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Singing as an adjunct therapy for children and adults with cystic fibrosis

Code: CD008036 **Year:** 2019 **Date:** 2010 - updated: 28 MAR 2019 **Author:** Irons JY

Study design (if review, criteria of inclusion for studies)

Randomised controlled trials in which singing (as an adjunct intervention) is compared with either a control intervention (for example, playing computer games or doing craft activities) or no singing in people with cystic fibrosis.

List of included studies (1)

Irons 2012

Participants

People with CF, of any age.

Interventions

All types of singing intervention that included diaphragmatic breathing, which were carried out in a group or one-to-one setting, facilitated by singing instructors or teachers, voice coaches or trainers, or music therapists, for a minimum of two half-hour sessions.

Outcome measures

Primary outcomes 1. Quality of life measured by validated instruments, e.g. CFQ-R (Cystic Fibrosis Questionnaire-Revised), St. Georgeâ€™s respiratory questionnaire, PedsQLTM (Pediatric Quality of Life InventoryTM) 2. Respiratory muscle function (Maximal inspiratory flow, Maximal expiratory flow, Cough peak flow). Secondary: 1. Other subjective scores (cough diary, Likert scales, visual analogue scales, subjective assessment of interference of cough etc.); 2. Spirometry; 3. Number of participants experiencing adverse effects; 4. Respiratory exacerbations; 5. Satisfaction with the intervention; 6. Adherence to other CF treatments; 7. Self-efficacy, depression and anxiety

Main results

Since only one small study (n = 40) was included, no meta-analysis could be performed. The included randomised controlled study was of parallel design and undertaken at two paediatric hospitals in Australia. The study evaluated the effects of a singing program on the quality of life and respiratory muscle strength of hospitalised children with cystic fibrosis (mean age 11.6 years, 35% male). While the singing group received eight individual singing sessions, the control group participated in preferred recreational activities, such as playing computer games or watching movies. This study was limited by a small sample size (51 participants) and a high drop-out rate (21%). There were no significant differences between the groups at either post-intervention or follow up; although by the end of treatment there were some within-group statistically significant increases for both singing and control groups in some of the domains of the quality of life questionnaire Cystic Fibrosis Questionnaire-Revised (e.g. emotional, social and vitality domains). For the respiratory muscle strength indices, maximal expiratory pressure at follow up (six to eight weeks post-intervention) was higher in the singing group, mean difference 25.80 (95% confidence interval 5.94 to 45.66). There was no significant difference between groups for any of the other respiratory function parameters (maximal inspiratory pressure, spirometry) at either post-intervention or follow up.

Authors' conclusions

There is insufficient evidence to determine the effects of singing on quality of life or on the respiratory parameters in people with cystic fibrosis. However, there is growing interest in non-medical treatments for cystic fibrosis and researchers may wish to investigate the impact of this inexpensive therapy on respiratory function and psychosocial well-being further in the future.

https://doi.org//10.1002/14651858.CD008036.pub5

See also

Irons JY, Petocz P, Kenny DT, Chang AB. Singing as an adjunct therapy for children and adults with cystic fibrosis. Cochrane Database

of Systematic Reviews 2019, Issue 7. Art. No.: CD008036. DOI: 10.1002/14651858.CD008036.pub5.

Keywords

Adolescent; Adult; Child; Music Therapy - Singing; non pharmacological intervention - psyco-soc-edu-org; Creative and physical therapies; Behavioural interventions;