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## IMPLEMENTATION OF THE DENTAL AND ORAL HEALTH CARE SERVICE MODEL FOR AUTISTIC CHILDREN

<sup>1</sup>Dr. drg. Supriyana, M.Pd<sup>2</sup>Rose Asni Latifah, M.Tr.Kes

<sup>3</sup>Wanda Nur Aida, M.Tr.Kes

<sup>1,2,3</sup>*department of dental health, health polytechnic, ministry of health, semarang*

Corresponding author: roseaini

Email: roseasnil@gmail.com

### ABSTRACT

**Background:** According to the World Health Organization (WHO) in 2012, 90% of school children throughout the world experienced dental caries. The prevalence of caries in normal school-aged children in Vietnam is 87.9%, Brazil 68%, America 59%, India 58.6%, in Taiwan 37.30%, and in Indonesia 89%. Dental and oral health problems are not only experienced by school-age children with normal body conditions, but are also experienced by children with special needs. In accordance with the characteristics of autistic children, dental health education should use interesting learning methods that can produce understanding, develop imagination and provide enjoyment. One of the media that can be used in a learning method is a 3D modified puzzle.

**Objective:** To produce a 3D modified puzzle media model as a fun learning medium for autistic children, increase parents' knowledge about cariogenic foods as companions for children and increase children's knowledge about cariogenic foods.

**Target audience:** Semarang State SLB autistic children accompanied by their parents.

**Method:** The method used is a combination of several activity stages including initial data collection, intervention stage and evaluation stage.

**Results:** 1) licensing carried out on 13 August 2021, 2) field survey on 13 August 2021, 3) Preparation of work program on 20 August 2021, 4) Appreciation on 21 August 2021, 5) Distribution of props on 13 – 20 September 2021, 6) Counseling on October 1 2021 will be held online.

**Conclusion:** The dental and oral health maintenance behavior of autistic children is greatly influenced by the role of parents and those closest to them. So before delivering material or introductions, it is necessary to approach someone the child trusts. In this case, the role of parents, caregivers and children's teachers greatly influences the material presented.

**Keywords:** service model, dental, children

## **Introduction** **(Pendahuluan)**

A dental and oral health problem that is widespread among most of the world's population is dental caries, which is a cavity characterized by progressive destruction of the enamel and dentin layers. Globally, dental caries is a very high chronic condition and has a significant negative impact on a person's quality of life, starting from early age, adult age, to older age.

The prevalence of dental caries has been experienced by all age groups in general, but for the younger generation it is more specifically visible. According to the World Health Organization (WHO) in 2012, 90% of school children throughout the world experienced dental caries. The prevalence of caries in normal school-aged children in Vietnam is 87.9%, Brazil 68%, America 59%, India 58.6%, in Taiwan 37.30%, and in Indonesia 89%. Dental and oral health problems are not only experienced by school-age children with normal body conditions, but are also experienced by children with special needs. Autistic children are children who have autism disorders. Autism or better known as Autism Spectrum Disorder (ASD) is a complex neurological developmental disorder that causes children to experience difficulties in terms of social interaction, communication and language, behavior, imagination, emotional disturbances, sensory perception and motoric aspects<sup>9, 10</sup>. In accordance With the characteristics of autistic children, dental health education should use interesting learning methods that can produce understanding, develop imagination and provide enjoyment. One method that can be used is Cooperative learning is learning where children work together in groups and achieve their individual and group learning goals through feedback and discussion with friends. Cooperative learning types consist

of jigsaw, group investigation, listening team, and make a match.

Cooperative learning (cooperative learning) type make a match is one type of learning for children with special needs, where children are asked to find, match and pair picture cards as a medium. Fatimah's research (2017), proves that the make a match model improves children's skills, such as fostering an attitude of mutual respect, a critical attitude, an attitude of always achieving, respecting each other to motivate children so that they get more effective and efficient learning outcomes. One of the media that can be used in a learning method is a 3D modified puzzle, which is a medium for combining image fragments and then arranging them to form groups of types of food that are good and bad for dental health.

## **Methods** **(Metode Penelitian)**

The first is the Service Method in the form of: preparation stage, stage, Initial Data Collection Stage, intervention stage. The second is a form of activity: making puzzles, output, promotional or outreach activities using 3D puzzles and their relationships.

## **Results and Discussion** **(Hasil dan Pembahasan)**

The behavior of autistic children regarding dental and oral health is still very dependent on other people, in this case the people closest to the child, namely the parents or child caregivers. Based on the results of community service carried out, children can follow instructions in brushing their teeth. Children can take part in tooth brushing activities according to the stages explained with repeated explanations with the help of parents.

Changes in improving skills for children with special needs can be carried out through repeated delivery or training. Apart from repeated delivery or training, the role of parents in assisting with tooth brushing greatly influences changes in

children's tooth brushing behavior and the level of child dental hygiene.

Children's ability to recognize foods that are healthy and damaging to their teeth is also explored by introducing foods that are healthy and damaging to their teeth through puzzle media. This puzzle media is made in the form of a 3D puzzle to attract more children's attention. In 3D it is made on an imprabord board measuring 30 x 30 cm which is divided into 2 parts. The top part is for healthy teeth and the bottom part is food that damages teeth. There are 8 types of food that are healthy and damaging to teeth respectively. Children are explained about the types of food that are healthy and damaging to teeth, then children are invited to play to identify types of food and determine which types of food are good or bad for teeth.

Children with autistic special needs have disorders in the areas of communication and gross and fine motor skills. The disturbance experienced by the child causes the child to be less able to understand the material provided to children in general. The material provided to children with autistic special needs must be appropriate to their needs. Providing appropriate material will increase the effectiveness of the learning process. Providing learning materials related to art and crafts. Hands can train children's fine motor skills (Damayanti et al, 2019). In this case, to improve children's fine motor skills, it is done by using the art of playing using 3D puzzle media regarding foods that are healthy and damage teeth<sup>39</sup>.

In community service activities regarding the implementation of the dental and oral health care service model for autistic children, parents and children were quite enthusiastic about participating. This was proven by the presence of 73.3% of all targets who were able to take part. There were other targets who were unable to participate due to the availability of online media for carrying out activities. Through this community service media, it is hoped that the ability of parents and autistic

children will improve in maintaining better oral and dental health with the methods or methods provided.

## **Conclusion** ***(Simpulan)***

The dental and oral health maintenance behavior of autistic children is greatly influenced by the role of parents and those closest to the child. So before delivering material or introductions, it is necessary to approach someone the child trusts. In this case, the role of parents, caregivers and children's teachers greatly influences the material presented. Children can imitate how to brush their teeth properly and correctly with the help of their parents, and can recognize healthy and tooth-damaging foods with the help of playing methods using 3D puzzles. This activity was enthusiastically supported by parents because they were interested and increased their knowledge on how to maintain healthy teeth. Through this community service media, it is hoped that the ability of parents and autistic children will increase in maintaining better oral and dental health with the methods or methods provided.

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