



Using Technology for Self-Measuring and Early Detection of Child Health

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Abstract. Some children have a complex developmental disorder that can also be called autism. Developmental disorders in autism can include language and speech (communication) disorders, behavioral disorders, namely children tend to live in their own world or tend to ignore the surrounding environment and social interaction disorders, namely the unwillingness to interact with other people. Signs and symptoms of a child with autism can be seen before the child is 3 years old. Another problem for children with autism is the difficulty in carrying out activities independently. Treatment as early as possible can reduce the severity of autism. Autism can be detected early when children have not reached the age of 3 years. Therefore, it is very important for the community, especially families, to pay attention to the growth and development of their children before the age of 3. However, there are still many people who do not know about autism and the signs and symptoms of autism. So that there are still many people who make the word autism a joke that is not quite right and can hurt parents who have children with autism. This study is to provide technology to self-measuring for nutrition's status and early detection of autism to Intergrated Service Post (Posyandu) volunteer in Ciseeng District, Bogor Regency. The purpose of this study is to increase the knowledge of Posyandu volunteer about the signs of autism and to be able to carry out early detection using technology and to take appropriate actions by asking for the help of health professionals. In addition, it can attract residents who have children with autism from low-income family so that stakeholders can immediately assist them

Keywords: Autism, Health Technology, Occupational Therapy, Pediatri, Early Detection

1 Backgrounds

From the results of various studies, it turns out that economic factors are not the most important factor that causes toddlers to experience malnutrition or deficiency, other factors that affect the good nutritional status of toddlers in poor families are good parenting styles for toddlers, but many parents do not know the importance of parenting. on the growth and development of their toddlers. One of the impacts arising from

malnutrition is the stunted growth and development of children under the age of five (toddlers) as indicated by their weight or height which is not appropriate for their age.

Bogor Regency is one of the areas that is close to DKI Jakarta as the capital city, but there are several health problems, especially in the group of children under five years old (toddlers). The problem related to nutritional status in Bogor district is malnutrition. As part of the academic community at the University of Indonesia, we have a moral responsibility to help people increase their knowledge which will have an impact on their better lives. The knowledge needed by mothers who have children under five is related to parenting and child development, so that with good knowledge, the nutritional status and growth and development of children will be better. Not only nutrition problems, but some also children's have developmental disorder

Some children have a complex developmental disorder that can also be called autism. Developmental disorders in autism can include language and speech (communication) disorders, behavioral disorders, namely children tend to live in their own world or tend to ignore the surrounding environment and social interaction disorders, namely the unwillingness to interact with other people. Signs and symptoms of a child with autism can be seen before the child is 3 years old. Another problem for children with autism is the difficulty in carrying out activities independently.

Treatment as early as possible can reduce the severity of autism. Autism can be detected early when children have not reached the age of 3 years. Therefore, it is very important for the community, especially families, to pay attention to the growth and development of their children before the age of 3. However, there are still many people who do not know about autism and the signs and symptoms of autism. So that there are still many people who make the word autism a joke that is not quite right and can hurt parents who have children with autism.

This study is to provide technology to self-measuring for nutrition's status and early detection of autism to Intergrated Service Post (Posyandu) volunteer in Ciseeng District, Bogor Regency. The purpose of this study is to increase the knowledge of Posyandu volunteer about the signs of autism and to be able to carry out early detection using technology and to take appropriate actions by asking for the help of health professionals. In addition, it can attract residents who have children with autism from underprivileged groups so that stakeholders can immediately assist them

2 Method

Participants. Participants in the study are Posyandu volunteers and mothers who have children under 5 years old.

Instruments. In this study, we will implement technology by creating an Android-based application regarding early detection of autism that can be used by the public, especially Posyandu volunteers and mothers who have children under 5 years old. The community is quick to detect autism early so that treatment can be given quickly, accurately and precisely with this application.

In this study we will making validity and reliability test to application that we create to early detection for autism and nutrition status (Asif et al., 2022; He et al., 2022; Lefebo et al., 2023; Liu et al., 2022; Ndagijimana et al., 2023)

3 Result

Participants are asked to fill out a digital form in the smartphone application. The questions contained in the application are questions answered from M-CHAT. After participants filled out the form on their smartphone, they were then asked how they felt after doing this.

The participants experienced a little difficulty the first time they tried the application, but after doing several repetitions, the respondent found it easier to use the application.

4 Discussion

The use of applications in health can provide convenience for early detection or screening. So that immediate treatment can be carried out for children who are indicated to have symptoms of autism. After using this early autism detection application, parents can receive recommendations for a thorough and more in-depth examination carried out by healthcare professionals. So that the ability of children with autism can be better because of fast and appropriate treatment by healthcare professionals.

5 Conclusion

From the results of this study, it can be concluded that using applications to carry out early detection of autism can make it easier and faster to identify the symptoms of children with autism. Once the early symptoms of autism are quickly identified, recommendations for a more detailed examination by a healthcare professional can be immediately given. By providing appropriate intervention early, the abilities of children with autism can improve, thereby providing much relief to the family.

We suggest that the next study be carried out in more depth with a larger sample size and a wider coverage area, so that it is better to see the influence of using applications in early detection of autism.

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