

Sound Therapy Method Through Quranic Recitation On Children With Autism

Ishak, H

*Universiti Kebangsaan Malaysia (UKM), 43600 UKM Bangi, Selangor.
hamdi@ukm.edu.my*

Majid, LA

*Universiti Kebangsaan Malaysia (UKM), 43600 UKM Bangi, Selangor.
umilm@ukm.edu.my*

Zulkafli, NS

*Universiti Kebangsaan Malaysia (UKM), 43600 UKM Bangi, Selangor.
helza_94@yahoo.com*

Mohd Saad, MF

*Universiti Kebangsaan Malaysia (UKM), 43600 UKM Bangi, Selangor.
faizam@ukm.edu.my*

Mohd Aderi Che Noh

*Sultan Idris Education University
aderi@fsk.upsi.edu.my*

Abstract

Children with autism are often misunderstood by society as aggressive and violent individuals because of their behavioural problems. Children with autism also have problems in communication and social interaction, thus it makes them difficult to live their daily life as other normal children. Sound therapy through Quranic recitation has proven to treat a variety of human diseases including giving positive effects on autism symptoms. This article aims to study sound therapy method through Quranic recitation on autism children. The literature review method has been used in this study as the research method, in which the previous studies related to sound therapy through Quranic recitation and autism have been synthesised and analysed. The data collected in this study were analysed using descriptive analysis to describe and provide a systematic explanation of certain facts. Implications of this study showed that sound therapy through Quranic recitation able to have effective healing effects on autism children including the aspects of behaviour, communication and social interaction. Parents and teachers are encouraged to implement the sound therapy method through the recitation of the Quran in daily life as well as for learning sessions of the children with autism, therefore, the autism symptoms in these children can be administered.

Keywords: *sound therapy, autism, behaviour, communication, social interaction*

Introduction

Children with autism will have some degree of learning difficulties. They are the individuals who suffer from developmental disorders that result in disabilities in communication, social interaction and behaviour (Oliveira & Sertie 2017). The term autism is originated from two words, "autos" meaning self and "ism" which means flow (Wan Nasyrudin & Hisham 2013). Thus, a person with autism is someone who is in his or her own world. The symptoms

experienced by these children had caused them to be unable to perform daily activities like other normal children.

Children with autism do not have a specific drug treatment in dealing with their experienced symptoms. One of the methods that can help children with autism in their daily life is through sound therapy. The sound therapy has been recognized by physicians around the world as an alternative method of treating various human diseases (Mahjoob et al. 2014 & Pashib et al. 2014). Sound therapy is also a systematic treatment with the use of sound to improve person's physiological and psychological state (Oztunc 2015). It is the same with the sound therapy through the recitation of the Quran which contains remedies for physical and spiritual illness. It is mentioned in Chapter al-Isra, verse 82:

Allah says (the meaning): And We send down of the Quran that which is healing and mercy for the believers, but it does not increase the wrongdoers except in loss.

According to Ibn Kathir (1999), the Quran is a grace that can increase faith, wisdom and good deeds of believer. The Quran will be a cure and a blessing to those who listened, memorized and practiced. Sayyid Qutb (2010) explained that the Quran was revealed by Allah Almighty contain cures and mercy to all the restlessness and anxiety inherent in the human soul. The reason is because the Quran is the link between Allah Almighty and His servants that can bring peace and tranquillity as well as treatment to the physical and spiritual illnesses.

Previous studies have shown that the Quran is able to alleviate the emotional stress experienced by individuals by channelling them a sense of calm even when they do not understand Arabic language (Dini Farhana & Melati 2011). The Quran has a harmonious set of letters as well as varying letter tones, and when these verses are listened and recited by a person, it can bring various positive effects such as increasing focus, controlling emotions and improving communication. Therefore, this research was developed to study the effects of sound therapy through Quranic recitation on children with autism.

Definition of Autism

Wozniak (2016) believed that autism terminology is known as a spectrum disorder because every individual with autism has different symptoms to each other. Meanwhile, Sung Koo (2015) stated that autism is a neurological disorder that occurred in a person and caused them to suffer from poor communication, social interaction and behaviour. Autism syndrome also affects integration processing and information management which has a significant impact on functional skills and learning performances (Tilton 2014).

According to the *Individuals with Disabilities Education Act (IDEA)*, autism is a person's developmental disability and has a negative impact on verbal and nonverbal communication as well as social interaction. This condition can be seen in children with autism before their age reaches three years old. The *Lanternman Developmental Disabilities Services Act and Related Laws 2019* defines 'developmental disability' as a defect that occurs before the age of 18 and is expected to continue on a permanent disability for the entire life. These include cognitive impairment, *cerebral palsy*, epilepsy and autism.

In addition, a study by Loomes, Hull and Mandy (2017) stated that autism occurs more frequently in boys, which is four times greater than in girls. Therefore, it can be concluded that children with autism are individuals with neurological disorders that result in communication, social and behavioural disabilities that make it difficult for them to live their daily life.

Factors of Autism

Statistics released by the Centers for Disease Control and Prevention (CDC) show that autism syndrome has increased by 15 percent in 2018 with a ratio of 1:59 in children to 1:68 in 2014. The exact cause of autism remains unknown, however, there are various factors that have been identified as causes of autism including genetics, viral infections, iron deficiency, melatonin deficiency, emotional instability of pregnant mother, exposure to toxic substances and intake of medication.

i) Genetic

Genetic is a leading cause of autism syndrome. A study conducted by Oliveira and Bertie (2017) and Rylaarsdam and Gamboa (2019) stated that autism spectrum disorders are complex diseases and heterogeneous due to different factors of genetic. Hundreds of genes have been found that cause disabilities in children with autism such as poor in communication, social interaction and behaviour.

Genetic factor can also cause a family to have another autism child with probability at 25 times higher than the whole population (Almandil et al. 2019). In addition, the risk for identical twins to have autism syndrome are from 60 to 90 percent while fraternal twins are from 0 to 24 percent.

ii) Infection of Virus

Viral infections during pregnancy is one of the causes of autism. Mothers exposed to prenatal virus infections such as *rubella*, measles and mumps will negatively affect the growth of brain cells and disturb the function of baby's brain (Libbey et al. 2005; White 2012).

iii) Iron Deficiency

A study done by Vela et al. (2015) found that iron deficiency can cause symptoms of autism such as difficulty developing language skills, poor in communication and social interaction. Gunes, Ekinsi and Celik (2017) reported that when a person does not have enough iron, this can lead to a detrimental effect on brain function and resulted in learning difficulties and memory impairment.

iv) Melatonin Deficiency

Autism syndrome able to happen to individuals as a result of melatonin deficiency. The production of melatonin in the human body is important because it acts as a regulator of sleep and wakefulness. Melatonin deficiency in autism children can lead to sleep disorder (Rossignol & Frye 2011). Meanwhile, a study conducted by Vriend et al. (2011) found that low quality of sleep could influence the negative behaviour of autism children to the extent that their problems were difficult to treat.

v) Emotional instability of pregnant mother

Unstable pregnancy emotions such as stress can affect the unborn babies. According to the study of Beversdorf, Stevens and Jones (2018), the symptoms present in autism children are related to the stress experienced by mothers during pregnancy. Bolte, Girdler and Marschik

(2019) also stated that complications during childbirth can put pressure on mothers as they continue to jeopardize the health of newborns such as brain haemorrhage and although the babies are safe from the brain haemorrhage, they are at risk for diagnosed with autism.

vi) Exposure to Toxic Substances

Autism syndrome can also occur in children when they are exposed to toxic substances. Toxic substances such as valporic acid; used to treat epilepsy can lead to several health problems including impaired of fine and gross coordination, and behavioural problems (Kolozi et al. 2009). Gracbrucker (2013) said that pregnant women exposed to toxic substances will negatively affect fetal development and cause birth defects.

vii) Intake of Medication

Pregnant medications such as thalidomide pills used to treat allergies are one of the leading causes of autism (James & Scialli 2011). This is because the thalidomide pills can have adverse effects such as severe birth defects. A study conducted by Vargesson (2015) found that most individuals with autism syndrome are due to taking these pills resulting in impaired brain development and nervous system problems.

Characteristics of Autism

Children with autism exhibit weird and bizarre characteristics. The characteristics of each child with autism differ from each other. Some children with autism exhibit aggressive, self-injurious, and hyperactive behaviour while some show passive behaviour. Autism symptoms can be identified in children from age 18 to 3 years old. There are three main characteristics of autism, which are language and communication, social interaction and behaviour.

i) Language and Communication

Children with autism exhibit difficulties in language and communication. According to Brown and Elder (2014), communication is an information exchanged with others in different forms and includes verbal and symbols communication. Language is a key tool for launching a communication and whenever children do not have language acquisition, therefore they have difficulty to communicate (Fariza et al. 2017). According to the study by Zainiah et al. (2017), the language skills that children will begin to master after birth are listening and speaking skills. However, it is common for children with autism to exhibit speech and language disorders before they are 3 years old. This is in line with Kjellmer (2018) statement explaining that children with autism are unable to master the receptive and expressive language and therefore, this matter will lead to have difficulty in social interaction.

A person's communication development began in childhood and crying was the first form of social interaction (Esposito & Venuti 2010). In addition, a study conducted by Brown and Elder (2014) showed that infants with autism syndrome will not be able to babble same as other normal babies. However, some autism children can babble like other normal babies. Salmihah (2016) found that some children with autism have the ability to speak but they have become silent when they are 10 years old and some of them are able to speak but are not considered as speech because they only making some sound.

Besides that, children with autism can be identified through the use of repetitive words or referred to as echolalia (Tilton 2014). Chen and Jen Kuo (2017) stated that echolalia is divided into three forms of echolalia, which are exact echolalia or imitation, mitigated or modified echolalia, and delayed echolalia. Furthermore, self-talk or monologue is also a feature that can be seen in autism children when they are 9 or 10 years old (Norfishah 2015 & Fariza et al. 2017). Generally, these children will be monologued if they are unable to communicate and interact with others. As a conclusion, mental disorders of autism children have caused language and communication problems that bother their daily life.

ii) Social Interaction

Autism spectrum disorder will be causing children with autism to have problems in social interaction, including difficulties to interact with their peers and to interpret communication skills (Lagasse 2017). Children with autism are also unable to adapt to the surrounding situations and they also do not like to make eyes contact with others eventhough they are actually listen to other people speeches (Karal & Wolfe 2018).

The social interaction of children with autism is low and can be seen as they do not care about others and the surrounding environment (Yeo & Teng 2015). According to Norfishah (2015), children with autism exhibited different social interactions compared to normal children such as having difficulty in expressing happiness or sadness. Meanwhile, Mantziou, Vrellis and Mikropoulos (2015) found that children with autism are not sensitive to feelings expressed by others and lack of empathy. This is due to their inability to recognize the facial expressions and emotions displayed by others.

Furthermore, children with autism disliked changes in environment that are different from those of they used to live (Salmihah 2016). These environmental changes will lead to emotional and behaviour impaired due to changes in their daily routine until their focus on any activities are disturbed. In conclusion, the inability to interact socially give adverse effect towards children with autism because they are unable to socialize with other people and making them isolated from society.

iii) Behaviour

The behaviour displayed by children with autism are unusual and different from other normal children. A study conducted by Kirby (2016) found that children with autism exhibited repetitive behaviours such as hand stimming, body shaking, hand clapping and hand flapping. Whereas Van Dongen et al. (2015) stated that children with autism have hyperactive or hypoactive behaviours. However, most of them exhibited hyperactive behaviours such as unable to sit still and they tend to run in a direction unpurposely (Wan Nasyrudin & Hisham 2013).

Self-harming behaviours such as hand biting, facial bruising and headaches have also been shown by children with autism (Richards et al. 2016). These self-harming autistic children are unaware of what they are doing because these behaviours are beyond their control. In addition, children with autism also have the habit of posing and imitating the actions of others such as reading, colouring and drawing (Norfishah 2015).

Furthermore, Giacomo et al. (2016) based on the observation that had been made found that children with autism become aggressive when they are facing with a different

environment than their usual environment. This behaviour is shown because they are frustrated and angry when their need are not understood by others. Fariza et al. (2017) also added that children with autism exhibit aggressive behaviour through negative reactions such as damaging objects and raging.

Sensitive and emotional behaviours such as crying and screaming are also often exhibited by children with autism (Fariza et al. 2017). These behaviours will be happened by when their need or desire are not fulfilling or being in a new situation and environment. They also tend to be sensitive and emotional when they are asking to do a task. In addition, autistic children also shown imaginative behaviour such as fantasizing, acting and playing a character based on the story that they had watched (Norfishah 2015). Overall, each child with autism has a different behaviour to each other. The behavioural problems they had to deal with must be addressed as these problems can cause failure in their learning activities.

DEFINITION OF SOUND THERAPY

According to the dictionary of *Dewan Bahasa dan Pustaka* (2020), therapy is a method used on individuals to treat a physical or mental illness through the process of recovery without the use of drugs and surgery. Meanwhile, Yasmin (2013) stated that therapy in special education is a method applied to individuals with special needs to help them achieve emotional, social, cognitive, psychomotor and other developments.

The World Federation of Music Therapy (WFMT) defines sound therapy as a music professional and its elements used in medicine, education and daily life to improve quality of life, physical, communication, social, emotional, intellectual, and spiritual well-being. Elements of sound therapy comprising various forms of sound that can also be used for the purpose of regeneration in modern life to heal human health (Dobrzynska et al. 2006). Oztunc (2015) on the other hand believed that sound therapy is a systematic treatment method that influences on a person physiology and psychology.

Furthermore, sound therapy can bring changes in a person's life through thoughts and emotions because of the therapeutics effects (Alves et al. 2016). According to a study conducted by Siti Norhidayah and Roziyah (2017), sound therapy is also referred to as music therapy. This is due to the production of music comes from medium waves such as water and air that can produce sound and can influence human psychology and emotions. In conclusion, sound therapy is a treatment that uses sound or music to heal and improve the quality of human life.

SOUND THERAPY THROUGH QURANIC RECITATION

Al-Quran is a revelation that is revealed by Allah Almighty to the Prophet Muhammad Peace Be Upon Him (P.B.U.H) to be used as a guidance to human to ensure the happiness, security and well-being in this world and the hereafter. The content of the Quran covers all aspects of human life including healing of all diseases whether physical or spiritual. The Quran also contains verses related to health and treatment which can provide comfort to anyone who recite, listen and practice the teachings. It is mentioned in Chapter Fussilat, verse 44:

Allah says (the meaning): "The Quran is a light and a cure for the believers."

Ibn Kathir (1999) explained that the Quran is a remedy for all the confusion and doubt found in the heart of believers. Quraish Shihab (2009) also stated that the Quran is a guide to believers that can cure all kinds of spiritual illness and anxieties. The Quran is able to influence individuals by lifting a new spirit that not only works for a person but also have many positive effects to the surrounding community (Sayyid Qutb 2010).

Sound therapy through recitation of the Quran is a method in which individuals listen to the verses of the Quran in order to cure the suffering from various illness in a person body. According to a study conducted by Dini Farhana and Melati (2011), sound therapy through recitation of the Quran has the potential to give peace and tranquillity to anyone who listen it eventhough they do not understand the Arabic language. This is because the frequency and waveform found in the verses of the Quran can generate elements that give balance and effect to brain cells (Nur Hidayah & Sharifah Norshah Bani 2018).

According to Sadeghi (2011), sound therapy through recitation of the Quran has an effective effect on human psychology. This can be proved when a person listens to the recitation of the Quran, their mental health is improved by lowering the level of their stress. Reciting, listening and looking at the Quranic verses is proven to help reduce the fatigue, boredom, depression and aggressive behaviour that may occur to a person and enable them to lead a better daily life (Khan et al. 2014 & Muhammad Nubli 2016). Alhouseini et al. (2014) explained that listening to Quranic recitation not only improve human mental health but they also find solace or peace because the recitations influence the internal factors of human and a major source for stress treatment.

Sound therapy through Quranic recitation is also used as a non-pharmacological treatment to reduce the anxiety disorders experienced by individuals (Ghiasi & Keramat 2018). This had been witnessed with a study conducted by Hamidiyanti and Pratiwi (2019) through a quasi-experimental research to examine the effect of listening to the Quran on anxiety levels of pregnant women. The study found that sound therapy through Quranic recitation was able to reduce the level of anxiety experienced by pregnant women in the intervention group in contrast to the control group that did not show a decrease in anxiety levels due to the absence of sound therapy through Quranic recitation. Furthermore, listening to Quranic recitation can be a healing tool that can reduce stress hormones, increase endorphins hormone that help divert people from fear and anxiety and as well as improving their body system.

A research done by Fatimah and Noor (2015) examined the effectiveness of listening to Quranic recitation on changing levels of elderly insomnia in elderly homes. The findings showed that the elderly in the given intervention group of reciting the Quran exhibit decreased insomnia levels compared with the control group whom were not listen to the Quranic recitation. The reason behind this finding is the Quran has a role to play in the well-being of a person while maintaining the health of the soul and strengthening the mental capacity to deal with the sleep disorder activities. Sound vibrations from reciting the Quranic verses enable the human body to vibrate and create harmonious vibration patterns that can provide an effective effect on human health including treating the insomnia. It is mentioned in Chapter az-Zumar, verse 23:

Allah says (the meaning): Allah has sent down the best statement: a consistent Book wherein is reiteration. The skins shiver therefrom of those who fear their Lord; then their skins and their hearts relax at the remembrance of Allah. That is the guidance of

Allah by which He guides whom He wills. And one whom Allah leaves astray - for him there is no guide.

According to Ibn Kathir (1999), the above verse explained that when people listen to the Quranic recitation, they will be shake because of the fear of Allah Almighty and then, the feeling will bring peace to the heart that remembers Allah Almighty. The serenity they felt was the guidance given from Allah Almighty. Based on this verse, through Quranic recitation can be the healing tool to various human diseases, for example activate the inactive cells and putting them at ease and rest state.

Furthermore, the therapeutic use of sound through the recitation of the Quran is an effective way in treating human physiology. A study by Siti Awa (2014) showed that reciting of the Quran in correct way (with *tajweed*) can encourage a person to listen more often and resulting to a decrease in heart rate. The decreasing in heart rate usually will occur when physiological response of body is relaxed. This is agreed by El-Hady and Kandeel (2017) and Mansouri et al. (2017) who found that patients' blood pressure, respiratory rate, pulse rate and oxygen partial pressure are becoming stable and increased as they listened to the Quranic recitation. Sound therapy through Quranic recitation also has a positive effect on physiological parameters of premature baby during plebotomy, which helps reduce heart rate, respiratory rate and increase oxygen saturation (Majidipour et al. 2017).

Moreover, listening to the recitation of the Quran can have a positive effect on human's memory. Norsiah and Nurul Amira (2017) in a quasi-experimental study that was conducted on 10 participants showed that reading al-Qursi verses has proven to stimulate the temporal lobe which functioning in memorization. The results of this study showed that the learning and memorization of the participants was better than before they listened to the recitation of the Quran. The progress of the participants in this study is due to the increase in alpha waves that act to give tranquillity to improve their memories. The same result achieved from a study conducted by Perdana Suteja Putra et al. (2017) which stated that sound therapy through Quranic recitation given to the participants are able to improve their focus and memorization.

Meanwhile, Noor Ashikin et al. (2012) and Al-Galal and Alshaikhli (2017) studied and compared the effects of listening to the Quran and music on human brain by using an electroencephalogram (EEG). The results showed a higher increasing of alpha wave which are 12.67 percent after listening to the Quranic recitations compared to after listening to music with 9.96 percent. Listen to the Quranic recitation is proven to provide the balance of brain waves, bring tranquillity and; improve emotions and focus (Shekha, Hassan & Othman 2013).

Therefore, sound therapy through recitation of the Quran proves to have an effective effect that can cure various illness that occur to human and enable them to live in better daily life. These include improving the memory, psychology, physiology and focus. Sound therapy through Quranic recitation given to a person produces an alpha wave associated with calmness and tranquillity. Quranic verses also have their own frequency and when they are listen by the human, it will have a direct effect as it can balance the body, energy and activate damaged brain cells.

EFFECTS OF SOUND THERAPY THROUGH QURANIC RECITATION TOWARDS CHILDREN WITH AUTISM

Effect on Communication and Social Interaction

Children with autism syndrome have disability in communication. Sound therapy through Quranic recitation is said to help these children deal and improve communication problems. The use of sound therapy through Quranic recitation are applied to the children with autism for their memory therapy which indirectly will improve their communication skills (Siti Patonah, Zulkifli & Durriyyah Sharifah 2013).

Religions therapy such as reciting the Quran to children with autism before starting a learning capable to provide tranquillity and increased their focus for learning sessions. Quran recitation that is played to children with autism will allow them to pronounce words found in the Quran with correct characteristics of letters, and train them to improve their communication capabilities (Fithri 2011). However, eventhough the children do not understand every verses of the Quranic recitation, but this therapy will give effective effects towards their communication skills until they can even recite the Quranic verses (Mohd Amzari et al. 2013).

Furthermore, difficulties in social interactions occurring in children with autism can also be overcome by using sound therapy methods through Quranic recitation. Fithri (2011) stated that children with autism show changes in their social interaction after listening to the Quranic recitation. These children are beginning to show an effort to interact with other people and to be aware of everything happening around them.

Impact on Behaviour

The sound therapy approach through Quranic recitation can be applied to children with autism who are facing emotional and behavioural problems. When the Quranic recitation is always being played to these children, it will familiarize them with good verses and indirectly will improve their emotional state (Siti Patonah, Zulkifli & Durriyyah Sharifah 2013). Repeated recitation of Quranic verses to children with autism can continuously activate cells in damaged brain by restoring the balance of these cells to help them deal with their emotional problems (Kahel 2010).

In addition, a study conducted by Mayrani and Hartati (2013) showed a reduction in the behavioural disorders experienced by children with autism after they were given sound therapy through Quranic recitation. Listening to the Quranic recitation help to control the emotions and body movements of these children and enable them to express emotions correctly under appropriate circumstances and situations. Sound therapy through recitation of the Quran produces two types of waves in human brain; The first wave is alpha wave and it is related to tranquillity and restful. The second wave is deltaic wave. The role of deltaic wave is to influence and control the body movements (Shekha, Hassan & Othman 2013; Mayrani & Hartati 2013).

Astuti et al. (2017) through experimental studies have also found that sound therapy through Quranic recitation is an effective therapy in developing the behaviour of children with autism. The result revealed through the average value readings that show significant changes in the behaviour of children with autism. Listening to the Quranic recitation before they start learning their sessions can help to calm down, able to sit in the class and reduce their

movements such as clapping and flapping (Fithri 2011). The characteristics of Arabic words in the Quran and related to each other give these children the opportunity to stay focused while reciting the Quran and to reduce their tantrum behaviour during the learning session. Meanwhile, a study done by Salmihah et al. (2018) showed that Quranic teaching if applied to children with autism will give the children a sense of calm and tranquillity as well as, help them to control their sexual behaviour.

Conclusion

The Quran is a miracle given by Allah Almighty and revealed to be a guidance in human life to guarantee happiness and well-being in the world and the hereafter. The contents of the Quran cover all aspects of human life such as literature, Shari'ah as well as the treatment for various diseases. The Quran also contains a harmonious set of letters that can have positive effects to the individual who recite, listen and practices the teaching.

Each Quranic recitation either recite or listen has its own amount of frequency that passes through the ear and moves through and later can affect and balance damaged brain cells. In addition, reciting and listening to the Quranic verses can also provide energy to cells that are inactive and give respond to the treatment of various human diseases such as stress problem, imbalanced emotion, communication problem, behavioural changes, depression and others.

Sound therapy through recitation of the Quran is one of the alternative methods that can be used to deal with a variety of human diseases including symptoms of autism syndrome such as inability to communicate and interact socially as well as strange and unusual behaviour problems. Sound therapy through recitation of the Quran acts based on the concept of sound therapy or referred to as sound vibration. Whenever the sound vibrations produced from Quranic recitation or from listening to the Quranic verses, it will also cause human body to vibrate as in response to the formation of harmonious vibration patterns that can give positive effects to these children.

The implications of this study show that sound therapy through Quranic recitation has proven to be able to address the communication, social interaction and behaviour problems of children with autism, therefore it is a helpful approach for them to lead their life as other normal children. As a conclusion, it is recommended for parents and teachers to use this method as one of the ways to help children with autism in developing their skills.

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