



**A study to develop a Methodology to Evaluate and Assess the
Effect of Music on Children with Multiple Disabilities**
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1. Introduction

Where words leave off, music begins.” Heinrich Heine.

Music plays an important role in life and every individual has experienced some form of music throughout his/her life. This paper provides an outline on how to conduct research to assess the impact of music therapy on social and behavioural skill acquisition in special children.

The previous study done by the author on sixty-two autistic children during the year 2011, - “Music as an aid to modify the behaviour of autistic children” has yielded positive results and has enhanced the quality of life of children. The children were evaluated on their social behaviour skills (smile, recognition, sitting tolerance, imitation and singing / speech) pre and post music therapy sessions. The training was conducted over 6 months and has yielded wonderful results. This paper aims to mention the step-by-step procedure on how to conduct research on similar projects with special children.

2. Child development

A child comes into this world with its own program of development (genetic material). The child then actively interacts with the available environment which facilitates the implementation of hereditary endowments. Each individual's developmental timetable is characteristically unique. Merely providing good nourishment and the necessary facilities is not adequate for the child's development. We need to organize the physical and social environment so that the child receives maximum benefit.

3. Visual Impairment - A brief overview

Blindness can be defined as temporary or permanent loss of vision due to damage in the optic nerve or the area of brain which is responsible for vision. This condition cannot be corrected by medical treatment, glasses, or surgery.

A child may have visual impairment at the time of birth or the child may develop visual impairment due to injury or illness at a later stage of his/her life. The loss of vision could be partial or complete. There may also be abnormalities with respect to structure of eye and facial features. The children also may have comorbid conditions like autism, mental retardation, and physical disabilities. When a child has disabilities there is delay with respect to learning skills, processing sensory outputs and emotional problems resulting in social and behavioural delays. Parents teachers and Caregivers must give them the appropriate stimulation and opportunities.

4. Music education and special needs

The auditory system is one of the predominant sensory organs through which a child can process inputs from the environment. Here is a necessity for instructional and methodological adaptation when it comes to teaching music. Blind students have sharp listening skills, but it cannot be presumed that they are gifted with musical ability.

Music teaching is interactive and innovative when it comes to working with these children. They principally use the oral method of learning with repeated reinforcement because at a very young age (less than 10 years), they are still learning Braille and reading through Braille is not feasible. There is multiple auditory software that are available which can help as an aid to music learning.

5. Purpose and Scope of Study

The project aims to identify the step-by-step procedure to undertake research to develop a methodology for behaviour and social skills training (details mentioned in the subsequent paragraphs) through music



that improves the learning and assimilation of skills. This format will help researchers conduct research using this framework.

6. Relevance of Research

The research paper will put forth a model to conduct research on children with multiple disabilities.

This area of research will focus on a social objective for the betterment of the lives of these special children by using music as a medium. Here we the study will understand the effect of the music on children with multiple disabilities on various parameters.

A study by Mary. M. Rainey Perry, MM, RMT published in the journal of music therapy, October 2003, Australia found that, "the children's level of communication development was reflected in individual music therapy. Specifically, children in different levels of communication development varied in their abilities to initiate, anticipate, and sustain participation in turn taking and to maintain attention and engagement in the interaction". There are some research studies which have recommended the use of music in special schools to improve their general quality of life. A study of this nature in the Indian context is essential and will be a pioneering work.

7. Methodology

The research should be conducted in the following stages

- o Research Design
- o Pilot Study
- o Pre Project-Assessment
- o Goals
- o Project Execution
- o Data Collection

The basic criteria for choosing children to be included in the study is visual impairment with comorbid autism, retardation, and slow learners. This intervention should be given at a classroom level during school hours. The execution of the project at two or more schools will strengthen the data collection and study. An effort should be made to reach out to as many students as possible while conducting these experiments, as it will be beneficial to these special children.

8. Research Design

The research design is a very essential feature of the study. This will lay the foundation for a pilot study and future execution of plans.

9. Details of children which can be included in the sample

There are many categories under which special children can be classified with respect to their disabilities. We will only understand the disabilities linked to a sample research plan.

The children will be grouped under

- Blindness with autism
- Blindness with mental retardation
- Blind with slow learners

Autism: Autism is a disorder of neural development that appears in the first 3 years of life, and affects the brain's normal development of social and communication skills.

Autism it is characterized by a neurological disorder, is manifested by a variety of behaviours like

- Impairment in speech, language, and communication.
- Abnormal response to stimuli
- Difficulty in coping with changes in routine, surrounding
- Deficiencies and delays in development
- Inability to form social relationships
- Restricted and repetitive behaviour

In early stages of research there were many theories which explained the cause of autism. But there is considerable evidence to show that it is a "Neurological disorder caused by various types of brain damage or dysfunction."



Mental Retardation: Individual with sub normal intellectual development usually come under this category. They lack the ability to do their day-to-day activities. They have below average intelligence. The variance with respect to intellectual disability maybe from mild to profound

Slow learners: The individual has average intelligence but the ability to learn new skills are significantly slower. They will not be able to perform age-appropriate tasks. The developmental parameters will be similar as other children their thinking skills will develop significantly slowly than the norm for one's age.

A brief idea about the various disabilities will give us an idea about learning ability of the child. A very careful understanding of their strengths and weakness can help us map a plan to teach them new behaviours and skills needed to lead an independent life in their day-to-day activities

10. Other Details of the Project Plan

Time period for conducting the experiment — One year.

This time period has included 9 months of actual intervention and three months to collate the data collected and present the findings.

Duration of each session - Half an hour session - twice a week

Blind children learn through touch and auditory modalities. An effective means of teaching new skills is by auditory means with emphasis on using music. These children will need longer time to learn and incorporate new behaviours as part of their routine. The behaviours learnt, need to be rehearsed and added to their daily routine. Reduced attention span and other cognitive difficulties impairs their learning ability. They need increased frequency of sessions to learn new concepts and make it a part of their routine. Any therapeutic intervention is normally recommended for two to three sessions per week over a certain time period. The author has been teaching music to blind children and is also a research scholar. Previous teaching and research experience in doing similar projects has helped her arrive at this kind of time frame.

Number of children — 25

It is very challenging to find children in this age group with such specific disability. Hence the sample size is small.

Grouping of children: Each of them will be given music sessions in a small group of 5 children. They will be grouped on the severity of their disability. The children are given intervention in small groups to give individual attention and for us on them mastering the skill. Group sessions facilitate peer interaction and social skills training.

11. Pilot Study

The Project is unique and we need to do a pilot study to understand the following -A few music sessions to be conducted in schools

1. To introduce music
2. To check on comfort of students
3. To bond with students
4. To meet the school authorities to take permission

The pilot study will lay a foundation for initiating the project. The schools working with disabled children have their own curriculum, a few sessions of music will definitely set the basis and transition to the next level of learning.

12. Pre Project-Evaluation

The next step post pilot study is to redesign the project based on the outcome of the trial sessions. Pre project assessment will be carried out in sequence to execute the project.

Any analysis of age-appropriate growth of human body, motor development, adaptive behaviours, and special development comes under the functional approach of diagnosis. Clinical diagnosis involves diagnosis or the illness by qualified professionals and potentially explores the causes or special conditions in the child and seeks solutions for the same.

An evaluation of a special child gives a broad idea of his/her strengths and weakness in various areas of development. The researcher will develop tailor made program for the child, to help him reach his



required potential. Adequate support from parents and teachers and care givers will accelerate the learning or skills in the child.

The children who come under the study need to be evaluated before the study using standardized tools by a qualified psychologist. Children with special needs are those with clinical disorders, who require special assistance in their routine life. The children in the study will not undertake any other music lessons or training

The children will be evaluated using functional and clinical diagnostic methods.

Functional evaluation includes

- Motor development
- Adaptive behaviours
- Communication skills
- Sensory issues

This can be usually done by a paediatrician, psychologist or by a special educator. Each method of assessment is unique and aids in the functional and diagnostic assessment of the child. This determines the appropriate treatment and therapy needed for the child. Information will also be gathered about the child from parents and teachers about their present level or functioning. Any analysis of age-appropriate growth of human body, Motor development, adaptive behaviours, and socio development comes under the functional approach of diagnosis. Clinical diagnosis involves diagnosis of the illness by qualified professionals and potentially explores the causes of special conditions in the child and seeks solutions for the same.

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13. Goals

The basic goals needed in a stage one research project can be as follows -

- o To improve the social communication of the child.
- o To improve the listening skills of the child.
- o To understand how the child is able to recognize or recall the songs.
- o To understand whether a child is able to match the rhythm of the song.
- o To enhance their sitting tolerance through music.
- o To understand the pitch the child is able to tolerate.
- o To improve concept learning through music.

The goals can be chosen based on the needs and requirements of the study

14. Project Execution

The project will be implemented as per research design. Goal appropriate songs will be written and sessions will be conducted with selected sample

15. Contents of the Music Session

The music session should include singing of slokas and songs to teach rhythm to children. Sanskrit is the mother of all languages and Indian music can be explored innovatively to teach social behaviours. In addition to memorization, the recitation of slokas chosen will teach children pronunciation, syllabification of words.

Songs will be designed based on consultation with teachers and parents. The songs will be interspersed with use of simple instruments to improve auditory discrimination. The songs are designed to make communication faster and easier (using lesser time).

- E.g. Open shut them, — open shut them
Give a little clap
Open shut them open shut them lay them on your lap
Creep them creep them right up to your chin



A song like this would teach children to clap in rhythm and can teach them to identify body parts, improve memory recall skills and learn action words. Learning music is a prelude to linguistic activity and it helps them understand special orientation.

16. Other Factors

The study will further be strengthened by specifying the inclusions and exclusions and also the co morbid conditions of the patients.

17. Findings of the study and Analysis

Any study is incomplete without the presentation of the results. The framework shall laydown the outcome of the study. Effectiveness of the intervention should be assessed in pre and post format to understand the impact of music therapy. This will include parent and teacher interviews. The children will also be evaluated by a psychologist with specific tools such as rating scales and parent questionnaires to assess behavioural and social skills improvements. Information gathered from parents and teachers prior to the study will be taken again to assess changes.

This will include recording the improvement in social behaviours, activities in their daily living and expressive speech and all the goals mentioned. The data collected will be put through quantitative analysis using appropriate statistical tools. The data obtained will be collated and results should be discussed. A comparison of pre and post assessments will help in validating the success of this study.

18. Conclusion

The research paper has enlisted the total procedure to conduct an experiment from start to end. The comprehensive summary of assessments will help understand if music can be used as a successful aid in enhancing the quality of life of children with disabilities.

19. Future possibilities

The successful implementation of a research plan may open a wide range of possibilities for future research where music is used as a tool to improve many other aspects of special children.