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[Intervention Review]

Music-based therapeutic interventions for people with dementia

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ABSTRACT

Background

Dementia is a clinical syndrome with a number of different causes which is characterised by deterioration in cognitive, behavioural, social and emotional functions. Pharmacological interventions are available but have limited effect to treat many of the syndrome's features. Less research has been directed towards non-pharmacological treatments. In this review, we examined the evidence for effects of music-based interventions as a treatment.

Objectives

To assess the effects of music-based therapeutic interventions for people with dementia on emotional well-being including quality of life, mood disturbance or negative affect, behavioural problems, social behaviour, and cognition at the end of therapy and four or more weeks after the end of treatment.

Search methods

We searched ALOIS, the Specialized Register of the Cochrane Dementia and Cognitive Improvement Group (CDCIG) on 14 April 2010 using the terms: music therapy, music, singing, sing, auditory stimulation. Additional searches were also carried out on 3 July 2015 in the major healthcare databases MEDLINE, Embase, psycINFO, CINAHL and LILACS; and in trial registers and grey literature sources. On 12 April 2016, we searched the major databases for new studies for future evaluation.

Selection criteria

We included randomized controlled trials of music-based therapeutic interventions (at least five sessions) for people with dementia that measured any of our outcomes of interest. Control groups either received usual care or other activities.

Data collection and analysis

Two reviewers worked independently to screen the retrieved studies against the inclusion criteria and then to extract data and assess methodological quality of the included studies. If necessary, we contacted trial authors to ask for additional data, including relevant subscales, or for other missing information. We pooled data using random-effects models.

Main results

We included 17 studies. Sixteen studies with a total of 620 participants contributed data to meta-analyses. Participants in the studies had dementia of varying degrees of severity, but all were resident in institutions. Five studies delivered an individual music intervention; in the others, the intervention was delivered to groups of participants. Most interventions involved both active and receptive musical elements. The methodological quality of the studies varied. All were at high risk of performance bias and some were at high risk of detection or other bias. At the end of treatment, we found low-quality evidence that music-based therapeutic interventions may have little or no effect on emotional well-being and quality of life (standardized mean difference, SMD 0.32, 95% CI −0.08 to 0.71; 6 studies, 181 participants), overall behaviour problems (SMD −0.20, 95% CI −0.56 to 0.17; 6 studies, 209 participants) and cognition (SMD 0.21, 95% CI −0.04 to 0.45; 6 studies, 257 participants). We found moderate-quality evidence that they reduce depressive symptoms (SMD −0.28, 95% CI −0.48 to −0.07; 9 studies, 376 participants), but do not decrease agitation or aggression (SMD −0.08, 95% CI −0.29 to 0.14; 12 studies, 515 participants). The quality of the evidence on anxiety and social behaviour was very low, so effects were very uncertain. The evidence for all long-term outcomes was also of very low quality.

Authors' conclusions

Providing people with dementia with at least five sessions of a music-based therapeutic intervention probably reduces depressive symptoms but has little or no effect on agitation or aggression. There may also be little or no effect on emotional well-being or quality of life, overall behavioural problems and cognition. We are uncertain about effects on anxiety or social behaviour, and about any long-term effects. Future studies should employ larger sample sizes, and include all important outcomes, in particular 'positive' outcomes such as emotional well-being and social outcomes. Future studies should also examine the duration of effects in relation to the overall duration of treatment and the number of sessions.

PLAIN LANGUAGE SUMMARY

Music-based therapeutic interventions for people with dementia

Background

People with dementia gradually develop difficulties with memory, thinking, language and daily activities. Dementia is often associated with emotional and behavioural problems and may lead to a reduction in a person's quality of life. In the later stages of dementia it may be difficult for people to communicate with words, but even when they can no longer speak they may still be able to hum or play along with music. Therapy involving music may therefore be especially suitable for people with dementia. Music therapists are specially qualified to work with individuals or groups of people, using music to try to help meet their physical, psychological and social needs. Other professionals may also be trained to provide similar treatments.

Purpose of this review

We wanted to see if we could find evidence that treatments based on music improve the emotional well-being and quality of life of people with dementia. We were also interested in evidence about their effects on emotional, behavioural, social or cognitive (e.g. thinking and remembering) problems in people with dementia.

What we did

We searched for trials in which people with dementia were randomly allocated to a music-based treatment or to a comparison group, and in which any of the outcomes we were interested in were measured. The comparison groups might have had no special treatment, or might have been offered a different activity. The trials had to have offered at least five sessions of treatment because we thought fewer sessions than this were unlikely to have much effect. If we judged that the trials were similar enough, then we combined their results in order to estimate the effect of the treatment as accurately as possible.

What we found

We found seventeen trials to include in the review and we were able to combine results for at least some outcomes from 620 people. All of the people in the trials were living in care homes. People with all severities of dementia were included. Some trials compared music-based treatments with usual care, and some compared it with other activities, such as cooking or painting. The quality of the trials and how well they were reported varied, and this affected our confidence in the results. First, we looked at outcomes immediately after a course of therapy ended. From our results, we could be moderately confident that music-based treatments improve symptoms of depression, but do not help with agitated or aggressive behaviour. We were less confident in our results on emotional well-being including quality of life, overall behavioural problems, and cognition, but music-based treatments may have little or no effect on these outcomes. We had very little confidence in our results on anxiety and social interaction. Some studies also looked to see whether there were any lasting effects four weeks or more after treatment ended. However, there were few data and we were very uncertain about the results. Further trials are likely to have a significant impact on what we know about the effects of music-based treatments for people with dementia, and so continuing research is important.