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Music for insomnia in adults (Review)

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[Intervention Review]

Music for insomnia in adults

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ABSTRACT

Background

Insomnia is a common sleep disorder in modern society. It causes reduced quality of life and is associated with impairments in physical and mental health. Listening to music is widely used as a sleep aid, but it remains unclear if it can actually improve insomnia in adults.

Objectives

To assess the effects of listening to music on insomnia in adults and to assess the influence of specific variables that may moderate the effect.

Search methods

We searched CENTRAL, PubMed, Embase, nine other databases and two trials registers in May 2015. In addition, we handsearched specific music therapy journals, reference lists of included studies, and contacted authors of published studies to identify additional studies eligible for inclusion, including any unpublished or ongoing trials.

Selection criteria

Randomised controlled trials and quasi-randomised controlled trials that compared the effects of listening to music with no treatment or treatment-as-usual on sleep improvement in adults with insomnia.

Data collection and analysis

Two authors independently screened abstracts, selected studies, assessed risk of bias, and extracted data from all studies eligible for inclusion. Data on pre-defined outcome measures were subjected to meta-analyses when consistently reported by at least two studies. We undertook meta-analyses using both fixed-effect and random-effects models. Heterogeneity across included studies was assessed using the I² statistic.

Main results

We included six studies comprising a total of 314 participants. The studies examined the effect of listening to pre-recorded music daily, for 25 to 60 minutes, for a period of three days to five weeks.

Based on the Grades of Recommendations, Assessment, Development and Evaluation (GRADE) approach, we judged the evidence from five studies that measured the effect of music listening on sleep quality to be of moderate quality. We judged the evidence from one study that examined other aspects of sleep (see below) to be of low quality. We downgraded the quality of the evidence mainly because of limitations in design or being the only published study. As regards risk of bias, most studies were at high risk of bias on at least one domain: one study



was at high risk of selection bias and one was judged to be at unclear risk; six studies were at high risk of performance bias; three studies were at high risk of detection bias; one study was at high risk of attrition bias and one study was judged to be at unclear risk; two studies were judged to be at unclear risk of reporting bias; and four studies were at high risk of other bias.

Five studies (N = 264) reporting on sleep quality as assessed by the Pittsburgh Sleep Quality Index (PSQI) were included in the meta-analysis. The results of a random-effects meta-analysis revealed an effect in favour of music listening (mean difference (MD) -2.80; 95% confidence interval (Cl) -3.42 to -2.17; Z = 8.77, P < 0.00001; moderate-quality evidence). The size of the effect indicates an increase in sleep quality of the size of about one standard deviation in favour of the intervention compared to no treatment or treatment-as-usual.

Only one study (N = 50; low-quality evidence) reported data on sleep onset latency, total sleep time, sleep interruption, and sleep efficiency. However, It found no evidence to suggest that the intervention benefited these outcomes. None of the included studies reported any adverse events.

Authors' conclusions

The findings of this review provide evidence that music may be effective for improving subjective sleep quality in adults with insomnia symptoms. The intervention is safe and easy to administer. More research is needed to establish the effect of listening to music on other aspects of sleep as well as the daytime consequences of insomnia.

PLAIN LANGUAGE SUMMARY

Music for insomnia in adults

Review question

This review assessed the effects of listening to music on insomnia in adults and the impact of factors that may influence the effect.

Background

Worldwide, millions of people experience insomnia. People can have difficulties getting to sleep, staying asleep or may experience poor sleep quality.

Poor sleep affects people's physical and mental health. The consequences of poor sleep are costly, for both individuals and society. Many people listen to music to improve their sleep, but the effect of listening to music is unclear.

Study characteristics

We searched electronic databases and music therapy journals to identify relevant studies. We included six studies with a total of 314 participants. The studies compared the effect of listening to music alone or with standard care to standard care alone or no treatment. The studies examined the effect of listening to pre-recorded music daily, for 25 to 60 minutes, for a period of three days to five weeks. The evidence is current to 22 May 2015.

Key results

Five studies measured sleep quality. The findings suggest that listening to music can improve sleep quality. Only one study reported data on other aspects of sleep, including the length of time it takes to fall asleep, the amount of actual sleep someone gets, and the number of times people wake up. This study found no evidence to suggest that listening to music benefits these outcomes. None of the studies reported any negative side effects caused by listening to music.

Quality of the evidence

The quality of the evidence from the five studies that examined sleep quality was moderate. The quality of evidence for the other aspects of sleep was low. More high quality research is needed to investigate and establish the effect of listening to music on other aspects of sleep than sleep quality and on relevant daytime measures.