The Effects of Music on Educational Performance in Mentally Disabled Children
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Aim and objectives
The prime aim of this research was to examine the effects of music on learning and educational performances on mentally disabled students.

Context
Let us be briefed on a definition of mental disability, as referred to in psychiatry as retardation. In psychiatry there are two types of retardation, mental retardation and psychomotor retardation. Mental retardation refers to slowness or arrest of intellectual maturation. Psychomotor retardation refers to slowness or slackened psychic activity or motor activity or both. The definition of mental retardation has been revised many times, but more latterly The American Association on Mental Retardation (1993) suggested a comprehensive definition: mental retardation refers to substantial limitation in present functioning. It is characterized by significantly sub-average intellectual functioning, existing concurrently with related limitation in two or more of the following applicable adaptive skill areas: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. Mental retardation manifests before age 18.

Music therapy might, in this context, be regarded as the systematic application of music in the treatment of the physiological and psychosocial aspects of an illness or disability. It focuses on the acquisition of nonmusical skills and behaviors, as determined by a board certified music therapist through systematic assessment and treatment planning.

Activities and techniques incorporating music stimuli play potentially rich and varied roles in therapy for persons with autism. Music therapy techniques can, for example, facilitate and support the desire to communicate (Thaut, 1984); break patterns of isolation and engage the individual in external experiences (Baker, 1982; Thaut, 1984); reduce echolalic responses impeding functional language use (Bruscia, 1982); decrease stereotyped motility patterns (Scoraci, Deckner, McDaniel, & Blanton, 1982); teach social skills (Reid, Hill, Rawers, & Montegar, 1975); and facilitate increased language comprehension (Litchman, 1976).

Music has the following inherent qualities and is therefore, a valuable therapeutic tool. Music can reflect a full range of human emotions, is a nonverbal means of expression; can decrease anxiety and tension, assist in pain management, help relieve insomnia, and promote relaxation. Music can ease cultural and/or linguistic barriers while bringing people together in a shared experience.
Regardless to its therapeutic and esthetic pleasure, music has a wide range and multi-dimensions of uses. Does music increase productivity?

Some researchers obtained ‘yes’:
- Kerr 1945 paper snappers
- Uhrbrock 1961 naval capacitors, quartz crystal, radio tubes
- Oldham, et al 1996 data entry 5% - 14%

But some others put ‘no’ to the ends of their researches.
- Smith 1961 typing skills
- Newman et al 1966 skateboard production
- Wentworth 1991 tasks by clients with MR
- Blood & Ferris 1993 conversation
- Lesiuk 2000 computer programming

To seek answers to: why the results seem to be so inconsistent, we note that some of the research outlined: lacks statistical analysis, has corporative motives, low sample sizes, uses subjective labels to categorize mood and has a failure to manipulate tempo.

Some studies that manipulated tempo, got different results:
- Martin 1990: no significant differences in slow, medium, or fast tempo for simple or complex task
- Gunsch 1991: rock music improves math scores more than instrumental or no music

In the current research the effects of music on the learning and educational performances in mental retarded students were examined. The principle question raised in our research was if the music somehow impacts the learning and educational performances in mental retarded students.

Methodology

All the subjects were randomly selected from students at first grade of elementary exceptional education school in Ahwaz city. Primary step one of the elementary exceptional education schools for retarded was selected by chance. Then 30 (15 male & 15 female) of first grade students were randomly selected. The sample divided into two groups: an experimental group and a control group, with the same or equal chances or probability of occurrence for each member of a group. The experimental group included students whom received music and control group subsumed students not receiving music. Two musical audiotapes were used as auxiliary instructional tools during the routine class period in experimental group, every day for 3 months of time. These tapes included a childish melody and Farsi alphabet chants.

For hypothesis testing, Pre-Test and Post-Test Experimental design with control group were processed. After a period of 3 months the educational performances scores of the two groups were analyzed by using T test for two Independent groups.

Results

Results indicated significant differences. A significant development in educational performance of group of students whom received music was observed, which was not seen in
the control group. Therefore the music did indeed seem to impact on the educational performance of mental retarded (with Learning Disability) Children.

**Key Contribution**

Music is a river-bed for human stream of dreams and leads her/him closer to the origin of inspiration and illumination. The human innate interest and sensibility to harmonic and rhythmic stimulation and provocation, besides the strong impact of sounds which easily influence nerves and the inner most angles of unconsciousness; and has an obvious place in therapy. Music affects the inmost mental and motor activities and causes consonance and co-action. Positive benefits of active listening and performing, in turn sets the context for developmental change in educational performance. ‘

It is important to acknowledge that in spite of the positive result of this study, since this research was a relatively small scale study it is best considered as a pointer in a general direction, rather than as a conclusive statement. However, the research demonstrated that music therapy may offer a very valuable option in the treatment of mental retarded children and will provide a platform for more detailed investigations of the potential roles of music therapy in the field.

**Key Words**

Mental Retarded Students, Music Effects, Learning and Education Performance
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