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The Effect of Classical Music Therapy on Language Skills in Children with ASD

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Abstract

The aim of this research was to investigate whether or not autistic children benefit from classical music therapy in terms of their linguistic abilities. This study used a research design known as a pre-experimental one-group pre-test and post-test design for its investigation. The type of sampling used was called purposive sampling, and there was a total of 30 respondents in the sample. A questionnaire served as the tool for the study, and the results were evaluated using a paired t-test at a significance level of 0.05. The findings indicated that there was an impact of classical music therapy on language abilities in autistic children, as shown by a p value of 0.000 or a p value less than 0.005. According to the findings of this research, which showed that autistic children received benefits from music therapy in the form of improved language abilities, it is anticipated that parents who have children diagnosed with autism would be able to expose their children to classical music therapy. In certain therapeutic settings, music therapy may be combined with other types of treatment.

Keywords: Teacher interpersonal communication • Autistic students • Social skills

Introduction

Autism is characterized by a spectrum of conditions, the most notable of which is a delay in communication and language development [1]. The process of communication and language development is very unlike to the way it occurs in typical youngsters. Even though language is the primary means of communication, autistic children nevertheless have trouble communicating with others because they suffer from language impairments (both verbal and non-verbal) [2].

Autistic therapy is the care of children who have autism disorders in an organized and continuous way with the purpose of reducing children's behavioral difficulties and improving children's learning and development capacities [3]. According to or at least approaching children of their age, and are multi-disciplinary, which includes behavioral therapy in the form of ABA (Applied Behavior Analysis), biomedical therapy (medication), and other adjunctive therapies, specifically; speech therapy, sensory integration therapy, music therapy, and diet therapy. One sort of treatment that is used in today's world is called music therapy. This is due to the fact that, in addition to making an environment more pleasurable, music is also known to influence thought processes [4].

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Studies have shown that listening to music, particularly classical music, has a significant impact on a person's IQ (Intelligent Quotient), Emotional Intelligence and EQ (Emotional Quotient). When compared to a youngster who just sometimes listens to music, a kid who has grown up listening to music on a regular basis has a greater chance of developing higher levels of emotional and intellectual ability [5]. In addition, the researchers discovered that listening to music may boost one's creative abilities, self-confidence, and ability to interact with others, as well as raise perceptual motor development and psychomotor development. When listening to music, the millions of neurons that are scattered out across the brain will become active. The brain itself is made up of neurons. The stimulation of neurons is what leads to an increase in intellectual capacity [6]. As a result, there is a need for cooperation between educators, medical workers (including nurses), and mental health professionals (such as psychiatrists or psychologists), so that persons with autism may be diagnosed early and treated in a timely and suitable manner.

Because autistic children are unable to form social relationships, as well as because they are unable to communicate and speak in the same manner as other normal children, this will undoubtedly have a significant impact on the stimulation that is received by the senses. This contributes to the diagnosis that autistic children have intelligence levels that are below average [7]. As a result of this circumstance, they will definitely lag behind their buddies and eventually get cut off from them. Due of the factors that were discussed earlier, the process of providing stimulation to autistic children in order to cultivate their linguistic talents requires the adoption of fresh ways or alternative therapies [8]. This is because of the conditions that were outlined before. Listening to classical music may, according to one school of thought, boost a child's intelligence, as well as their capacity to focus and pay attention, lessen feelings of weariness and boredom, and even avoid feelings of exhaustion and boredom. On the other hand, not a lot of people have investigated whether or not autistic children's verbal skills may be improved by listening to classical music.

Methods

This research was conducted using a pre-experimental one-group type pre-test and post-test design for the research methodology. The method of purposive sampling was used to get the sample for this investigation [9]. This particular research used a total of thirty different respondents as its samples. In this study, data collection was carried out utilizing observation and observation methods with the purpose of monitoring how the kid got the therapy that was subsequently delivered throughout the research. The goal of this observation was to see how the child responded to the treatment. After that, it will be determined whether or not the music therapy that has been provided has had any discernible outcomes [10]. After that, the data that were obtained over the course of this research were evaluated in accordance with the guideline for evaluating linguistic abilities that was supported by observations on the development of language impairments in children who have autism.

The analysis of the data in this research, which includes coding observations, testing language abilities, and evaluating graphs, will provide the findings to be stated in language that is straightforward, unambiguous, and not difficult to comprehend [11]. Bivariate analysis was performed on two independent and dependent variables that were thought to have a connection. Statistical tests were carried out by the Sample paired T-Test test, and the significance threshold was set at less than 0.05 [12]. The purpose of this test is to examine whether or not autistic children's language abilities improve as a result of receiving treatment with classical music therapy.

Results and Discussion

Respondent's language ability before giving therapy classical music

The data shown in (Table 1) indicates that only 23.3% of autistic children have the ability to engage in active language. While 76.7% of children with autism have passive language abilities, this does not mean that autistic children cannot have active language skills. Children with autism spectrum disorder have a frequency of 23.3% when they have active language abilities.

Respondent's language ability after classical music therapy

The number of autistic children that are able to engage in active language is shown as 22 in (Table 2). This represents a proportion of autistic children that is 73.3%. while children with autism who are able to understand what is being said to them may account for as many as eight people (or 26.7% of the total population).

Comparison of language skills in autistic children before and after therapy

Before receiving treatment with classical music therapy, only seven of the twenty-three children with active autism had any language abilities at all, this accounts for 23.3% of the total. The data can be seen in (Table 3), which can be found above. The language abilities of active autistic children grew to 22 respondents after they were given classical music treatment. This represents 73.3% of the total number of respondents. In the meanwhile, before to receiving therapy with classical music, autistic children's passive language abilities were 23 responders strong (76.7%). But after they had had treatment with traditional music therapy. The ability of autistic children to use passive language decreased to 8 responders, which is 26.7% of the total.

Table 1. Distribution of Respondents by Language Ability Before Treatment

Language Skill	Frequency	%
Active	7	23,3%
Passive	23	76,7%
Total	**30**	**100%**

Table 2. Distribution of Respondents According to Language Ability After Treatment

Language Skill	Frequency	%
Active	22	73,3%
Passive	8	26,7%
Total	**30**	**100%**

The effect of classical music therapy on language skills in autistic children

In order to assess whether or not there is a link that can be considered statistically significant between the two variables in question, a T-test was carried out. In addition, the purpose is to determine the degree to which the two sets of data have substantially distinct means from one another. However, before anything further was done, a normality test was performed to see whether or not the data on linguistic talents followed a normal distribution. The purpose of this test was to determine whether or not the data were reliable. The Shapiro-Wilk Test was carried out in order to establish whether or not the data gathered for this investigation followed a normal distribution. Because the sample that was studied consisted of less than or equal to 50 people, this test had to be carried out. It was discovered that the data followed a normal distribution when it was found that the p values for both before and after classical music treatment were higher than 0.05. This led to the conclusion that the data were normally distributed. The p value for language skills in autistic children was found to be 0.053 before they received classical music treatment, and the p value for language skills was found to be 0.096 after they had classical music therapy (Table 4).

As can be seen in the table to the right, the statistical tests that were performed revealed data that were statistically significant, with a p value that was lower than 0.001. (p less than 0.05). This suggests that there is a detectable change in a person's language capacities both before and after getting treatment with classical music therapy. This was shown to be the case in both cases. The findings of this study provide evidence that the hypothesis that was investigated and found to be correct, namely, that children with autism can benefit from receiving classical music therapy because it improves their language abilities. This was demonstrated by the fact that the hypothesis was supported by the findings of the study. At a significance level of 5%, the hypothesis that there is no influence of classical music therapy on enhancing language skills in autistic children was rejected, which implies that there is an impact of this kind. And was successful in increasing the average value, which increased all the way from 43.06 to 52.06.

According to the criteria and scores that are now in place, which are based on the questionnaire test, a score of 49 or above shows active language abilities, whilst a score below 49 indicates passive language skills. The majority of the individuals who participated in the classical music therapy study had scores that fell into the passive language skills category, as demonstrated by the average score of 43.06 that was obtained before the

Table 3. Comparative Results of Language Ability in Autistic Children Before and After Therapy

Language Skill	Before		After		Total	
	N	%	N	%	N	%
Active	7	23,3	22	73,3%	30	100
Passive	23	76,7	8	26,7%	30	100

Table 4. Results of T-Test on Language Ability in Autistic Children Before and After Therapy

	N	Mean	Mean Interval	Std. Dev	Min	Max	SE	Sig. *P Value*
Before	30	43,06	9,0	6,86	26	56	1,25	<0,001
After	30	52,06		7,28	36	62	1,33	

participants were offered treatment. The average value of language skills demonstrates an increase in language abilities in children after receiving classical music therapy, with a value of 52.06 being in active language skills. This finding is supported by the fact that the average value of language skills is higher. The fact that the importance of language abilities falls within the "active" category lends credence to the aforementioned discovery.

In the table that is positioned above this one, the difference between the average score of language skills before and after getting classical music therapy is shown to be 9.0. This indicates that the treatment was effective in improving language abilities. There was an increase in the participants' average score on a test of their language skills both before and after they got treatment in the form of classical music therapy. Therefore, it is feasible to arrive at the conclusion that the use of classical therapy may be capable of enhancing children's existing linguistic capabilities.

Discussion

The findings of this study provide even more credence to the hypothesis that children's language skills might be considerably enhanced by the use of music therapy techniques. Children whose speaking abilities are worked on in music therapy show significant progress, especially in the areas of conceptualization, symbolization, and comprehension [13]. Processing music requires cooperation between the left and right hemispheres of the brain, as stated by the views of a number of trained professionals. Children who have autism may have improvements in both their cognitive function and their ability to interact with others as a result of participating in music therapy [14]. When autistic children take part in activities that entail listening to music, it is believed that they will begin to communicate, even if this can only be done via music. This theory is supported by research.

As a consequence of this, music therapists have come to the knowledge that autistic children respond more easily and more quickly to musical sounds than they do to verbal directives or physical tactics. This is a discovery that has significant implications for the treatment of autistic children. Music, which has a strong connection to it, has a profound effect on the brain and is closely tied to it as well [15]. It has been shown via studies that music, and in particular classical music, has a considerable influence on both IQ (Intelligent Quotient) and EQ (Emotional Quotient). It is recommended that women who are pregnant play and listen to music during their pregnancy. This is due to the possibility that music may influence the way in which a baby's brain develops while it is still within the mother's womb. A child who has grown up listening to music on a consistent basis has a larger possibility of having higher levels of emotional and intellectual aptitude than a youngster who just listens to music on occasion. This is because music has been shown to stimulate the brain and improve memory [16].

According to the findings of this study, it is possible to draw the conclusion that the majority of the autistic children who participated in the study and had some level of verbal ability benefited from receiving classical music therapy because they improved their language skills. These children were able to communicate better with their parents and teachers after receiving this treatment. The subjects who had been less expressive, had slower reactions, were less communicative, were less able to make eye contact when speaking, were less able to repeat words spoken by others, and were less able to recognize the names of objects in their immediate environment prior to receiving classical music therapy showed significant improvement in each of these areas following treatment [17]. Subjects are more expressive, reply more quickly, are chattier, are better able to repeat sentences that others have said, create eye contact more often, and are more familiar with the names of more items in their immediate area.

Music therapy may be beneficial for autistic children who are able to talk as a means of improving their language abilities and reducing the severity of the symptoms associated with language challenges [18]. Although it is not always the case, it is possible that some autistic children have a positive reaction to music as a motivator. However, this is not the case in all situations. To put it another way, the use of music therapy, more specifically classical music therapy, may be an approach that is successful in enhancing language skills in autistic children.

Conclusion

Prior to receiving treatment with classical music therapy, there were seven autistic children with active language abilities, representing 23.3% of the total population of autistic children. In the meanwhile, there are 23 children with autism who have passive language capabilities, representing 76.7% of the total. After receiving classical music treatment, autistic children have shown improvements in their capacity to communicate via language. Specifically, the percentage of autistic children with active language abilities has grown from 12 to 22 (73.3%). While children with autism who have receptive language abilities may make up to eight persons (26.7% of the total population). With a p-value of less than 0.001, there is a statistically significant correlation between the use of classical music therapy and improved language abilities in autistic children.

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