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## **3D Puzzle: As a Fine Motor Skill Therapy Media for Children with Autistic Syndrome**

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### **Abstract**

The aim of this research is to find out the purpose of 3d puzzle as a therapy media for autism children to develop their fine motor skills at Talenta therapy centre. This research in a qualitative methode with the data collection with the observation, interviews and documentation. the analysis of this research has been showed that autism children took a long time to finishing the puzzle. the reason was because their eyes and hand were uncoordinated well. The study also showed that through this 3d puzzle as a therapy media, the misbehavior of the children can be reduced such as hitting, scratching, and any other thing. the 3d puzzle can be a way for children with autism in any therapy centre to stimulate their fine motor skill.

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## INTRODUCTION

The autism often shunned or viewed the spy by anak-anak normal because of his disorder. Often they are cautious autism children for fear of the emotions are out of control, because he has a disturbance autism on a communication, social interaction and they often started playing imaginative emerged on children are under 3 year so cause students to autism it cannot play with teman-teman in the area. The autism known to have silos because it often play unimaginative and should not pay no mind the around. As one who had physical normal, should not avoid this anak-anak with special needs disabled athletes. As in undang-undang number 23 years 2002 about children protection dictates that the child with special needs disabled athletes is part of Indonesian children that needs to be attention and protection from the government, society and family. This outlined in the state minister women empowerment and child protection RI no 10 years 2011 about the handling of children with special needs disabled athletes.

Abnormalities or disorder autism this happen at an early age, even several factors triggers can happens when the remain in the womb. Some difficulty or complication birth to cause of the children with autistik syndrome, including an untimely birth bleeding at age pregnancy approaching first three months, the use of obat-obatan during pregnancy ( Gillberg & Coleman, Tsai; 2000, 1987 in Aloy, 2005: 498 ) The importance to launch detection this for the children so that know whether was suffering from a autism and can be immediately handle it because the more years level patients disorder autism increase. In Pennsylvania, United States, the number of children autism alone in the past five years meningkat of 500%, up to 40 than 10,000 of the birth of your handoyo, 2005: 6 ) Of several aspects of the development of which will pass children autism be stunted, as aspects cognitive, aspects language, aspects value moral and religious, aspects motor and emotional social aspects. Aspects the development of which will pass kids are described in Permendiknas no. 58 2009, in it already exists that will pass children start age 0 months until with age of 6 years. Of the Permendiknas we can know the development of a child in accordance with development level or not, if not, parents and environment can give stimulus to help the development of to walk in individuals at. If we want to seeing the development of on child autism with the guidebook Permendiknas no. 58 2009, we should see a mental age of children the autism. Even though the child autism in chronological age

was five years, but with progress not necessarily they have been through its stages on age 5 years, often children autism aged five years

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Limited or abnormality that happened on child autism made researchers want to see from the use of that *puzzle 3D* for children autism as a medium therapy fine motor. Media that *puzzle 3D* themselves into one of the media who able to stimulate the development of fine motor for children, that made researchers want to see directly the use of against children autism.

Preliminary observations conducted by researchers in therapy center talents of Semarang, interviews were conducted with one therapist who explained that *puzzle 3D* this could be one of the media therapy fine motor for children autistic because of the motions that done in preparing puzzle will train smooth muscles existing on a finger so that it can become preparation writing for a child. Reason researchers chose a research in therapy center talents of Semarang because in this institution that directly addressing directly autistic child by the span of the age of 2-8 years of age who is a requirement of research to be performed

Problems this research which are ( 1 see the use of that *puzzle 3D* for children autism, ( 2 see the role that *puzzle 3D* as a medium therapy fine motor for children autism. The purpose of research are ( 1 ) to know the use of that *puzzle 3D* for children autism, ( 2 ) to know bagaimana the role that *puzzle 3D* as a medium therapy fine motor for children autism

## METHOD

This study adopted qualitative approaches, with data collection by interview, documentation and observation. The subject of research this is the autism in central therapy talents sema-

rang between the ages of 2-8 years .Observation done to see the use of that *puzzle 3D* by the son autis during the process therapy .Interviews were conducted with the therapist who handle directly children autis and already versed in its field.

## RESULTS AND DISCUSSION

In chapter 1 previously been explained that the study is done to know the use of that *puzzle 3D* for the media therapy fine motor for children autisdengan method kulitatif that is by using a method of observation nonpartisipatif and interview in depth to informants as specified based on criteria is chosen and determined

### Talenta's therapy profile

Institutions therapy center of talents in Jl. mintojiwo in iii 10 semarang .Have been constructed since july 2010 .This institution handle therapy for crew members without limit age the child that shall be by giving therapy by the span of age children who were now under by giving therapy from age 3 - 23 years , several species of crew members that is in an institution are children autis , cerebal palsy , hyperaktif , down syndrom , syndrom asperger , mental retardation and late talk or speech delay .Therapy on monday till friday was started at 8 am s / d 2 pm , and on saturday was started at 8 am s / d 12 pm to a session therapy 1-2 hours every child depends the needs of a child which will perform therapy and seen from disorder suffered .Besides institutions therapy talents , there are kindergarten of talents including kindergarten inclusion because children by giving therapy in office also schools in kindergarten talents .

Based on the outcome of the findings potential and the problem , media development in accordance with the needs of a child indispensable .Hence , developed a medium that can be used to the activities learning especially activity motor according to the ability of children and able to increase confidence children interact social another friend as well as a media multi-function that can be used to learning other.

Institutions headed by elizabeth w.m indira S.Psi or often called Mrs. ira has 3 a therapist who have versed in handle a kid crew members. The therapist that is in an institution talents of already have special skill to handle a kid who by giving therapy .Before becoming a therapist given trainings on special by psychologists but knows best characteristic , type and for crew members .Number of children by giving therapy in office is 20 children with different characteristics .Talents

institutions have aims to help crew members to the development of can develop better .The following are table 4.1 data students who eventually get through in central institutions therapy talents Semarang.

The number of children therapy center talenta's semarang in september 2015

Type of disorder	The number of kids
Autis	7 anak
Cerebal Palsy	1 anak
Hyperaktif	2 anak
Down Syndrom	1 anak
Syndrom Asperger	1 anak
Retardasi Mental	1 anak
Terlambat bicara (speech delay)	2 anak

During their stay in the research locations , researcher has supervise the to five children autis who by giving therapy in an institution therapy center talents semarang .Observation are in the form of activity during therapy that does the autis , from beginning to end , especially the use of the *puzzle puzzle 3D* this in therapy session .Behavior shown children autis own diverse , starting from who are not interested in a game of that has been provided until interested .

Researchers given time for approximately four observation and interview in an institution talents , and done researchers on sunday first see usage that *puzzle 3D* in the terapi.karena the time of the do his research is not long daru the new school year therefore his new therapies enter a reminder and new activities .To the process therapy every day , researchers used field notes in observasinya The first week of observation on the use of that *puzzle 3D*, some children were wanted to play with that *puzzle 3D* this and others did not want to.But in the first week of observation, researchers only see the newly want to holding had not would play it.But the meeting to 2 and three sons have started to want to put that in various ways, is assisted, can anyone but only ordered 1 part and others

In this study, researchers conducted interview in depth to school principals who here as psychologist who directly gave assessment to the autis which will perform therapy and the therapist who directly handle a kid autis.Interviews were conducted to answer formulation problems in chapter sebelumnya.terdiri than one person psychologist / the school principal and 3 peop-

le therapist. A therapist who chosen by virtue of being connected directly handle a kid autistic and also have teaching more than 1 year, know in depth children autistic, know the world children autistic as well as having proximity emotional to one autistic observed

### **The use of that puzzle 3D as a the media therapy fine motor for children autistic**

#### **The use of puzzle 3D puzzle at talenta's therapy**

In therapy that does the autistic, many media that can be used to train progress, better than the development of motor, cognitive, language and others. In this research, researchers see one of the media unique used children autistic in session therapy, media is called that *puzzle 3D*.

From the interviews that has been done about that shaped *puzzle 3D* obtained the statement that *puzzle 3D* having the color of compelling that children autistic who meihat immediately interested, this is in line with statements from the third therapist in central institutions talents Semarang.

Third therapist in the agency admit that *puzzle 3D* this is very interesting to used as a medium therapy play for children autistic, in addition to the shapes as funny and his livery interesting not uncommon children autistic this direct the taking of that without the opportunity to directly it plays. Besides interesting, children autistic in office also looked pleased while playing use that this. From the statement informants, can be seen that interest of children autistic depending on the level of autistic owned

. Although not all the autistic interested directly against that this, but except the son autistic are also interested to use that this. Interest that is unusual shown by the son autistic by direct means take and played it.



“Lt” Children with other disorder interested to play that *puzzle 3D*

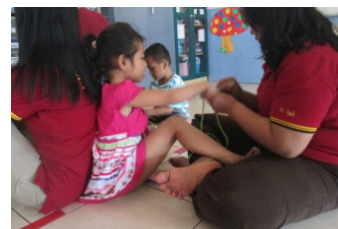
From the statement above would known level interest shown by the son autistic to *puzzle 3D* is variously. There is then took and played it, but some are will not take own but when given that *puzzle 3D* this child zeal in them.

Level of concentration in the son of autistic indeed cannot be likened to a child normal. In working on an activity that also given a therapist, if he had was bored or tired, then a therapist cannot force him.

Of little bit of the most striking namely little bit of 2, but the time it takes to assemble the depending on the level of autistic suffered severe anak. semakin level autisnya hence the longer to be able to put them together. Intensity given to puzzle ordered the little bit of *puzzle 3D* for a child autistic namely by around 10-15 minutes, but it depends of the level of the level of autisnya. For a child autistic with a low rate of 2 with little bit of it often takes some time no more than 5 minutes, but for a child with the level of severe it is just up to 15 minutes or even 30 minutes for the son of with the level of severe is not interested in all the activity given by a therapist

In ordered that *puzzle 3D* with little bit of 4 in the process is not that easy ordered little bit of 2, some children were difficulty ordered they 4 because they are more they so that a little outwit concentration children to pair they with each other. Of course a therapist before giving they 4 to the, provides an example of way they string up between one and the other. Some children were failed to but keep trying and finally ordered, with the first experiment intensity time used can longer which is approximately 20 minutes, but if the child have come to can ordered they 4 would need only five minutes. Explanation of some informants also was supported by informants second the say if difficulty in using that this depending on the level of disorder children autistic it self.

Children with disorder autistic having one of the characteristics behavior as a child like tantrum if his are not met, or she does not can do something he would be angry and will be wrathful or cry, this berdasar from researchers and field notes



Ar” being tutored by a therapist to perform the activities of sewing

In this research, even though the child therapy do not want to do that *puzzle 3D*, the son shall not experienced tantrum, if a child is able to play they tend leave the *puzzle 3D*

Various kinds of reaction from the autism if they do not can play with the puzzle *puzzle 3D* most like leaving puzzlenya just like that and during this child autism in office never show reaction tantrum ( raging , crying and screaming or even hurting himself ) if it does can do it



Reaction "Ar" do not want to put that *puzzle 3D*

Of the three the form of that that is, like home, the train and can children autism tend to have fondness different. From the shape of the puzzle *puzzle 3D* own namely the form of house, cars and bus that each having little bit of 2 and 4. Among all the form of that *puzzle 3D* this, according to researchers children autism especially loved all form of that *puzzle 3D*, but because characteristic of a child different will not all the autism like all, between a son of one and the other different. For example ch love the form of chariots and bus, then Gb love the form of the house and train. It can be concluded that all forms of that *puzzle 3D* this favored by the son autism.

### **The Development of Fine Motor Children Autism**

In any therapy session , children always be given game that *puzzle 3D* ini. hal aims to train dexterity the hand of the boy and also to train fine motor children to more trained again .Necessarily in the use of that *puzzle 3D* this development fine motor children autism also can change. By the provision of that this every time children do therapy session , the more often also the son train the development of motor but know not only that *puzzle 3D* just media which can be media motor therapy but know , many media that can be used as a medium therapy fine motor .Starting from the finger painting , squeezing or tear newspaper , clamp , weaving , inserting acorns and still many more .Motor activities fine given usually all the activity pertaining to a muscle fine hand.

Of many different kinds of therapy that child is given autism , good to stimulate the development of motor , language , cognitive and others .In this research , researchers want to see the degree to which the role that *puzzle 3D* in the

therapy and included in what therapy .A description of informants second about therapy that uses that *puzzle 3D* mengungkapkan that it includes in therapy okupasi .From the opinion of the third therapist , all media that deals with movement done by the hands it can be said as a medium therapy fine motor and that *puzzle 3D* including one of them .This explained by the school principal who explained that puzzle *puzzle 3D* this could be one of the variations given to son because so far media yang be in schools that is media that 2d .That *puzzle 3D* this has an interest to son of bentul and size , because in times of this kid needs an example concrete in learning and the get need a concrete example in learning so that the child can figure out information provided to children clearly because in this *puzzle 3D* puzzle has a clear form such as bus, train and shape of the House.

Between the 2D and *puzzle 3D* puzzles that are provided in this institution, as long as the therapist's opinion and research tells us that children who underwent therapy at the Institute in particular autistic children more like *puzzle 3D* puzzle.

Some of the opinions expressed by the third and fourth informant about motor development disorders experienced by autistic children in the institutions of these Talents among them when holding objects such as floating and other motor disorders as well as less able to coordinate between the eye and the hand that results in an activity that was given to the child could not be done in a good, this analysis views of child who absolutely can not exercise the tasks given by the therapist

It could be inferred that the motor disorders according to the informant in the talent that is a child who has not been able to coordinate eyes and hands nicely so that children could not be given tasks well.

Lot of activities that able to stimulate fine motor children autism, same as activities that was given the paid such as playdough who able to stimulate sensory kids for some children were feel risik holding objects spongy and can be formed, not even possible there are children who refuses to play playdough this. A rally this playdough the therapist teach starting from roll up, and menekan. dari this game can be seen children autism can do not control emotionally as most children with disorder autism cannot control its pressure or more tending to hyperaktif. atau also game fingerpainting use glue wood added dye food, with its texture sticky children are some will done and were not did. Of renunciation this, the therapist will teach babies to can get used.

If seen, actually activities child is given autistic like the son normal in made, but the difference more on supervision and guidance when activities. Children berkebutuhan special as autistic cannot be tolerated just to perform the activities of therapy, must go through bimbingan the therapist

Much effort to make kids autistic being personal better, besides attention and effort given by parents, now there are many institutions that offers therapy program aimed at helping parents make child can being personal better. Program activities therapy having allocation of time diverse, hanging from the needs of the patients and volition from parents. Program therapy that is in an institution varies between 1-2 hours to the intensity of therapy 3-2 times per week, but some children were take full almost 5 times a week.

### **The discussion**

#### **The use of Puzzle *puzzle 3D* to autistic children at Talenta's Therapy**

The shapes as actually make children and can studies the shape of puzzleapa being strung together. In education, institutions paid especially institutions are many use that in learning activities because early childhood love media that in general. Agreed with pramudiati and reza (2011: 14) the media that very often used in kindergarten due to the media that is one of a game having educative values and in playing that requiring meticulous detail, children will be trained to focus mind, for the son of should concentrate when developing pieces of the puzzle to a picture intact and complete. For observation researchers see some children autistic very enthusiastic in playing puzzle. salah one features children autistic namely terobesesi with objects die (maulana, 2014: 12). In other words if the child autistic is like a game was playing tended to withdraw from of the environment, in the sense of autistic children do not want to join with other friends. In the book of Maulana (2001:15) mentioned that if autistic children were playing with their toys, then the behavior will tend to be aggressive or moving his body, not able to stop the game when prompted by others and just focus on what is done by hand only.

The use of that *puzzle 3D* in office given in each program therapy, good for children autistic or child other disorder with allocation of time 10-15 minutes. The use of, same as other media used there are children that receive and is that did not receive. This is because some abnormalities experienced by the son autistic that causes a child is can focus or higher was consumed by his world

own. This also expressed by sunu (2012) (in wikasanti, 2014: 20-22) clear that the cerebellum (brain small) is part the brain that mediate the ability speaking, attention, the capacity to think, memory, and the process of sensory. A disorder in this section causes disruption of functions relating to the in the atas.hal cause students to autistic experienced difficulty focus or speaking.

In other words children with medium IQ, light and normal limits sure you can ordered or unload pairs of that *puzzle 3D* given to them as a medium play and media therapy to stimulate the development of motor but know. Intensity time used by the son autistic in ordered they that good they 2 or 4 also depends on level of autisnya level. The lower level autistic level, the less time needed to ordered and vice versa the more severe level level autistic the longer also in ordered they that *puzzle 3D*.

Some of the activities often done by autistic child the truth has no sense as researchers gazed observation and observations on the autistic child in an institution talents, for example child autistic is often menepuk-nepukkan two hands. The opinion of koswara (2013: 12) namely response stimulation himself who disturb the interactions of autistic child social often do or showing such attitudes mengepak-ngepak hand, banging the head, biting fingers when felt like it was going or frantic with the situation a new neighborhood received and belong. With some attitude carried out by anak autistic, can be transferred by some media, one of them is *puzzle 3D* puzzle, this objective is to remove some of the habits the son and also for child could interact social a good for the environment. In hadianah (2013: 145) mentioned that therapy played for people with autism can ditunjukkan to minimize / deprive of aggressive behavior, behavior hurt yourself,

That *puzzle 3D* in this research be one of the media therapy for children autistic, several species of therapy one of them according to hasdianah (2013: 137) the therapy play. Therapy play is the use of game as a medium effective by a therapist, to help clients prevent or finish obstacles psikosial and reach growth and development optimal, through freedom of exploration and expression self. All kinds of therapy done fixed for the last result better, for development and its growth. In addition according to him mahendra (in masudah 2014: 3) explained that berrmain could cause cheerfulness, agility, relaxation, and harmonisasisehingga someone inclined to passionate dandapat do movements without any compulsion and obstacles. So that it was expected a son although is undergoing the process therapy but

not is too heavy a price since the process seperti the activity of playing therapy .

Behavior arising on child autistic it could be because the food consumed , on 18 september 2015 in research behavior " ar " not like this that although it will be difficult to to be set but can still controlled , after d kroscek by a therapist asked to her parents it turns out that " ar " mengkosumsi food that should not have eaten .According to the therapist , the son of which have been affected autistic need to go through some a diet of foods .A diet according to winanrno ( 2013: 75-76 ) elimination of all kinds of or part of the menu in handling and the treatment of adhd against usually called a diet .Diet is a regiment manner of feeding and drink that is focused on elimination against gluten and casein .

Casein according to winanrno ( 2013: 76 ) is protein that was found in dairy products , but expected people did not be fooled by the term milk to free from casein free because casein can terkadung in the product other than milk , as yogurt , ice cream , many products cake and bread even products never unexpected as tuna in cans .While gluten according to winarno ( 2013: 76 ) is a species proteins in seeds of grain and several species of other cereals .

Once again , the success of the behavior and happened on child autism needs to be supported of several factors , one of them factors a diet of foods this .The careful parents over food intake consumed children , calmness children will be more awake .

Based on the opinion of maulana ( 2014: 45 ) that the intensity of therapy should be done between 4-8 hours per day, while intensity therapy conducted at the talents according to penurutan the informants and researchers own observations is 1-2 hours a day, of course intensity formally is very less. But expected parents at home able to assist well and offered some stimulation of which can exercise of children autism so no need to rely on this program is provided in an institution therapy.

#### **A role that *puzzle 3D* puzzle as a media fine motor therapy for the autism**

Therapy program performed in this institution that is by 1 therapist 1 child therapy , it is aimed to make the process of therapy work better .Agree with the theory of paul ( 2008: 386 ) who say that individual psychodynamic therapy , the form of therapy one on one .This therapy not only focusing on businesses cure symptoms that there is , but also restore the child to normal in the path of its development

The development of that can be seen in special needs not we can see same with the development of on child normal , this is because many disorder that occurs on a system neurobiologis children autism because of some factors .According to sunu ( 2012 in wikasanti , 2014: 20-22 ) one abnormality anatomically the brain that is a disorder in certain parts which includes the cerebellum ( brain small , lobes parietalis , and the limbic system reflect this behavior different forms appear on child autism

In other words , *puzzle 3D* puzzle that is simple puzzle because it has little bit of that is relatively easy to demolished pairs of good little bit of little bit of 2 and 4 and could be one of the media who provide a leadership role to stimulate the development of fine motor for a child autistic , especially in an institution talents of this therapy .Although previous of the study no one has explained that the type of puzzle *puzzle 3D* influenced the development of fine motor , but some research on 2d puzzle that will influence fine motor and the development of children special need

In the use of that *puzzle 3D* on child autism in an institution talents response from the therapy different , according to field notes obtained researchers , some children were at once meeting can ordered and even were not can .This is because children will mengobservasi first the activities to be performed .According to sujiono ( 2008: 1.4 ) there are three stage of development motor skills early childhood , namely the cognitive , associative and autonomous .At the kognitif children trying to comprehend skill motor and all is required to perform a a certain movement .According to this theory when viewed from son manners autism , so if any one kid who just want to holding or see , therefore his autism be at the cognitive this

If in experiments second or third child autism in ordered was still wrong put aside that *puzzle 3D* , but girls were at the associative according to sujiono ( 2008: 1.4 ) , the son of a lot to learn by means of trying to rectify in appearance processed or movement be corrected that tidsk made a mistake back in the future. When the autism in the process of therapy they have been able to put that properly , so son were at the autonomous according to in sujiono ( 2008: 1.4 ). At this stage movement shown children is a response that more efficient with little mistake, kids are showing movement automatically .

In theory maulana ( 2014: 58 ) when asked children do something ( e.g. sitting , the children will rebelled verbally or using physical .If in theory maulana ( 2014: 58 say children instructed to sit will rebelled , but during the process therapy

children autism that cannot be ordered they that good they 2 or 4 , the response that was given the to a therapist that is the son shall not tant-rum if it does can put them together, .It is based on research conducted by researchers have never seen attitude children who rebelled or tantrum if it does can ordered they puzzle 2 or 4.

On the other hand, if a child is can ordered they that good they 2 or 4, as did "Ys" the field notes on 15 september 2015 when given they 4 by a therapist, given example first in assemble. Then "Ys" given the opportunity to try own assemble, but "Ys" felt that they were not can and finally only child of silence without trying to piece at all. In theory, this sort of thing called prompt. According to handojo ( 2008: 55 ) prompt namely aid or landing that is child is given when the child does not respond to instruction. Prompt shortened by p.prompt can be given in full namely hand-on-hand, hand therapy holding the hand of the boy and directing by giving therapy he was holding the and directing do behavior instructed.

## CONCLUSION

Based on the research be done about the use of that *puzzle 3D* as a medium therapy fine motor in therapy center talents kids semarang it can be concluded that the use of that *puzzle 3D* in central therapy talents be one alternative media can menstimulus the development of fine motor children autism .Children autism prefer peunggunaan that *puzzle 3D* this , proven from some of the children of them enthusiastically play it and sometimes before it was given kids are take beforehand and that *puzzle 3D* provide a leadership role to the development of fine motor children autism , because all media that deals with movement coordination hands and eyes are media can stimulate the development of fine motor children autism .Advice can be given from the study is activities child is given autism or is it all not to monotonous stunned the work of the that was all you avoid babies to not get bored so it was always want to join the terapi.kerjasama from the parent of dross.

The researchers acknowledged that time be used for research too short , so perhaps researchers from readers can continue research on the use of that *puzzle 3D* in media motor therapy smooth for the autism.

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