (standardised mean difference): QoL-AD or ADRQL or CBS– higher values favour intervention									
3	RCT	Serious ⁴	Not serious	Not serious	Serious ⁵	152	84	SMD 0.16 (-0.11, 0.43)	Low
Carer burden: ZBI – lower values favour intervention									
1 (Sarkamo 2016)	RCT	Serious ⁴	Not serious	N/A	Serious ²	51	23	MD -0.82 (-4.56, 2.92)	Low

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Standard care	Summary of results Mean difference (95% CI)	
Carer burden (standardised mean difference): ZBI or Global rating – lower values favour intervention									
2	RCT	Serious ⁴	Not serious	Serious ¹	Serious ²	77	36	SMD -0.40 (-0.91, 0.12)	Low
1. I ² >40% 2. Non-significant result 3. Low participant numbers 4. Issues with blinding of participants, personnel and/or assessor; personnel enthusiasm and training could influence outcome 5. 95% CI crosses 1 line of a defined MID interval ADRQL: Alzheimer's Disease Related Quality of Life; CBS: Cornell Brown Scale for quality of life; CMAI: ; Cohen-Mansfield Agitation Inventory; CSDD: Cornell Scale of Depression in Dementia; GDS: Geriatric Depression Scale; HRQoL: health related quality of life; MMSE: Mini Mental State Examination; NPI: Neuropsychiatric inventory; QoL-AD: Quality of life in Alzheimer's disease; ZBI: Zarit Burden Interview									

Sensitivity analysis excluding studies only recruiting people with non-cognitive symptoms (e.g. anxiety/depression) at baseline

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Standard care	Summary of results Mean difference (95% CI)	
Cognition: MMSE – higher values favour intervention									
5	RCT	Serious ⁴	Not serious	Serious ¹	Not serious	157	127	MD 1.91 (0.05, 3.78)	Low
Depression: CSDD – lower values favour intervention									
1 (Chu 2014)	RCT	Serious ⁴	Not serious	N/A	Not serious	49	51	MD -7.25 (-10.55, -3.95)	Moderate
Depression (standardised mean difference): CSDD or GDS – lower values favour intervention									
2	RCT	Serious ⁴	Not serious	Serious ¹	Very serious ⁶	76	74	SMD -0.40 (-1.18, 0.38)	Very low
Agitation: CMAI – lower values favour intervention									
2	RCT	Serious ⁴	Not serious	Serious ¹	Serious ²	165	157	MD -4.15 (-12.07, 3.76)	Very low
Activities of daily living: Katz Index – higher values favour intervention									

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Standard care	Summary of results Mean difference (95% CI)	
1 (Ceccato 2012)	RCT	Serious ⁴	Not serious	N/A	Not serious	19	15	MD -0.67 (-1.20, -0.14)	Moderate
HRQoL: QoL-AD – higher values favour intervention									
1 (Sarkamo 2016)	RCT	Serious ⁴	Not serious	N/A	Serious ²	51	23	MD 1.61 (-0.31, 3.53)	Low
HRQoL (standardised mean difference): QoL-AD or ADRQL or CBS– higher values favour intervention									
1 (Sarkamo 2016)	RCT	Serious ⁴	Not serious	Not serious	Serious ⁵	51	23	SMD 0.35 (-0.14, 0.85)	Low
Carer burden: ZBI – lower values favour intervention									
1 (Sarkamo 2016)	RCT	Serious ⁴	Not serious	N/A	Serious ²	51	23	MD -0.82 (-4.56, 2.92)	Low

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Standard care	Summary of results Mean difference (95% CI)	
Carer burden (standardised mean difference): ZBI or Global rating – lower values favour intervention									
2	RCT	Serious ⁴	Not serious	Serious ¹	Serious ²	77	36	SMD -0.40 (-0.91, 0.12)	Low
1. I ² >40% 2. Non-significant result 3. Low participant numbers 4. Issues with blinding of participants, personnel and/or assessor; personnel enthusiasm and training could influence outcome 5. 95% CI crosses 1 line of a defined MID interval 6. 95% CI crosses 2 lines of a defined MID interval ADRQL: Alzheimer's Disease Related Quality of Life; CBS: Cornell Brown Scale for quality of life; CMAI: ; Cohen-Mansfield Agitation Inventory; CSDD: Cornell Scale of Depression in Dementia; GDS: Geriatric Depression Scale; HRQoL: health related quality of life; MMSE: Mini Mental State Examination; NPI: Neuropsychiatric inventory; QoL-AD: Quality of life in Alzheimer's disease; ZBI: Zarit Burden Interview									

Music therapy versus standard care in people with dementia (follow-up)

Full population

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Standard care	Summary of results Mean difference (95% CI)	
Cognition: MMSE – higher values favour intervention									
2	RCT	Serious ⁴	Not serious	Not serious	Serious ¹	100	74	MD 1.53 (-0.27, 3.33)	Low
Behavioural and psychological symptoms: NPI – lower values favour intervention									
1 (Raglio 2015)	RCT	Serious ⁴	Not serious	Not serious	Serious ¹	80	40	MD 1.90 (-3.71, 7.50)	Low
Depression: CSDD – lower values favour intervention									
1 (Chu 2014)	RCT	Serious ⁴	Not serious	N/A	Serious ¹	49	51	MD -1.89 (-5.49, 1.71)	Low
Depression (standardised mean difference): CSDD or GDS– lower values favour intervention									

2	RCT	Serious ⁴	Not serious	Serious ²	Very serious ³	62	62	SMD -0.61 (-1.57, 0.35)	Very low
Agitation: CMAI – lower values favour intervention									
2	RCT	Serious ⁴	Not serious	Serious ²	Not serious	66	68	MD -9.27 (-14.06, -4.48)	Low
HRQoL: QoL-AD – higher values favour intervention									
1 (Sarkamo 2016)	RCT	Serious ⁴	Not serious	N/A	Not serious	51	23	MD 2.30 (0.01, 4.58)	Moderate
HRQoL (standardised mean difference): QoL-AD or CBS– higher values favour intervention									
2	RCT	Serious ⁴	Not serious	Not serious	Serious ⁵	152	84	SMD 0.35 (0.05, 0.65)	Low
Carer burden: ZBI – lower values favour intervention									
1 (Sarkamo 2016)	RCT	Serious ⁴	Not serious	Not serious	Serious ¹	51	23	MD -1.74 (-5.83, 2.35)	Low
Carer burden (standardised mean difference): ZBI or Global rating – lower values favour intervention									
2	RCT	Serious ⁴	Not serious	Serious ²	Serious ⁵	77	36	SMD -0.69 (-1.37, -0.01)	Very low
<ol style="list-style-type: none"> 1. Non-significant result 2. I²>40% 3. 95% CI crosses 2 lines of a defined MID interval 4. Issues with blinding of participants, personnel and/or assessor; personnel enthusiasm and training could influence outcome 5. 95% CI crosses 1 line of a defined MID interval <p>ADRQL: Alzheimer's Disease Related Quality of Life; CBS: Cornell Brown Scale for quality of life; CMAI: ; Cohen-Mansfield Agitation Inventory; CSDD: Cornell Scale of Depression in Dementia; GDS: Geriatric Depression Scale; HRQoL: health related quality of life; MMSE: Mini Mental State Examination; NPI: Neuropsychiatric inventory; QoL-AD: Quality of life in Alzheimer's disease; ZBI: Zarit Burden Interview</p>									

Sensitivity analysis excluding studies only recruiting people with non-cognitive symptoms (e.g. anxiety/depression) at baseline

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Standard care	Summary of results Mean difference (95% CI)	
Cognition: MMSE – higher values favour intervention									
2	RCT	Serious ⁴	Not serious	Not serious	Serious ¹	100	74	MD 1.53 (-0.27, 3.33)	Low
Depression: CSDD – lower values favour intervention									
1 (Chu 2014)	RCT	Serious ⁴	Not serious	N/A	Serious ¹	49	51	MD -1.89 (-5.49, 1.71)	Low

Depression (standardised mean difference): CSDD or GDS– lower values favour intervention									
1 (Chu 2014)	RCT	Serious ⁴	Not serious	N/A	Very serious ³	49	51	SMD -0.20 (-0.59, 0.20)	Very low
Agitation: CMAI – lower values favour intervention									
1 (Lin 2011)	RCT	Serious ⁴	Not serious	N/A	Not serious	49	51	MD -7.40 (-11.26, -3.54)	Moderate
HRQoL: QoL-AD – higher values favour intervention									
1 (Sarkamo 2016)	RCT	Serious ⁴	Not serious	N/A	Not serious	51	23	MD 2.30 (0.01, 4.58)	Moderate
HRQoL (standardised mean difference): QoL-AD or CBS– higher values favour intervention									
1 (Sarkamo 2016)	RCT	Serious ⁴	Not serious	Not serious	Serious ⁵	152	84	SMD 0.49 (-0.01, 0.99)	Low
Carer burden: ZBI – lower values favour intervention									
1 (Sarkamo 2016)	RCT	Serious ⁴	Not serious	Not serious	Serious ¹	51	23	MD -1.74 (-5.83, 2.35)	Low
Carer burden (standardised mean difference): ZBI or Global rating – lower values favour intervention									
2	RCT	Serious ⁴	Not serious	Serious ²	Serious ⁵	77	36	SMD -0.69 (-1.37, -0.01)	Very low
<ol style="list-style-type: none"> 1. Non-significant result 2. I²>40% 3. 95% CI crosses 2 lines of a defined MID interval 4. Issues with blinding of participants, personnel and/or assessor; personnel enthusiasm and training could influence outcome 5. 95% CI crosses 1 line of a defined MID interval <p>ADRQL: Alzheimer's Disease Related Quality of Life; CBS: Cornell Brown Scale for quality of life; CMAI: ; Cohen-Mansfield Agitation Inventory; CSDD: Cornell Scale of Depression in Dementia; GDS: Geriatric Depression Scale; HRQoL: health related quality of life; MMSE: Mini Mental State Examination; NPI: Neuropsychiatric inventory; QoL-AD: Quality of life in Alzheimer's disease; ZBI: Zarit Burden Interview</p>									

Music therapy versus active control in people with dementia (post-intervention)

Full population

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Active comparat or	Summary of results Mean difference (95% CI)	
Cognition: MMSE – higher values favour intervention									

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Active comparat or	Summary of results Mean difference (95% CI)	
1 (van der Winkel 2004)	RCT	Serious ⁴	Not serious	N/A	Very serious ^{1,2}	15	11	MD 2.46 (-0.93, 5.85)	Very low
Cognition (standardised mean difference): MMSE or SIB – higher values favour intervention									
2	RCT	Serious ⁴	Not serious	Not serious	Very serious ³	33	30	SMD 0.23 (-0.27, 0.73)	Very low
Behavioural and psychological symptoms: NPI – lower values favour intervention									
1 (Narme 2014)	RCT	Serious ⁴	Not serious	N/A	Very serious ^{1,2}	18	19	MD 1.20 (-6.67, 9.07)	Very low
Depression: GDS – lower values favour intervention									
1 (Cooke 2010)	RCT	Serious ⁴	Not serious	N/A	Serious ¹	24	23	MD 0.23 (-0.31, 0.77)	Low
Agitation: CMAI – lower values favour intervention									
3	RCT	Serious ⁴	Not serious	Not serious	Serious ¹	45	59	MD 2.82 (-1.61, 7.26)	Low
HRQoL: Dementia Quality of Life – higher values favour intervention									
1 (Cooke 2010)	RCT	Serious ⁴	Not serious	N/A	Serious ¹	24	23	MD 0.09 (-1.47, 1.65)	Low

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Active comparator	Summary of results Mean difference (95% CI)	
Carer burden: NPI distress – lower values favour intervention									
1 (Narme 2014)	RCT	Serious ⁴	Not serious	N/A	Very serious ^{1,2}	18	19	MD 0.90 (-2.40, 4.20)	Very low
1. Non-significant result 2. Low patient numbers 3. 95% CI crosses 2 lines of a defined MID interval 4. Issues with blinding of participants, personnel and/or assessor; personnel enthusiasm and training could influence outcome CMAI: Cohen-Mansfield Agitation Inventory; MMSE: Mini Mental State Examination; NPI: Neuropsychiatric inventory; SIB: Severe Impairment Battery; ZBI: Zarit Burden Interview									

Sensitivity analysis excluding studies only recruiting people with non-cognitive symptoms (e.g. anxiety/depression) at baseline

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Active comparator	Summary of results Mean difference (95% CI)	
Cognition (standardised mean difference): MMSE or SIB – higher values favour intervention									
1 (Narme 2014)	RCT	Serious ⁴	Not serious	N/A	Very serious ³	18	19	SMD 0.05 (-0.59, 0.70)	Very low
Behavioural and psychological symptoms: NPI – lower values favour intervention									
1 (Narme 2014)	RCT	Serious ⁴	Not serious	N/A	Very serious ^{1,2}	18	19	MD 1.20 (-6.67, 9.07)	Very low
Agitation: CMAI – lower values favour intervention									
1 (Narme 2014)	RCT	Serious ⁴	Not serious	N/A	Serious ¹	18	19	MD 5.90 (-2.08, 13.88)	Low

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Active comparator	Summary of results Mean difference (95% CI)	
Carer burden: NPI distress – lower values favour intervention									
1 (Narme 2014)	RCT	Serious ⁴	Not serious	N/A	Very serious ^{1,2}	18	19	MD 0.90 (-2.40, 4.20)	Very low
1. Non-significant result 2. Low patient numbers 3. 95% CI crosses 2 lines of a defined MID interval 4. Issues with blinding of participants, personnel and/or assessor; personnel enthusiasm and training could influence outcome CMAI: Cohen-Mansfield Agitation Inventory; MMSE: Mini Mental State Examination; NPI: Neuropsychiatric inventory; SIB: Severe Impairment Battery; ZBI: Zarit Burden Interview									

Music therapy versus active control in people with dementia (follow-up)

Full population

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Active comparator	Summary of results Mean difference (95% CI)	
Cognition: SIB – higher values favour intervention									
1 (Narme 2014)	RCT	Serious ³	Not serious	N/A	Very serious ^{1,2}	18	19	MD 0.90 (-10.77, 12.57)	Very low
Behavioural and psychological symptoms: NPI – lower values favour intervention									
1 (Narme 2014)	RCT	Serious ³	Not serious	N/A	Very serious ^{1,2}	18	19	MD -2.10 (-10.51, 6.31)	Very low
Agitation: CMAI – lower values favour intervention									
2	RCT	Serious ³	Not serious	Not serious	Serious ¹	35	53	MD 3.03 (-1.43, 7.49)	Low
Carer burden: ZBI – lower values favour intervention									
1 (Narme 2014)	RCT	Serious ³	Not serious	N/A	Very serious ^{1,2}	18	19	MD -1.20 (-5.07, 2.67)	Very low
1. Non-significant result									

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Active comparator	Summary of results Mean difference (95% CI)	
2. Low patient number 3. Issues with blinding of participants, personnel and/or assessor; personnel enthusiasm and training could influence outcome MMSE: Mini Mental State Examination; NPI: Neuropsychiatric inventory; SIB: Severity Impairment Battery; ZBI: Zarit Burden Interview									

Sensitivity analysis excluding studies only recruiting people with non-cognitive symptoms (e.g. anxiety/depression) at baseline

Quality assessment						No of participants		Effect estimate	Quality
No of publications	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Music therapy	Active comparator	Summary of results Mean difference (95% CI)	
Cognition: SIB – higher values favour intervention									
1 (Narme 2014)	RCT	Serious ³	Not serious	N/A	Very serious ^{1,2}	18	19	MD 0.90 (-10.77, 12.57)	Very low
Behavioural and psychological symptoms: NPI – lower values favour intervention									
1 (Narme 2014)	RCT	Serious ³	Not serious	N/A	Very serious ^{1,2}	18	19	MD -2.10 (-10.51, 6.31)	Very low
Agitation: CMAI – lower values favour intervention									
1 (Narme 2014)	RCT	Serious ³	Not serious	N/A	Serious ¹	18	19	MD 6.40 (-1.49, 14.29)	Low
Carer burden: ZBI – lower values favour intervention									
1 (Narme 2014)	RCT	Serious ³	Not serious	N/A	Very serious ^{1,2}	18	19	MD -1.20 (-5.07, 2.67)	Very low
1. Non-significant result 2. Low patient number 3. Issues with blinding of participants, personnel and/or assessor; personnel enthusiasm and training could influence outcome MMSE: Mini Mental State Examination; NPI: Neuropsychiatric inventory; SIB: Severity Impairment Battery; ZBI: Zarit Burden Interview									