

AOTA Evidence Briefs

Children With Behavioral and Psychosocial Needs

*A product of the American Occupational Therapy Association's Evidence-Based Literature Review Project

PSYCH #5

Both music and nonmusic programs can improve certain social skills in children with moderate intellectual disability

Duffy, B., & Fuller, R. (2000). Role of music therapy in social skills development in children with moderate intellectual disability. *Journal of Applied Research in Intellectual Disabilities*, 13(2), 77–89.

Level: IB1a

Randomized controlled trial, 2 groups, fewer than 20 participants per condition, high internal validity, high external validity.

Why research this topic?

Studies have shown that music therapy helps children with intellectual disability develop social skills. However, the role of music in the therapeutic process is not clear.

What did the researchers do?

Duffy and Fuller (2000), of Beechpark Services for Autism (Stillorgan, Ireland) and Trinity College (Dublin, Ireland), respectively, conducted a study "to investigate further the effectiveness of music therapy in facilitating social skill development, [and] also to evaluate the specific contribution provided by the music component" (p. 78). They designed two group programs to teach five basic social skills: initiation, turn-taking, vocalization, imitation, and eye contact. One program was based on music therapy; the other was not. For the music therapy program, they compiled a 30-minute cassette tape of prerecorded music, including classical selections and original songs. An accompanying therapeutic manual provided instructions for using the tape. The nonmusic program was identical to the music program except that nonmusical activities (e.g., free play with Playdoh) took the place of the musical elements. It too had an accompanying therapeutic manual.

For participants the researchers recruited 32 children from special schools connected with four day centers for people with intellectual disabilities. The 32 children (8 per school) were 5–10 years of age and moderately disabled intellectually. (Average age and gender were not reported.) One child was later dropped from the nonmusic program because of behavior problems.

The researchers assigned the children in each school to one or the other program. The result was two groups of four at every school.

Staff members at the four schools were trained in the programs' procedures. The staff members then implemented the programs twice a week for 8 weeks.

The outcome areas of interest were *initiation*, *turn-taking*, *vocalization*, *imitation*, and *eye contact* (all as measured by a test designed to assess the presence and the quality of the five skills in each child; initiation and vocalization also as measured by a count of the occurrences of these skills in each child's performance). Measures were taken before and after the intervention.

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What did the researchers find?

From before the intervention to after, both groups **significantly** (see *Glossary*) improved on the five target skills. Both groups also significantly increased their occurrences of initiation and vocalization.

On comparisons between the groups, they differed nearly significantly on only one skill (imitation), the music group performing better.

What do the findings mean?

For therapists and other providers, the findings suggest that both music and nonmusic programs can improve the five target skills in children with moderate intellectual disability. Thus the music component of music therapy may not be an important element in the intervention process.

What are the study's limitations?

The study had two limitations. First, the researchers did not report the reliability or the validity of their outcome measures. Second, they did not report the genders of their participants.

GLOSSARY

significance (or significant)—A statistical term that refers to the probability that the results obtained in the study are not due to chance, but to some other factor (e.g., the treatment of interest). A significant result is likely to be generalizable to populations outside the study.

Significance should not be confused with *clinical effect*. A study can be statistically significant without having a very large clinical effect on the sample. For example, a study that examines the effect of a treatment on a client's ability to walk may report that the participants in the treatment group were able to walk significantly longer distances than those in the control group. However, after reading the study one may find that the treatment group was able to walk, on average, 6 feet, whereas the control group was able to walk, on average, 5 feet. Although the outcome may be statistically significant, a clinician may not feel that a 1-foot increase will make his or her client functional.

This work is based on the evidence-based literature review completed by Ming-Hui Kuo, MS, OTR.

For more information about the Evidence-Based Literature Review Project, contact the Practice Department at the American Occupational Therapy Association, 301-652-6611, ext. 2040.

