American Music Therapy Association

8455 Colesville Rd., Ste. 1000 • Silver Spring, Maryland 20910
Tel. (301) 589-3300 • Fax (301) 589-5175 • www.musictherapy.org

Music Therapy in Mental Health— Evidence-Based Practice Support

STATEMENT OF PURPOSE

Description: Music Therapy (MT) is the clinical and evidence-based use of music interventions to accomplish individualized goals within a therapeutic relationship by a credentialed professional who has completed an approved music therapy program. MT with seriously mentally ill clients is a psychotherapeutic method that uses musical interaction as a means of communication and expression. The aim of therapy is to help people with mental illness, including serious mental illness (e.g., schizophrenia or like illnesses) to develop relationships and to address issues they may not be able to using words alone. MT sessions include the use of active music making, music listening, and discussion. MT includes both individual and group therapy.

STANDARDIZATION: MT sessions are documented in a treatment plan and delivered in accordance with standards of practice. Music selections and certain active music making activities are modified for client preferences and individualized needs (i.e., song selection and music may vary). Toolkits are available via AMTA and publications.

REPLICATION: Yes; has been used with different providers and populations also.

MEANINGFUL OUTCOMES: Global state, mental state, general functioning, social functioning

SPECIFIC OUTCOMES:

Reduced muscle tension
Decreased anxiety/agitation
Enhanced interpersonal relationships
Increased motivation
Improved self-image/Increased self-esteem
Increased verbalization
Improved group cohesiveness
Successful and safe emotional release

OVERVIEW OF RESEARCH

SCHIZOPHRENIA AND PSYCHOPATHOLOGY

Gold, C. (2007). Music therapy improves symptoms in adults hospitalised with schizophrenia. *Evidence-Based Mental Health*. 10(3): 77

> **Objective**: Does music therapy improve symptoms in people hospitalised with schizophrenia?

Method: RCT with concealed allocation and single blind (assessors blinded). Follow-up period was three months (treatment period only). Setting included four London hospitals, among eighty one adult inpatients (>/= 18 years old) with a primary diagnosis of schizophrenia or schizophrenia-like psychosis. Exclusions: secondary diagnoses of dementia or organic psychosis. Intervention: Music therapy (access to a range of musical instruments and encouragement to express themselves accompanied by a trained music therapist during weekly individual sessions of up to 45 min) plus standard care (access to occupational, social and other activities and nursing care) versus standard care alone for up to 12 weeks. Outcomes: Primary outcome measure: symptoms, total score on the Positive and Negative Syndrome Scale (PANSS); secondary outcome measures: satisfaction with care, Client Satisfaction Questionnaire (CSQ); global function, Global Assessment of Functioning Scale (GAF). Patient follow-up: 85%.

Results: In people hospitalised with schizophrenia, adding music therapy to standard care lead to greater improvement in symptoms compared with standard care alone at 12 weeks (change in PANSS total score from baseline: -9.00 with music therapy plus standard care vs -2.96 with standard care alone; p = 0.045). There was no significant difference in patient satisfaction with care and global function between groups (change in CSQ score from baseline: +1.82 with music therapy plus standard care vs +0.33 with standard care alone; reported as non-significant; change in GAF score from baseline: +4.74 with music therapy plus standard care vs +4.60 with standard care; reported as non-significant).

Gold, C., Heldal, T. O., Dahle, T., & Wigram, T. (2005). Music therapy for schizophrenia or schizophrenia-like illnesses. *Cochrane Database of Systematic Reviews, 3.*

Objectives: To review the effects of music therapy, or music therapy added to standard care, compared to placebo, standard care or no treatment for people with serious mental illnesses such as schizophrenia.

Search strategy: The Cochrane Schizophrenia Group's Register (July 2002) was searched. This was supplemented by hand searching of music therapy journals, manual searches of reference lists, and contacting relevant authors.

Selection criteria: All randomized controlled trials that compared music therapy with standard care or other psychosocial interventions for schizophrenia.

Data collection and analysis: Studies were reliably selected, quality assessed and data extracted. Data were excluded where more than 30% of participants in any group were lost to follow up. Non-skewed continuous endpoint data from valid scales were synthesized using a standardized mean difference (SMD). If statistical heterogeneity was found, treatment 'dosage' and treatment approach were examined as possible sources of heterogeneity.

Results: Four studies were included. These examined the effects of music therapy over the short to medium term (1 to 3 months), with treatment 'dosage' varying from 7 to 78 sessions. Music therapy added to standard care was superior to standard care alone for global state (medium term, 1 RCT, n = 72, RR 0.10 CI 0.03 to 0.31, NNT 2 CI 1.2 to

2.2). Continuous data suggested some positive effects on general mental state (1 RCT, n=69, SMD average endpoint PANSS -0.36 CI -0.85 to 0.12; 1 RCT, n=70, SMD average endpoint BPRS -1.25 CI -1.77 to -0.73),on negative symptoms (3 RCTs, n=180, SMD average endpoint SANS -0.86 CI -1.17 to -0.55) and social functioning (1 RCT, n=70, SMD average endpoint SDSI score -0.78 CI -1.27 to -0.28). However these latter effects were inconsistent across studies and depended on the number of music therapy sessions. All results were for the 1-3 month follow up.

Conclusions: Music therapy as an addition to standard care helps people with schizophrenia to improve their global state and may also improve mental state and functioning if a sufficient number of music therapy sessions are provided.

Pavlicevic, M., Trevarthen, C., & Duncan, J. (1994). Improvisational music therapy and the rehabilitation of persons suffering from chronic schizophrenia. *Journal of Music Therapy, 31*(2), 86–104.

Conclusions: Patients with schizophrenia at the end of 10 music therapy sessions showed significant improvement of the Brief Psychiatric Rating Scale and increased their level of musical interaction with the therapist.

Silverman, M. J. (2003). The influence of music on the symptoms of psychosis: A meta-analysis. *Journal of Music Therapy, 40*(1), 27–40.

Objective: The purpose of this study was to analyze the existing quantitative research evaluating the influence of music upon the symptoms of psychosis.

Method: A meta-analysis was conducted on 19 studies.

Conclusions: Results indicated that music has proven to be significantly effective in suppressing and combating the symptoms of psychosis.

Tang, W., Yao, X., & Zheng, Z. (1994). Rehabilitative effect of music therapy for residual schizophrenia: A one-month randomised controlled trial in Shanghai. *British Journal of Psychiatry, 165*(Suppl. 24), 38–44.

Seventy-six in-patients who had the residual subtype of schizophrenia were randomly assigned to a treatment group or a control group. Both groups received standard medication as prescribed by their treating physicians, but the treatment group also received a one-month course of music therapy that included both passive listening to music and active participation in the singing of popular songs with other patients. Outcome was evaluated by four nurses using Chinese versions of the Scale for Assessment of Negative Symptoms and the in-patient version of the World Health Organization's Disability Assessment Scale.

Conclusions: Music therapy significantly diminished patients' negative symptoms, increased their ability to converse with others, reduced their social isolation, and increased their level of interest in external events. As music therapy has no side-effects and is relatively inexpensive, it merits further evaluation and wider application.

Thaut, M. H. (1989). The influence of music therapy interventions on self-rated changes in relaxation, affect, and thought in psychiatric prisoner-patients. *Journal of Music Therapy, 26,* 155–166.

Objective: To evaluate self-perceived changes in states of relaxation, mood/emotion, and thought/insight in psychiatric prisoner-patients pre- and post- music therapy.

Methods: Three were scales derived from a survey of 130 subjects regarding perceived therapeutic benefit of music therapy. The study was condicted over a 3-month period with eight different groups of patients (N = 50); with each group participating in three different treatment modalities: group music therapy, instrumental group improvisation, and music and relaxation.

Results: There was a significant ($p < .05$) change in self-perceived ratings across all scales before versus after music therapy. The magnitude of change differed significantly ($p < .05$) between scales. All eight groups showed similar responses, and the different treatment modalities did not significantly influence the results.

Ulrich, G., Houtmans, T., & Gold C. (2007). The additional therapeutic effect of group music therapy for schizophrenic patients: a randomized study. *Acta Psychiatrica Scandinavica*. 116(5):362-70.

Objective: Schizophrenia is one of the most serious mental disorders. Music therapy has only recently been introduced as a form of treatment. The aim of this study was to examine the effect of music therapy for schizophrenic in-patients needing acute care.

Method: Thirty-seven patients with psychotic disorders were randomly assigned to an experimental group and a control group. Both groups received medication and treatment indicated for their disorder. Additionally, the experimental group (n = 21) underwent group music therapy.

Results: Significant effects of music therapy are found in patients' self-evaluation of their psychosocial orientation and for negative symptoms. No differences were found in the quality of life. CONCLUSION: Musical activity diminishes negative symptoms and improves interpersonal contact. These positive effects of music therapy could increase the patient's abilities to adapt to the social environment in the community after discharge from the hospital.

You, Z. Y., & Wang, J. Z. (2002, December). *Zhongguo yi xue ke xue yuan xue bao.* [Meta-analysis of assisted music therapy for chronic schizophrenia], *24*(6), 564–567. Institute of Evidence-Based Medicine, Shandong University, Jinan 250012, China.

Objective: To evaluate the effect of assisted music therapy for chronic schizophrenia.

Methods: 11 articles including 603 chronic schizophrenia patients were meta-analyzed using fixed effect model or random effect model.

Results: 6 randomized controlled trials were synthesized, showing that the difference was significant in statistics between experimental group (patients with music and drugs

therapy) and control group (patients with drugs therapy only). Both the scores of SANS and BPRS for the control group were higher than those for the experimental group (SANS, d = 0.68; 95%CI: 0.46-0.90 and BPRS, d = 0.44; 95%CI: 0.06-0.82). In addition, the scores of both SANS and BPRS for the pre-test were higher than those for the post-test (SANS, d = 1.17; 95%CI: 0.02-2.32 and BPRS, d = 2.05; 95%CI: 0.28-3.82).

Conclusions: The short-term effect of assisted music therapy is positive for chronic schizophrenia, but the long-term effect is still to be further studied.

MUSIC THERAPY WITH ADOLESCENTS AND CHILDREN

Field, T., Martinez, A., Nawrocki, T., Pickens, J., Fox, N. A., & Schanberg, S. (1998). Music shifts frontal EEG in depressed adolescents. *Adolescence, 33*(129), 109–116.

Conclusions: Depressed adolescents listening to music experienced a significant decrease in stress hormone (cortisol) levels, and most adolescents shifted toward left frontal EEG activation (associated with positive affect).

Montello, L. M., & Coons, E. E. (1998). Effect of active versus passive group music therapy on preadolescents with emotional, learning, and behavioral disorders. *Journal of Music Therapy, 35,* 49–67.

Conclusions: Music therapy clients significantly improved on the Aggression/Hostility scale of Achenbach's Teacher's Report Form, suggesting that group music therapy can facilitate self-expression and provide a channel for transforming frustration, anger, and aggression into the experience of creativity and self-mastery.

MUSIC THERAPY WITH ADULTS

Bodner, E., Iancu, J., Gilboa, A., Sarel, A., Mazor, A., & Amir, D. (2007). Finding words for emotions: The reactions of patients with major depressive disorder towards various musical excerpts. *Arts in Psychotherapy*, 34(2):142-50.

Objective: This study aims to show that the specific use of sad music in patients with major depressive disorder can circumvent the verbal barrier they typically experience when asked to express their emotions.

Method: We examined the effect of four emotionally distinctive types of music (i.e. happiness, fear, anger, and sadness) on 14 hospitalized patients with major depressive disorder (MDD group) and 31 healthy controls (HC group). Participants were asked to choose emotional descriptors that expressed the feelings that were induced in them by each excerpt. We hypothesized that in the specific case of sad music, patients with MDD would describe the music more vividly than HC participants.

Conclusions: Patients with MDD chose fewer emotional labels than controls in response to angry, scary, and happy excerpts. Patients with MDD and controls chose similar emotional labels in response to sad music, but patients with MDD chose more labels in

response to sad music than to any other excerpt, while controls demonstrated the exact opposite pattern. These findings are in line with clinical descriptions of patients with MDD as demonstrating difficulties in verbalizing their emotions. Their intensified response to sad music is in accordance with their focus on sad cues. The use of sad music in psychotherapy is thus recommended as means of bypassing the verbal barrier experienced by patients with MDD.

Leardi, S., Pietroletti, R., Angeloni, G., Necozione, S., Ranalletta, G., & Del Gusto B. (2007). Randomized clinical trial examining the effect of music therapy in stress response to day surgery. *British Journal of Surgery*. 94(8):943-7.

Objective: Music therapy could reduce stress and the stress response. The aim of this study was to investigate the role of music therapy in alleviating stress during day surgery.

Methods: Sixty patients undergoing day surgery were randomized to one of three groups, each containing 20 patients. Before and during surgery, patients in group 1 listened to new age music and those in group 2 listened to a choice of music from one of four styles. Patients in group 3 (control group) heard the normal sounds of the operating theatre. Plasma levels of cortisol and subpopulations of lymphocytes were evaluated before, during and after operation.

Results: Plasma cortisol levels decreased during operation in both groups of patients who listened to music, but increased in the control group. Postoperative cortisol levels were significantly higher in group 1 than in group 2 (mean(s.d.) 14.21(6.96) versus 8.63(2.72) ng/dl respectively; $P < 0.050$). Levels of natural killer lymphocytes decreased during surgery in groups 1 and 2, but increased in controls. Intraoperative levels of natural killer cells were significantly lower in group 1 than in group 3 (mean(s.d.) 212.2(89.3) versus 329.1(167.8) cells/microl; $P < 0.050$).

Conclusion: Perioperative music therapy changed the neurohormonal and immune stress response to day surgery, especially when the type of music was selected by the patient.

Pellitier, C. L. (2004). The effect of music on decreasing arousal due to stress: A meta-analysis. *Journal of Music Therapy*, 42, 192-214.

Objective: To conduct a meta-analytic review of research articles using music to decrease arousal due to stress.

Results: 22 quantitative studies were included in the analysis. Results demonstrated that music alone and music assisted relaxation techniques significantly decreased arousal (d = +.67). Further analysis of each study revealed that the amount of stress reduction was significantly different when considering age, type of stress, music assisted relaxation technique, musical preference, previous music experience, and type of intervention. Implications and suggestions for future research are discussed.

Silverman, M.J. (2006). Psychiatric patients' perception of music therapy and other psychoeducational programming. *Journal of Music Therapy*, 43(2):111-22.

Objective: The purpose of this study was to quantitatively evaluate psychiatric patients' perception of their psychoeducational programming.

Method: Participants (N = 73) completed a survey rating on each class/therapy in which they were enrolled and its helpfulness. Participants answered questions concerning which class/therapy addressed specific psychiatric deficit areas most effectively.

Results: Results indicated that participants rated music therapy as significantly more helpful than all other programming ($p < .05$). Further analyses indicated that participants admitted to a psychiatric institution only once rated their classes as more helpful when compared to participants who had been admitted multiple times. Additionally, participants who were minorities rated programming as more helpful than participants who were Caucasian. Participants consistently rated music therapy as more effective than other programming in addressing specific psychiatric deficit areas. Additionally, 57% of participants noted that music therapy was their favorite class/therapy. Reasons for these discrepancies are discussed and suggestions for future research are made.

Weber, S. (1996). The effects of relaxation exercises on anxiety levels in psychiatric inpatients. *Journal of Holistic Nursing, 14*(3), 196–205.

Conclusions: The anxiety level of psychiatric inpatients was significantly reduced using progressive muscle relaxation, meditative breathing, guided imagery and soft music to promote relaxation.

OTHER REFERENCES

Bruscia, K. (ed.) (1998). The dynamics of music psychotherapy. Gilsum, NH: Barcelona Publishers.

Crowe, B. J., & Colwell, C. (Eds.). (2007). *Effective clinical practice in music therapy: Music therapy for children, adolescents, and adults with mental disorders*. Silver Spring, MD: American Music Therapy Association.

Scovel, M., & Gardstrom, S. (2002). Music therapy within the context of psychotherapeutic models. In R.F. Unkefer & M.H. Thaut (Eds.), *Music therapy in the treatment of adults with mental disorders: Theoretical bases and clinical interventions* (2nd ed.) (pp. 117-132). St. Louis, MO: MMB Music.