



American Music Therapy Association

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Selected References on Music Therapy and ADHD

An examination of recent research studies in the area of music therapy among persons with ADD and ADHD provides growing evidence in favor of several music therapy techniques and protocols for the treatment and management of behavior and motor impulsivity problems. Music therapy services alone and in conjunction with other services reveal a positive trend in terms of effectiveness. Furthermore, creative music-making with a music therapist has not been found to over-arouse clients; and, as complementary service to neurotraining shows evidence of improved focus behavior in ADD subjects. Given some underlying evidence of a pure time perception deficit in persons with ADHD, it appears promising that music therapy activities and selected passive music concurrent with cognitive tasks are reasonable and accessible noninvasive concomitant interventions. The state of the evidence merits continued work to validate findings and contribute to the base of evidence on the topic.

[1] Abikoff H. Courtney ME. Szeibel PJ. Koplewicz HS. The effects of auditory stimulation on the arithmetic performance of children with ADHD and nondisabled children. *Journal of Learning Disabilities*. 1996 May; 29(3): 238-46. (47 ref)

Abstract: This study evaluated the impact of extra-task stimulation on the academic task performance of children with attention-deficit/hyperactivity disorder (ADHD). Twenty boys with ADHD and 20 nondisabled boys worked on an arithmetic task during high stimulation (music), low stimulation (speech), and no stimulation (silence). The music "distractors" were individualized for each child, and the arithmetic problems were at each child's ability level. A significant Group x Condition interaction was found for number of correct answers. Specifically, the nondisabled youngsters performed similarly under all three auditory conditions. In contrast, the children with ADHD did significantly better under the music condition than speech or silence conditions.

[2] Jackson, N.A. (2003). A survey of music therapy methods and their role in the treatment of early elementary school children with ADHD. *J Music Ther.* Winter;40(4):302-23.

Abstract: Attention-Deficit Hyperactivity Disorder (ADHD) has recently been receiving more frequent attention in professional circles and in the press, and some sources would assert that its occurrence in the general population is consistently growing. Because music therapists often work with preschool and school-age children, it is likely that they will increasingly be treating children with a diagnosis of ADHD. However, there is little in the music therapy literature about music therapy treatment for ADHD. The purpose of

this survey was to ascertain what music therapy methods are being used for children with an ADHD diagnosis, how effective this treatment is perceived to be, and the role that music therapy treatment plays in relation to other forms of treatment. Results of the survey indicated that music therapists often utilize a number of music therapy methods in the treatment of children with ADHD. They often address multiple types of goals, and treatment outcome is generally perceived to be favorable. Referrals for music therapy services are received from a number of different sources, although parents and teachers were indicated to be the most frequent referral sources. Most children with ADHD receiving music therapy services also receive other forms of treatment, with an overwhelming majority receiving medication. The implications of these results are discussed, and areas for continuing research into the use of music therapy with ADHD are identified.

[3] Montello, L., Coons, E.E. (1996). Effects of active versus passive group music therapy on preadolescents with emotional, learning and behavioral disorders. *Journal of Music Therapy*. 35(1): 49-67.

[4] Pratt, R.B., Abel H., Skidmore J. (1996). The effects of neurofeedback training with background music on EEG patterns of ADD and ADHD children. *IJAM: International Journal of Arts Medicine*. 4(1): 24-31.

http://www.barcelonapublishers.com/IJAM/IJAM_VOL4_NO1.pdf

Summary: Article discusses the role of music during neurofeedback training. This controlled repeated measures model study showed a trend in improved focus behavior among the ADD students assigned to the music intervention group.

[5] Rickson, D.J. Instructional and improvisational models of music therapy with adolescents who have attention deficit hyperactivity disorder (ADHD) : a comparison of the effects on motor impulsivity : a thesis presented to fulfill the requirements for the degree of Master of Music Therapy at Massey University, Wellington, New Zealand

Abstract: This study compared the impact of instructional and improvisational music therapy approaches on the level of motor impulsivity displayed by adolescent boys who have Attention Deficit Hyperactivity Disorder (ADHD). Measures included numbers of errors made on a Synchronised Tapping Task (STT); and Conners' Rating Scales (Conners, 1997). Participants (n=13), aged 11 – 16 years, were enrolled in a special residential school. A combination of a multiple contrasting treatment and an experimental control group design was used. Students were randomised to three groups; control (Group A) and two treatment groups. Students in Group B received eight sessions of improvisational music therapy followed by eight sessions of instructional music therapy, while the order was reversed for Group C.

There was no statistical difference between the impacts of the contrasting music therapy approaches on the level of motor impulsivity displayed by the students as measured by the STT and the Restless-Impulsive and Hyperactive-Impulsive Conners' subscales. However all students significantly improved on the STT across each phase of treatment

and improvement was slightly greater during the instructional treatment periods for both groups. During these same periods teachers reported a small decrease in restless and impulsive behaviours. The results therefore cautiously imply that the instructional approach might contribute to a reduction in motor impulsivity in the classroom.

Significant improvement on STT without the corresponding improvement in motor impulsivity suggested that increased accuracy on the STT might be attributable to progress in other developmental domains. Teacher report of significant improvement for treatment groups on the DSM-IV Total Subscale adds weight to this suggestion, and implies that combined music therapy approaches might have contributed to a reduction in DSM-IV symptomology in the classroom.

Rickson's (2001) tentative suggestion that creative music-making might over-arouse students with ADHD was not confirmed. Students did make more errors when tested on the STT a second time on the same day but this was regardless of whether they had been involved in instructional, improvisational or no music therapy programme. It is possible that students who have ADHD are easily aroused by the general school milieu and classroom or music room interactions with peers.

[6] Rickson DJ. (2006). Instructional and improvisational models of music therapy with adolescents who have attention deficit hyperactivity disorder (ADHD): a comparison of the effects on motor impulsivity. *J Music Ther.* Spring;43(1):39-62.

Summary: Multiple contrasting treatment and an experimental control group design was used to examine the impact of instructional and improvisational music therapy on motor impulsivity by adolescent boys. Findings suggest that music therapy may contribute to a reduction in a range of ADHD symptoms in the classroom. Over the period of the study both music therapy treatment groups were coincident with significant reduction in Conners' DSM-IV Total and Global Index subscale scores. (See Ref. 4, above)

[7] Rickson DJ, Watkins WG. (2003). Music therapy to promote prosocial behaviors in aggressive adolescent boys--a pilot study. *J Music Ther.* 2003 Winter;40(4):283-301.

Abstract: This pilot study was undertaken to investigate whether music therapy is effective in promoting prosocial behaviors in aggressive adolescent boys who have social, emotional, and learning difficulties. Fifteen subjects (aged 11-15 years), enrolled at a special residential school in New Zealand, were randomly assigned to music therapy treatment groups (n = 6, n = 5), and a waitlist control group (n = 4). Examination of demographic data identified differences between groups for diagnosis (p = .044), with Group 1 all having Attention Deficit Hyperactivity Disorder (ADHD), and for age (p = .027), with Group 2 having a mean age 1.38 years older. Measures included parent and teacher versions of the Developmental Behaviour Checklist (DBC-P & DBC-T) (Einfeld & Tonge, 1994; Einfeld, Tonge, & Parmenter, 1998). While no definite treatment effects could be detected, results suggest that a music therapy program promoting autonomy and creativity may help adolescents to interact more appropriately with others in a residential villa setting, but might also lead to a temporary mild increase in disruptive behavior in

the classroom. A more highly structured program and smaller group numbers may be advantageous for boys who have ADHD.

Group x Order interaction indicated that arithmetic performance was enhanced only for those children with ADHD who received music as the first condition. The facilitative effects of salient auditory stimulation on the arithmetic performance of the children with ADHD provide some support for the underarousal/optimal stimulation theory of ADHD.