



Creative Dance for the Motor Development of Mental Retardation Students

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Abstract. This article aims to discuss the result of research on creative dance as intervention for psychomotor and thinking changes of children with mental retardation. Children with mental retardation experience delays in their ability to move, think, and act. The research methodologies used in this study is a qualitative paradigm with descriptive analysis method. The information gathered is supported by documentation studies, fieldwork, interviews, and literature reviews. Triangulation was used to do the analysis. This article will discuss about creative dancing as a tool for children with mental retardation. The findings of this study demonstrate that creative dance, which enhances and modifies neurotransmitters and activates acetylcholine, dopamine, and gaba, is a very useful tool for the development of children with mental retardation.

Keywords: Psychomotor · Stimulus · Creative Dance · Children with Mental Retardation

1 Introduction

In State Junior High School Number 23 Padang, an inclusive school in 2016, there are two categories of pupils, namely normal children and children with special needs, one of which is children with mental retardation. Based on the differences in conditions in the classroom, it attracted the attention of researchers to apply creative dance learning as a medium to develop motor skills in mentally retarded children because through physical activities carried out during creative dance learning, it can increase nerve performance to a maximum which acts as a conductor of stimulation to the brain so that the neurotransmitter become active and develop on the part of Acetylcholine, Dopamine and Gaba.

Mental retardation is a condition where a person has an IQ below the average and causes slowness in thinking, moving, and behaving [1].

Children with special needs struggle to move, socialize, and interact with their environment. They also respond and think more slowly, and their development is delayed [2].

In Indonesia, studies on children with mental retardation have been conducted. One of them is “The Effects of Creative Dance Learning on Students with Mental Retardation’ Gross Motor Skills in Special Needs Elementary Schools [3], Learning Dance Creations

for Light Tuna Grahita Children Through an Imitative Process [4], Application of Motion Therapy to Reduce Motor Disorders in Children with Mental Retardation [5].

The three references support the conclusion that dance can help mentally retarded children grow their abilities so they can train students' motor skills. However, many researchers have not fully explained how dance affected the development of mentally retarded children.

In light of this knowledge, the researcher utilizes descriptive analysis to examine the developmental processes that take place in children's motor skills through creative dances for mentally retarded children. This study is necessary because it can shed light on how children with mental retardation acquire their motor skills. Additionally, the results can serve as a foundation for future studies on dance learning's effects on young children's motor development. This study examined the effects of creative dance learning on mentally retarded children's motor development. The goal of this article is to address the use of dance as a teaching tool for children with mental retardation.

2 Methods

This research uses a qualitative paradigm with descriptive analysis research methods. Descriptive research is research that collects data in accordance with research, then analyzes these factors to find out their role [6].

Three second-grade junior high school students with special needs and mental retardation participated in this study. The study was conducted at State Junior High School 23 in Padang, West Sumatra.

The information gathered is supported by documentation studies, fieldwork, interviews, and literature reviews. Triangulation procedures, such as triangulation, reduction, data display, and drawing conclusions, will be used to process the obtained data.

3 Results and Discussion

3.1 Results

In 2016 researchers conducted a study located at SMP N 23 Padang, West Sumatra. The school has two types of children, namely normal and mentally retarded children with the same time, classroom and conditions. During the learning process, the treatment given to mentally retarded children is different from other normal children because mentally retarded children need special treatment [7], and mentally retarded children have a companion during the learning process and each child has 1 assistant who has been assigned from the school who is considered to have met the qualification requirements as a companion for mentally retarded children.

Each generation has a distinct number of mentally retarded children; for example, there are 4 such children from grade 7, 3 such children from grade 8, and 1 such children from grade 9. In this study, the researcher used purposive sampling to choose the participants, who were 8th graders with three kids having special needs due to mental retardation.

There are three different levels of mental retardation in Indonesia: level 1 is mild, level 2 is moderate, and level 3 is severe [8]. Three mentally retarded students from various categories are enrolled in grade 8 at SMP N 23 Padang: two students have moderate level 2 mental retardation, and one student has severe level 3 mental retardation.

Researchers conducted preliminary observations of the learning environment and conditions of students who were mentally retarded to determine what applications and processes would be used during the learning process.

According to the study's findings, there are three kids with mental retardation with two different levels. Conditions in class, two moderate level children do not have much interaction with other friends or during the learning process or in the school environment, there is very little movement and activity, so if they are required to move or change places, they must be accompanied or directed because of the student's condition. Who have not been able to master the movements of the student body itself. 1 child with mental retardation level 3 in the severe category.

Children with mental retardation with level three are comparable to autistic children. When the student was in the field, the researchers observed that the student had quite strong mood swings since the student could sit quietly for a time and then move very energetically a short while later, meaning that the student moved very freely and could not be adequately managed.

A shadow teacher is assigned to each student, and they are always present with them while they are in the classroom and engaged in their lessons. It is envisaged that mentally disabled children would be able to connect with other pupils and develop their independence while learning with the help of the shadow teacher.

Researchers are interested in using creative dance as a tool for the development of children with level one, level two, and level three mental retardation. This is one medium that can aid the growth of pupils who are mentally retarded.

The teacher will provide information and direction to mentally retarded students and in the early stages of learning will be assisted by a shadow teacher as a companion. The researcher asks the shadow teacher to keep a distance from the students once they begin entering the core of learning so that students can be independent and not depend on the shadow teacher as they learn creative dance in the classroom.

The following procedures are used when using imaginative dance as a tool for the motor development of mentally retarded students in the classroom:

1. The teacher designs a lesson based on the conditions of the students.
2. The teacher makes or chooses a creative dance which is the subject of learning the art of creative dance.
3. The teacher analyzes to find out whether the movement can be understood and easily moved by mentally retarded students.
4. When learning in class the teacher greets when learning will begin.
5. The teacher show a creative dance video with the aim of attracting students' attention.
6. The teacher gives a warm-up first.
7. The teacher invites students to participate in a creative dance movement
8. The teacher cooperates with the shadow teacher, just monitoring from a distance.
9. The teacher teaches slowly at a tempo one by one without using music
10. The teacher harmonizes the child's movements and music

11. The teacher evaluates the faithfulness of the movements made by the child so that they can move optimally.
12. The teacher closes the lesson with greetings

The above-mentioned twelve stages were created taking into account the child's condition, the reports from the shadow teacher, the choice of appropriate dances for mentally retarded children so that the children can follow the dance movements. Researchers have used the twelve learning phases with mentally retarded students in the classroom.

Three mentally retarded children have been described as having two different levels in the paragraph above. Because children have developing emotional and motor skills that cannot be controlled at any time, researchers employed these twelve steps for mentally retarded children with varying levels. The differences were in the time and process in the field. When the student is out of control, the shadow teacher intervenes to help them become stable by calming them down.

During the application to mentally retarded children there are several facilities that are able to support the creative dance learning process as a stimulus medium for the motor development of mentally retarded children, namely: speakers, infocus, laptops, LCDs, clean and empty rooms because using technological developments can increase the main attraction for mentally retarded students so that able to make the center of focus and attention of students can be focused on the subject of learning that will be given [1] and if using an empty class without any obstacles such as tables and chairs can make students free to express and move without having worries if there are obstacles while moving. Of the six facilities, it is the most helpful for teaching creative dance to children with mental retardation.

3.2 Discussion

Dance as a Media. Dance is one of the learning activities that involve children physically so that it can be a medium to maximize children's growth and development. Dance is also rhythmic body movements performed at a certain place and time to practice movement and control the body and mind [9].

This study uses a Minangkabau Malay creative dance that is adapted to the condition of students so that they can follow the movements properly and correctly.

By applying the Malay Minang Kabau creative dance as a medium, students can train their body to be good in motoric development of students.

Motor. The process by which children learn to move their bodies so that they can control and coordinate well and are conscious of the movements of the limbs is known as motor development, and it is crucial for children [10]. Motor development is one of the factors that must be taken into account in children's development. Since motor skills are physical, it is possible to immediately observe their growth [11]. Physical growth and development follows the cephalocaudal and proximodistal principles. According to the cephalocaudal principle, growth occurs from top to bottom, because: The brain grows rapidly before birth, the newborn's head is a large disproportion.

According to the proximodistal principle of motor growth and development from the inside out (center of the body outward), in the womb the head and body develop before

the arms and legs, then hands and feet, and fingers and toes. The limbs keep growing faster than hands and feet in early childhood [12].

Analysis. Research on mentally retarded children has been carried out by several researchers, in this article there are three studies from Indonesia that are references to the development of mentally retarded children.

The first is Ratnayanti, and Kustiawan with the title *The Influence of the Application of Creative Dance Learning on the Gross Motor Ability of Mentally Impaired Students in Special Schools with the experimental method*. This research focuses on mentally retarded children and applies creative dance as a medium in learning material, the results of this study state that gross motor skills after the application of creative dance learning are relatively lower than when applying creative dance learning, but the results are higher and stable compared to conditions before the intervention. The effect of creative dance learning provides a fairly good benefit to the improvement of brain function, because structured and programmed movement exercises are beneficial in stimulating various learning centers in the brain. Improving gross motor skills in students with severe mental retardation has a good impact on the effectiveness of learning at school because children are better prepared to undergo the learning process at a later stage [3].

The second, Indah, Sudigdo, and Amalia, with the title *Learning Dance Creations for Mild Tuna Grahitita Children Through an Imitative Process with experimental research methods*. This research is aimed at level one mentally retarded children with the results of this study stating that the creative dance material entitled bird dance can improve the skills of mentally retarded students and can train students' motor skills [4].

The third, Octaviani, and Windrawanto with the title *Application of dance movement therapy to reduce motor impairment in mentally retarded children with experimental research methods*. This study was aimed at mentally retarded children with dance movements as special therapy, with the results stating that dance movement therapy can reduce motor disorders of mentally retarded children at SLB Wantuwirawan Salatiga as evidenced by the results of *Asymp.sig* (2 tailed) of 0.034 ($p < 0.05$) Suggestions for mentally retarded children who have been given dance movement therapy are expected to remain enthusiastic and active in the healing process of motor disorders. If this process is carried out regularly and gets a positive response from the mentally retarded child, the mentally retarded child will experience behavioral changes to become adaptive, the child can accept the surrounding environment and can be accepted as well [5].

This research was carried out for six months starting from February to July 2016 in public schools with the condition of these schools having normal students and students with special needs such as mental retardation. Each generation has children with special needs and this research focuses on eighth graders consisting of three students with mental retardation, each with a different level, two children at level 2 moderate and one child at level 3 severe.

The same procedures and processes were used for this study's conduct, but what differentiates them is how the researcher approached the students and the shadow instructor. When teaching, the researcher delivers instructions and asks the class to participate in the prepared movements.

The Minangkabau Malay creative dance will be the dance form used. Prior to the movements being presented, researchers have observed them to ensure that pupils can

follow them easily and that they can serve as a medium for exciting mentally retarded children.

Based on a fundamental movement from the Minangkabau Malay culture, the researcher constructed a movement that was later modified and adjusted to the child's musical preferences and environmental factors.

During the research, the researcher always evaluates and coordinates with the shadow teacher of each student. Because the role of the shadow teacher as a companion for children with special needs is very important in addition to controlling conditions in the classroom so that children become independent, the shadow teacher also monitors the development of children while at school.

Researchers conduct interviews with each shadow teacher once a month as an evaluation of whether there is progress to students who are given creative dance media as a stimulus. In the process of applying media to students, there were two different results, the first is level 2 mentally retarded children.

At the beginning of learning, before using technology media, children had difficulties in responding and moving when the teacher gave directions or an invitation to move and lasted until several meetings.

At the second meeting, two months later, the researcher used technology media as a distraction for students, and it worked, but the students were still shy and had difficulty controlling their movements.

In the third month, students seem to be getting used to moving although they are still not used to controlling their body well and following the given movement pattern.

This development was very obvious because initially, students were not accustomed to controlling their bodies to move as exemplified until the fourth and fifth months, when students started to be able to follow the motion although still roughly. In the fourth and fifth months, students began to respond well and slowly could follow the movement slightly.

Students are able to follow and comprehend the provided motion technique and are aware of the change in motion by the sixth month, even though they are not yet able to move flawlessly like the example provided.

Children with mental retardation levels two and three respond differently to creative dance media, with level two students responding more quickly than level three. Because students' emotions are subject to alter at any time, researchers still need to modify the students' condition at the first encounter. And is unable to control its movement, which lengthens the procedure.

Researchers and shadow teachers work together to make level 3 mentally retarded children more focused and controllable. In the sixth month, the level 3 mentally retarded students experienced very good changes because they were able to follow the technique even though they were not perfect and experienced difficulties in moving movements.

The researcher conducted the last interview with three shadow teachers after six months of applying creative dance media to mentally retarded children. The first shadow teacher with level 2 children said that when the learning process was in progress, the child could respond well to every movement in the class, such as when a friend wanted to interact, either in the form of a handshake or taking things that students needed, they could do it themselves.

The second shadow teacher interview with level 2 children can already control movement as during the lesson students are able to look straight ahead and follow light exercise well. In interviews with shadow teachers for level 3 children, children are getting used to controlling their emotions and hand movements so that students rarely make unexpected movements. From the results of interviews with three shadow teachers, it can be said that the application of creative dance to mentally retarded children is successful because children experience well-structured development. From a child who can not control his body to be better and aware of body movements.

One of the finest ways to stimulate mentally retarded children is through creative dancing because when a child moves, their nerves and stimulation are active and functioning at their best, which allows them to stimulate their brains and their nerves to function at their best.

Children with mental retardation have problems in many different areas of their brains. The lateral ventricles are swollen and improperly shaped. The subarachnoid space and the cortical sulcus as well as the cerebri are all dilated in the second ventricle. The hippocampus in particular has a decreased size and an irregular form in the temporal lobe. The corpus colosum, one of the biggest axon channels in the brain, is thinned in the white matter and is crucial for the communication of information between the two hemispheres of the brain.

The part of the brain, the associated frontal lobe is the prefrontal cortex. In mentally retarded children the prefrontal cortex does not develop like other normal children. The brain needs to be preserved both structurally and functionally. Structural maintenance is carried out by flowing blood, oxygen, and sufficient energy to the brain, with a structure that is maintained, brain function will be optimal. Functional maintenance of the brain can be done through various learning processes, including moving, remembering, feeling, seeing and so on.

Children's brain development will always change because the brain is dynamic and plastic so that it can be honed and trained, including children with special needs for mental retardation. By applying creative dance in a structured manner, it can be a stimulus medium for mentally retarded children.

The application of creative dance as a stimulus for mentally retarded children in a structured and programmed manner is useful for stimulating various learning centers in the brain. When the child moves, the Malay Minang creative dance can indirectly stimulate the mentally retarded child because the child tries to process his body with predetermined movements and activates body movements that initially cannot move to become active. When a mentally retarded child's body moves simultaneously in the head, hands, torso, and feet in a structured and active manner, the left and right hemispheres of the brain function together, which will strengthen the relationship between the two brains. So that it can increase and change neurotransmitters [13] and activate acetylcholine, dopamine and gaba. Neurotransmitters are compounds in the body or body tissues that play an important role as a messenger from neurons to body tissues, making it possible for the brain to respond properly and manage the body's automatic response. Acetylcholine, dopamine and gaba are types of neurotransmitters [14], each of which is important for maximizing the child's muscle movement so as to be able to develop children's motor skills optimally and children become better at controlling the body or responding to the body.

4 Conclusion

Children with special needs are children who have deficiencies, one of which is mentally retarded children. Children with mental retardation need special attention in the growth and development of children. The characteristics of children with special needs are that children have delays in thinking so that children have difficulty controlling body movements and respond well. Based on the research that has been done, it can be concluded that creative dance is a good medium to support students' motor development, because it is able to maximize the work of nerves to the brain and increase neurotransmitters and activate acetylcholine, dopamine and gaba.

It is intended that the research will serve as a resource for more researchers and as a material for thought and reference for the use of creative dance media as a stimulus medium for children with mental retardation.

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