

Application The Aikipressure Techniques to Improve The Development of Children with Special Needs: A Qualitative Study

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ABSTRACT

Purpose: describe how to apply *aikipressure* techniques to improve the development of children with special needs in the development clinic health center, Sukoharjo, Central Java, Indonesia.

Methodology: a descriptive qualitative design. Determination of research subjects by purposive sampling includes the following criteria: 1) mothers who have children with special needs are members of the development clinic health center; 2) mothers who want to give acupressure therapy to their children; 3) mothers who are willing to be respondents; 4) mothers who are willing to provide data according to the research questions. The research was conducted in September-November 2021. The research site was in the development clinic health center, Sukoharjo, Central Java, Indonesia. The time of data collection was carried out for 1 month with monitoring carried out every 1 week. The *aikipressure* technique was carried out every day by the parents and accompanied by the research team.

Results: Interviews were conducted with 10 main informants, 1 key informant and 1 supporting informant. Characteristics of the main informants, namely 1 male informant and 9 female informants, aged between 27-44 years, the majority are housewives, the age of children is in the range of 2.5-14 years. Characteristics of informants based on the condition of the child, namely 1 child hydrocephalus, 5 children with cerebral palsy, 2 children with hyperactivity and 2 children with Down syndrome. The advantages of *aikipressure* are simple, effective and efficient.

Applications/Originality/Value: The novelty of this research is the application of *aikipressure* therapy in improving the development of children with special needs. *Aikipressure* therapy can be done by parents independently.

Keyword: aikipressure; development; children

INTRODUCTION SECTION

Developmental problems in children are common and require evaluation from the neurological aspect of the child. Therefore, early diagnosis and recognition the sign of developmental disorders is very important (Tjandrajani et al., 2012). The results of a study conducted in the United States reported that 15.1% of children under the age of 18 years (approximately 11.2 million) were estimated to have special health care needs. Overall, 23% of households in the United States have at least 1 child with special health care needs (Glassman, 2017).

The true prevalence of developmental delay is not known with certainty. The prevalence of delay increased with age in all domains. It is estimated that 5-10% of children experience developmental delays. The results of research conducted by (Tjandrajani et al., 2012) showed that among the 604 new patients evaluated, 187 (30.9%) patients with general developmental delays, 93 cases (49.7%) of them had a clear cause, namely congenital abnormalities, microcephaly, macrocephaly, epilepsy, sensory disturbances, integration, febrile seizures, encephalitis, cerebral palsy, congenital hypothyroidism, Down syndrome, history of asphyxia, and ADHD. The remaining 94 (50.3%) were without comorbidities, consisting of 62 (66%) males and 32 females. Men are at a higher risk of experiencing delays in communication, gross motor and social-personal development compared to women (Tjandrajani et al., 2012; Correia et al., 2019).

The impact of developmental delays is one of the limitations of body functions, including impaired breathing or respiration, swallowing or digestion, blood circulation, chronic physical pain including headaches, limited vision, hearing, etc. These limitations also include limitations in activities, movement, using hands, learning, understanding or paying attention, speaking or communicating (Glassman, 2017).

The most common causes of developmental delay are chromosomal abnormalities and brain malformations, but there are many other causes as well. General developmental delay in patients with significant physical abnormalities or a history of severe disease can be analyzed/assessed earlier, but this is more difficult in patients with normal physique and no history of severe disease or other comorbidities. If stimulation and intervention are carried out only based on the main complaint without assessing other developments, then the management of general developmental delay is not optimal, and this chief complaint often does not always reflect the actual situation. Appropriate intervention is needed to improve child development (Tjandrajani et al., 2012; Zhang et al., 2018).

This research was conducted as an effort to improve the development of children with special needs with a simpler method and focus on problem solving. The novelty of this research is the provision of aikipressure techniques in improving the development of children with special needs. *Aikipressure* is a form of developing massage methods for improving muscles, nerves and spine inspired by the Aiki Taiso movement (aikido movement technique), by rubbing, massaging, and pressing the body surface in order to support promotive, preventive and rehabilitative efforts. The advantages of *aikipressure* are simple, effective and efficient. This study discusses how the application of *aikipressure* techniques in improving the development of children with special needs. The discussion raised several research questions, including: 1) what are the advantages of aikipressure technique? 2) what are the disadvantages of *aikipressure* technique? 3) How was the condition of the child before being given aikipressure therapy? 4) how is the development of personal social, language skills, fine motor and gross motor skills in children after being given *aikipressure* techniques?. The purpose of this study was to describe how the application of *aikipressure* techniques in improving the development of children with special needs in the development clinic health center, Sukoharjo, Central Java, Indonesia.

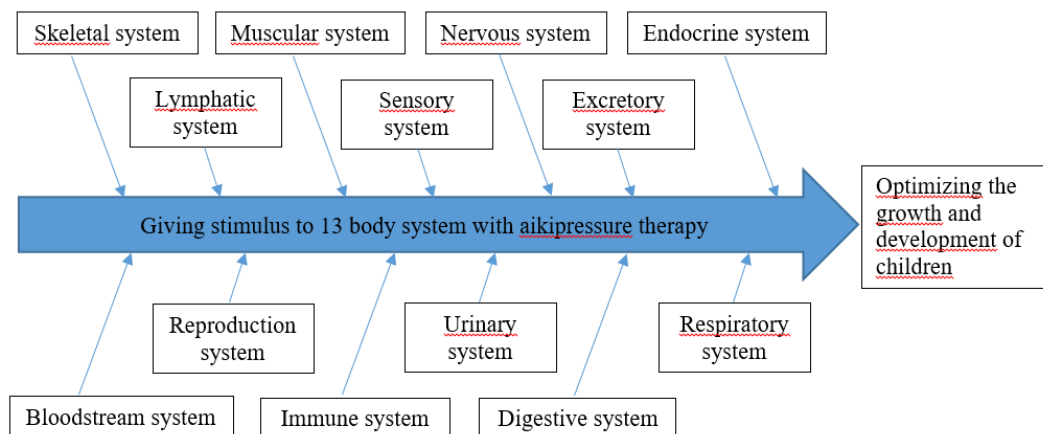


Figure 1. Fishbone research about about *aikipressure* therapy mecanism for optimizing children's growth and development

METHOD

This study used a descriptive qualitative design that produces descriptive data in the form of written and spoken words from people and observed behavior. This study describes how the application of *aikipressure* techniques in improving the development of children with special needs in the development clinic health center, Sukoharjo, Central Java, Indonesia.

Determination of research subjects was carried out by purposive sampling, namely the determination of research subjects according to the criteria and research objectives. The subjects of this research are parents who have children with special needs with the following criteria: 1) mothers who are members of the development clinic health center, Sukoharjo, Central Java, Indonesia.; 2) mothers who want to give *aikipressure* therapy to their children; 3) mothers who are willing to be respondents; 4) mothers who are willing to provide data according to the research questions. The focus of the qualitative research study was the feelings, experiences, meanings that parents get regarding the application of *aikipressure* techniques given to children with special needs.

The research was conducted in September-November 2021. The research site was in the development clinic health center, Sukoharjo, Central Java, Indonesia. The time of data collection was carried out for 1 month with monitoring carried out every 1 week. The *aikipressure* technique is carried out every day by the child's parents and accompanied by the research team. Qualitative data was collected by means of in-depth interviews and documents. The data collection instrument used observation sheets and interview guides. Qualitative data analysis was carried out in 3 stages, namely: 1) data reduction, namely summarizing, selecting the main points, focusing on the important things, looking for themes and patterns and discarding unnecessary ones; 2) data presentation; 3) conclusion or verification (Siyoto and Sodik, 2015; Yusuf, 2017; Anggito and Setiawan, 2018).

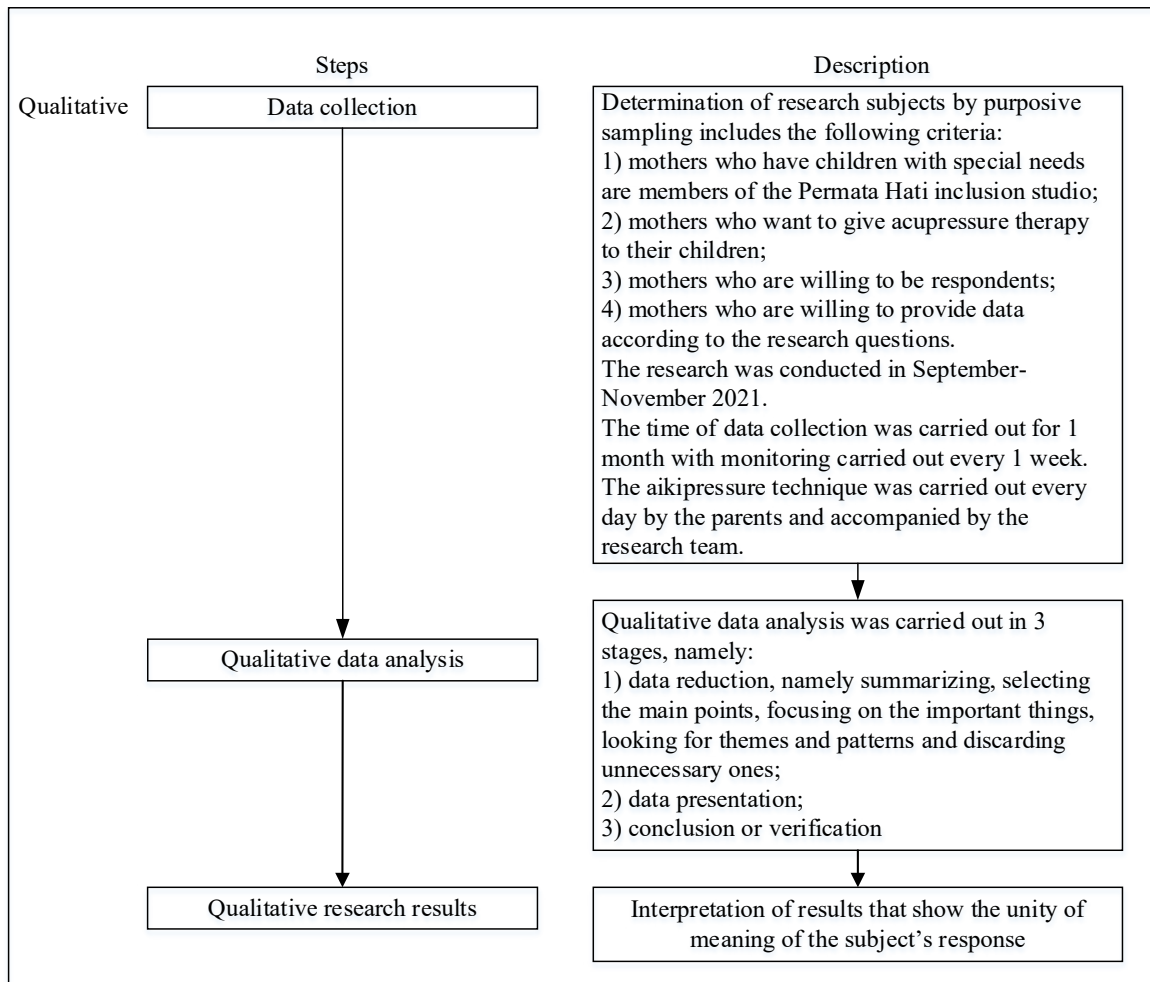


Figure 2. Research stages

RESULTS AND DISCUSSION

Interviews were conducted with 10 main informants, 1 key informant and 1 supporting informant. The main informant in this study is that parents can be represented by the father or mother of children with special needs. The key informant in this study was the leader of in the development clinic health center, Sukoharjo, Central Java, Indonesia. Supporting informants in this study are experienced health therapists in the field of pediatric therapists as well as formulators of aikupressure techniques. Key informants are informants who have comprehensive information about the problems that occur. Key informants not only know about conditions/phenomena in society in general but also understand information about key informants. The selection of key informants depends on the unit of analysis to be studied. Key informants should be people who are willing to share concepts and knowledge with researchers and are often used as a place to ask questions by researchers. Therefore, it is better to collect research data starting from key informants to get a complete and comprehensive picture of the problems observed. The main informants are people who know technically and in detail about the research problem to be studied. Supporting informants are people who can provide additional information as a complement to analysis and discussion in qualitative research The main informants are people who know technically and in detail about the research problem to be studied. Supporting informants are people who can provide additional information as a complement to analysis and discussion in qualitative research The main informants are people who know technically and in detail about the research problem to be studied. Supporting informants are people who can provide additional information as a complement to analysis and discussion in qualitative research (Adiputra et al., 2021).

Children with special needs are children who experience physical, mental, social and emotional disorders. Children with special needs show lower or higher physical, mental, social, intellectual and emotional characteristics than normal children of their age. This disorder is usually detected during pregnancy until an early age of growth and development. In Indonesia, with the fourth largest population in the world, has a large number of children with special needs. Indonesia does not yet have accurate and specific data on how many children with special needs are. However, children with special needs live in the midst of society in large numbers. Understanding the dynamics of life experienced by children with special needs, Monitoring growth and development and how the environment becomes a social agent that can support the existence of children with special needs is very important to pay attention to. Types of special needs of children vary based on the symptoms that appear. There are special needs children whose symptoms are obvious so that other people can know quickly that the child has special needs. There are also special needs with early symptoms that are difficult to see with the naked eye, the symptoms will only be known after interacting for a long time or after going through a series of examinations carried out. There are special needs children whose symptoms are obvious so that other people can know quickly that the child has special needs. There are also special needs with early symptoms that are difficult to see with the naked eye, the symptoms will only be known after interacting for a long time or after going through a series of examinations carried out. There are special needs children whose symptoms are obvious so that other people can know quickly that the child has special needs. There are also special needs with early symptoms that are difficult to see with the naked eye, the symptoms will only be known after interacting for a long time or after going through a series of examinations carried out (Cahyani, 2015; Desiningrum, 2016; Hodayah et al., 2019; Mirnawati, 2019).

Characteristics of the main informants by gender 1 informant is male and 9 informants are female. Characteristics of informants based on age are in the age range between 27-44 years. Characteristics of informants based on occupation, namely 1 informant works as a private employee, 1 informant works as a tailor, 8 informants are housewives. Characteristics of informants based on the age of the child are in the range of 2.5-14 years. Children are more than just little adults. Physically, mentally, emotionally they have unique needs, wants and boundaries. The toddler period is called the golden period and the critical period is a period of the most rapid growth and development in the human

brain. Toddler development will be optimal if the environment provides positive support or vice versa. General developmental delay or global developmental delay (GDD) is part of the inability to achieve age-appropriate development and is defined as a delay in two or more areas, including gross motor development, fine motor, speech or language, cognition, personal social and daily activities (Tjandrajani et al., 2012; Allen, 2013; Usman, Sukandar Hadyanan and Sutisna, 2014).

There are 5 informants who have children under five, namely ages ranging from 2.5 to 3.5 years, while 5 informants have children with ages ranging from 6-14 years. Since the child is born until the age of 5 years (golden age), is a period of important growth and development in the body. This period, which is commonly referred to as toddlerhood (under five years), is a period of vulnerability to factors that make children affected by disturbances in the process of growth and development. (Wihadi and Evijanty, 2017). Parents and therapists should have a basic understanding of child development, but what is more important is the willingness and flexibility to meet each child at their own stage of growth and development. This aspect of flexibility must be seen when providing therapeutic massage for children which can be expressed into 5 points, including permission, speed, pressure, positioning, and parents (Allen, 2013).

The results of interviews with supporting informants stated that *aikipressure* is a form of developing massage methods for improving muscles, nerves and spine inspired by the Aiki Taiso movement (aikido movement technique), by rubbing, massaging, and pressing the body surface in order to support promotive, preventive efforts, and rehabilitative. *Aikipressure* arises because the existing therapies seem complicated when learning it takes a lot of time because the discussion is related to problems that occur in bones, muscles, nerves and joints. This is supported by the theory that massage requires some basic preparation and techniques. The massage begins by creating a calm atmosphere. If possible, massage in a warm and quiet place, indoors or outdoors, removing jewelry. Massage is done in a comfortable position on the floor or bed or standing in front of the changing table and position the baby on a blanket or towel in front. Massage is done by controlling the touch when you first start massaging. Massage also uses a soft touch and adjusts to the condition of the body. Next, gently rub every part of the child's body including the head, neck, shoulders, upper back, waist, thighs, feet and hands and communicate during the massage (Anonim, 2020).

The results of interviews with main informants, key informants and supporting informants explained that the advantages of *aikipressure* were simple, using bare hands, effective and efficient. The disadvantage of *aikipressure* is that it requires the skill and sensitivity of the person who does it, in direct skin to skin contact, adjusting to the needs and comfort of the client so that in practice the amount of pressure given adjusts to the client's condition. Another disadvantage of *aikipressure* is that the aikipressure technique requires perseverance from parents and the willingness to be able to do therapy for their children on a regular basis. This is in accordance with research conducted by Alen (2013) which states that there is no general rule about the amount of pressure that should be used on children. One may find the strong touch soothing, while for others it may be painful. The same mild pressure that soothes one child to sleep can be very torturous for other children with amusement. It is important to meet each client, case by case, and day by day. The child has the right to have control over the amount of pressure applied. Building trust with the child is just as important as the massage itself and it may also take an entire session just to build trust. After the trust is well established, the child will be able to relax and enjoy the massage given. In general, most child massages are done fully clothed. This allows the therapist to focus more on the client's comfort and safety. The same light pressure that soothes one child to sleep can be very torturous for other children with amusement. It is important to meet each client, case by case, and day by day. The child has the right to have control over the amount of pressure applied. Building trust with the child is just as important as the massage itself and it may also take an entire session just to build trust. After the trust is well established, the child will be able to relax and enjoy the massage given. In general, most child massages are done fully clothed. This allows the therapist to focus more on the client's comfort and safety. The same mild pressure that soothes one child to sleep can be very torturous for other children with amusement.

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The results of interviews with main informants and key informants revealed that their children had hydrocephalus, Down's syndrome, cerebral palsy, speech impairment, hearing loss, history of leaky heart, and non-symptomatic epilepsy. Massage therapy has a positive effect on several conditions of the child. These include premature growth, psychological problems including aggression, digestive problems including constipation and diarrhea, painful conditions including burns and sickle cell, impaired muscle tone including cerebral palsy and Down syndrome, and chronic diseases including diabetes, asthma and HIV. Massage is part of treatment with touch therapy using certain techniques. The main points around massage are 1) baby massage is a global practice; 2) the existing evidence base is methodologically limited, therefore, difficult to draw conclusions to inform clinical practice; 3) Health professionals need to be careful in recommending topical oils for massage until it is known about their effects on infants or children (Cooke, 2015; Field, 2019; Risa Sanputri, Elliyanti and Author, 2019).

The results of interviews with key informants explained that the 10 main informants were parents who actively took their children to the development clinic health center, Sukoharjo, Central Java, Indonesia. Key informants also have children with special needs. Her son is 8 years old and has hydrocephalus since birth. The child has undergone surgery 4 times but the results have not been as desired. Every day the fluid in his head is increasing, causing his head to get bigger. The condition of children before aikipressure therapy often experienced spastic and tense muscles. The condition after aikipressure therapy is rarely spastic, the eyeballs begin to focus and do not protrude too much, the muscles begin to flex and are easier to move, the child also looks more comfortable after aikipressure therapy. This is reinforced by the theory that one of the physical characteristics of children with mental retardation is suffering from hydrocephalus. Hydrocephalus is a large, fluid-filled head (Cahyani, 2015).

The results of interviews with 1 main informant whose child has hydrocephalus since he was 4 years old (now he is 6 years old) but is not accompanied by an enlarged head. The results of a CT scan showing fluid in the head. The condition of the child before the aikipressure therapy was stiff, sat not upright, could not walk, did not want to learn to walk, always gripped his hand, often shook (shalore). The condition after the aikipressure therapy is no longer working, the legs are more flexible, the hands are still gripping, they are willing to be invited to learn to walk even though their legs are still crossed, the child is more cooperative and responds better when invited to communicate with other people. This is reinforced by the theory that explains that hydrocephalus occurs when the production and absorption of brain fluid is not balanced, in children, it will cause symptoms in the form of headaches, memory loss or concentration, nausea and vomiting, visual disturbances,

impaired body coordination, balance disorders, and difficulty holding urination. Ten to fifteen percent of patients with hydrocephalus can initially develop without clinical signs, such as enlargement of the head (Musi and Nurjannah, 2021).

Hydrocephalus is a physiological disorder of cerebral spinal fluid resulting in abnormal expansion of the cerebral ventricles. Infants generally present with progressive macrocephaly whereas children older than 2 years generally present with signs and symptoms of intracranial hypertension. The most common surgical treatment for hydrocephalus is a ventriculoperitoneal shunt. Postoperative complications include infection, blockage, drainage abnormalities and mechanical failure (Estey, 2016; Kahle et al., 2016).

The results of interviews with 5 main informants who have children with special needs with 3 children at the age of toddlers and 2 children over the age of 5 years. The children were diagnosed with cerebral palsy from the age of 6 months to 1 year. In one of the children who are over 5 years old, cerebral palsy is experienced accompanied by non-asymptomatic epilepsy symptoms. Conditions prior to aikipressure therapy included stiff legs, unable to bend, inactive hand movements, palms gripping, fingers close together, restlessness, a lot of movement and undirected movements. The condition after aikipressure therapy is that the legs can begin to bend, they are willing to be invited to learn to walk, the feet are swinging, the hand movements are active, the hands are not gripping, the stiffness is reduced, the fingers are not attached. The results of observations on children with special needs after therapy with aikipressure showed a faster development in children aged under five than those over the age of five. This is supported by several research results which state that children with cerebral palsy not only experience disturbances in motor function but most of them experience health problems, such as sensory, cognitive, behavioral, language, epilepsy and secondary musculoskeletal problems. This form of spastic paralysis is often found in children with cerebral palsy, in about 70%-75% of cases. Spasticity will increase muscle tone and cause muscle stiffness and impaired function and muscle atrophy. Currently there is no treatment that can be used to treat cerebral palsy. However, most children with cerebral palsy survive into adulthood. Cerebral palsy is expected to become a public health problem in the future (Soebandi et al., 2017)

The results of interviews with 2 main informants who have children with special needs with hyperactive motor disorders aged over 5 years. In addition to hyperactivity, one of the children has problems with his vocal cords and hearing loss, namely his left ear is completely deaf. The condition before the aikipressure therapy was carried out was that the child did not want to stop his activities, was very active, never felt tired, if he was going to be treated, he did not want to and moved a lot, his ears did not want to be touched. The condition after the aikipressure therapy made the child calmer, more responsive when asked to communicate, more controllable, has begun to be treated, his ears can be held, and after every aikipressure therapy the child falls asleep.

The results of interviews with 2 main informants who have children with special needs with Down syndrome at the age of 2.5 years. The condition before the aikipressure therapy was carried out, the child could not walk, only stood for a while then fell, the vocabulary spoken was not clear. The condition after aikipressure therapy was able to walk, the walk became smoother, began to be able to stand by lifting 1 leg, throw and kick a ball, the fingers began to be active, could play well with friends, the vocabulary that was spoken became clearer and increased, such as saying said father, mbah, sis, maem.

The benefits of massage include: 1) improving the relationship between mother and baby or child; 2) regular massage can increase the activity of the vagus nerve which connects the neck, heart, lungs, and stomach to the brain, including the digestive system; 3) increase body weight, nervous system stability and disease resistance; 4) maximize the baby's brain development, promote muscle development in the neck, shoulders, arms, and back as well as overall neurological; 6) maximize the baby's brain development, promote muscle development in the neck, shoulders, arms, and back as well as overall neurological; 7) increase the baby's sleep duration; 8) optimize baby's growth and development; 9) increase the frequency and duration of breastfeeding in infants. Massage is also

beneficial in stimulating and regulating physiological processes such as breathing and digestion, restore the balance of the body, balance the nervous system and hormones. Massage can also be a means of conveying attention, acceptance, support and empathy (Gürol and Polat, 2012; Hidayah, Wahyuningsih and Firrahmawati, 2018; Pratami, Risa Wahyuningsih and Firrahmawati, 2018; Saputri, Wahyuningsih and Kamidah, 2019; Sari Puspita, Wahyuni and Wahyuningsih, 2019; Anonim, 2021; T Prianti, Darmi and Kamaruddin, 2021)60 in the control group.

The results of interviews with supporting informants that aikipressure can improve personal social development, language and motor skills of children with special needs. Aikiperssure with personal social development is based on the concept that energy is circular. Circulation of energy flows throughout the body through the circulation of blood vessels. If the circulation is not smooth it will cause health problems and decreased organ work, such as speech delays, walking delays, etc. Children who have difficulty speaking experience blockage of energy from the energy center (stomach) to the mouth and brain. The main pathways that are blocked are in the neck and shoulder areas, while on the peripheral nerves the blocked areas are under the jaw, below the mouth, and above the mouth. There are also speech limitations stemming from hearing limitations. Aikipressure with motor development is based on blockages that block the flow of blood and energy throughout the body, especially in the muscles that support the spine. This concept occurs in both gross and fine motor delays. The muscles around the spine experience tension so that it blocks the central nervous system. If the central nervous system is repaired, the peripheral nerves will also improve so that their motor skills can develop optimally.

The way *aikipressure* works begins with the concept that one of the keys to a healthy body is smooth blood circulation, because blood is responsible for distributing oxygen and nutrients to all body tissues. Blood circulation that is not smooth, can cause various symptoms and health problems. How aikipressure works on the body by providing stimulation to maintain, restore and optimize the skeletal system, muscular system, circulatory system, digestive system, nervous system, respiratory system, immune system, lymphatic system, excretory system, urinary system, reproductive system, sensory system and endocrine system. The meaning of health based on aikipressure is to return to nature. The various meanings of fitrah include thuhr (holy), Islam (safe), monotheism (confessing the oneness of Allah), sincere (pure),

The results of interviews with key informants showed that the frequency of massage performed by the informants varied. There are those who routinely do it once a day, 1-2 times a day and 2 times a day, but there are also those who only adjust the conditions of the informants and their children. Factors that influence the behavior of parents in this study are divided into 2, namely supporting factors and inhibiting factors. Supporting factors, among others, motivation within the informant so that their children have better development, the support from the environment. While the inhibiting factors include busy parents, children who do not want to be treated, children who cannot be self-treated, and no support from the surrounding environment, especially from the family. The results of interviews with supporting informants that ideally aikipressure therapy is carried out 1-2 times a day by parents on a regular basis to get maximum results, and if the therapist does it, it is enough once every 3 days. Overall health and health disparities are shaped significantly by non-medical factors. It includes individual characteristics, such as education, income, health beliefs and others. In addition, many things come from the social and physical context of individuals and families, schools, workplaces, the environment and the political economy of the larger society. It includes individual characteristics, such as education, income, health beliefs and others. In addition, many things come from the social and physical context of individuals and families, schools, workplaces, the environment and the political economy of the larger society. It includes individual characteristics, such as education, income, health beliefs and others. In addition, many things come from the social and physical context of individuals and families, schools, workplaces, the environment and the political economy organization of the larger society (Short and Mollborn, 2015)we review applications of the widely applied 'social determinants' approach to health behaviors. This approach shifts the lens

from individual attribution and responsibility to societal organization and the myriad institutions, structures, inequalities, and ideologies undergirding health behaviors. Recent scholarship integrates a social determinants perspective with biosocial approaches to health behavior dynamics. Empirical advances model feedback among social, psychological and biological factors. Health behaviors are increasingly recognized as multi-dimensional and embedded in health lifestyles, varying over the life course and across place and reflecting dialectic between structure and agency that necessitates situating individuals in context. Advances in measuring and modeling health behaviors promise to enhance representations of this complexity.»»author»:«{«dropping-particle»:»»,»family»:»Short»,»given»:»Susan E.»»,»non-dropping-particle»:»»,»parse-names»:false,»suffix»:»»,»{«dropping-particle»:»»,»family»:»Mollborn»,»given»:»Stefanie»,»non-dropping-particle»:»»,»parse-names»:false,»suffix»:»»,»},»container-title»:»Current opinion in psychology»,»id»:»ITEM-1»,»issued»:«{«date-parts»:«[[«2015»,»10»,»1]]],»page»:»78»,»publisher»:»NIH Public Access»,»title»:»Social Determinants and Health Behaviors: Conceptual Frames and Empirical Advances»,»type»:»article-journal»,»volume»:»5»,»uris»:«{«http://www.mendeley.com/documents/?uuid=f53c3830-72ce-392e-9af6-0fe4ec181403»}],»mendeley»:«{«formattedCitation»:»(Short and Mollborn, 2015.

CONCLUSIONS

1. The advantages of the aikiperssure technique are simple, using bare hands, effective and efficient.
2. Disadvantages of the aikiperssure technique are that it requires the skills and sensitivity of the therapist, direct skin to skin contact, adjusting to the needs and comfort of the client and requires perseverance from parents and to get maximum results, therapy must be done regularly.
3. The condition of the child before therapy is experiencing developmental delays in 4 domains, namely personal social, language skills, fine motor and gross motor skills.
4. The condition of the child after therapy is experiencing improvement in development in 4 domains, namely personal social, language skills, fine motor and gross motor skills

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