

## REVIEW ARTICLE

# LANGUAGE DEVELOPMENT AND TELEVISION EXPOSURE IN CHILDREN

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### ABSTRACT

Language development is an indicator for all of child development. In general, there are two main factors that influence language development: genetic factors and environmental factors. Television is a part of environmental factor. Repeated exposure to television can affect child language development. There are very few studies on the relationship between television exposure and language development in children. In some studies it was reported that television exposure had a positive impact on cognitive development and language in children. Meanwhile, in other studies it was reported that there was no significant impact between television exposure time and language ability in children. High television exposure in first year of life is related to lack of attention in school. Violent television exposure may also result in a child experiencing a behavioral disorder. However, age-appropriate educational television programs can teach new vocabulary to children. Thus, effect of television exposure and its effect on language development still needs to be further evaluated.

### Introduction

Child development is a qualitative and quantitative change. Language development is one of the most important development in children, because it is an indicator for all of child development. (1) Language skill is sensitive to delays or abnormalities in other systems, such as cognitive, sensorimotor, psychological, emotional and environmental abilities around the child. As with any other development, the first years of life are very important in child language development. In general, there are two main factors that influence language development: genetic factors and environmental factors. Environment is a factor that determines genetic potential achievement. A good environment will enable the achievement of genetic potential and vice versa. One of environmental factors that influences child development is television. (2)

Television is a mass media widely used in the world. (3) Nowadays, television has reached more than ninety percent of the population in developing countries. (4) Although television is the most widely used mass media in homes, the relationship between television exposure and language development in children remains unclear. In some studies it was reported that television exposure had a positive impact on cognitive development and language in children. (5,6) Meanwhile, in other studies it was reported that there was no significant impact between television exposure time and language ability in children. (7-9) But all previous studies still have limitations, including the limited number of samples and

the number of confounding factors in the study. (10)

### Language development

Language is a communications system used voluntarily and socially, using certain symbols to convey and receive messages from one person to another. (2,11) There are two types of language skills: receptive and expressive language. Receptive language is the ability to understand including reading, sign language, comprehension and listening comprehension. Whereas, expressive language is the ability to produce communication symbol including writing and signing as visual output and speech as auditory output. (2) Left hemisphere is the language center of 94% of right-handed adult and over 75% in left-handed. There are three main areas in a child's left hemisphere: Broca's area and motor cortex in anterior, and Wernicke's area in posterior part. Information derived from the primary and secondary auditory cortex is transmitted to the posterior temporoparietal cortex (Wernicke's area). This information is then matched to previously saved memories, formulated and transmitted by the fasciculus arcuatus to the anterior portion of the brain, for coordination of motor responses (Brocca's area). (2)

### Factors affecting language development

There are some factors that affect language development in children namely physical readiness, mental readiness, good imitation model, chance for practicing language, motivation and guidance.

### Television exposure

Television is one of communicative media served using pictures and voices which affects senses of sight and hearing. (13,14) Repeated television exposure could affect the child's development. High television exposure in first year of life is related to lack of attention in school especially with language

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and reading. If television is used as a substitute for reading and talking with others at a young age, children will experience language development disorders. (15-17) In addition, high television exposure also raises attention issues and decrease in planning and judging capabilities. Violent television exposure may also result in a child experiencing a behavioral disorder. (18,19) The American Academy of Pediatrics (AAP) in its 2001 publication recommends the following about television exposure in children, including (17) :

- Television exposure time is limited to no more than one to two hours per day
- Do not put the television in a child's room.
- Reduce exposure to children under two and increase interactive activity that affects brain development such as talking, playing, singing and reading together
- Keep an eye on children while watching television. Television programs should be educative, informative and non-violent.
- Watch television with the child and discuss the content.
- Use controversial television programs as material for discussions on family meaning, violence, sexuality and drugs.
- Use a video recorder wisely to show recording of quality educational programs for children.

### **Characteristics of Television Programs Influencing Language Development**

The impact of television exposure in each age group is different. The vocabulary of the language is the center of attention in many studies and is influenced by age-appropriate content, exposure to new and familiar languages, frequent exposures, the possibility of interaction and the presence of adult accompaniments while watching television. Age-appropriate educational television programs can teach new vocabulary to children even in the absence of accompanying adults. Even so, the presence of a companion while watching television can improve language skills. (20,21)

### **Quantity of Television Exposure Affecting Language Development**

Some studies suggest that there is a correlation between low language proficiency in pre-school age children with high adult television program exposure and child entertainment programs such as commercial cartoons. (22,23) While in some other studies it was found that children's entertainment television programs did not have a negative impact on language development but there was a relationship between children who watched commercial cartoons with high general television exposure. (5,23,24) This high television exposure relates to low language skills. It is not clear from the existing studies what happens to situations where children do not watch television for long periods of time. (25)

### **The relationship between television exposure and language development in children**

Although it has been clear that children can learn a variety of behaviors from television such as aggressive

behavior and the introduction of numbers and letters, it is still a debate about the effectiveness of television in teaching the language to children. (26-30) The relationship between television exposure and language development in children has not been clear. There are several reasons for this lack of studies. First, it is more difficult and more time-consuming tests for very young children. Second, until the last decade, television was generally designed for verbally prepared children. Therefore, the effects of television on praverbal children are still debated. (31) When children listen to talk directly from adults or television, they may be able to learn new words. However, it may also be that visual-based television does not offer sufficient input for early childhood learning.(31) Some evidence suggests that children aged 18 months will watch television for a certain period and have a verbal response to television, especially when exposed to quality educational programs. This response indicates that the learning process plays an important role even though what the child understands from television is far from what it should be. Interaction with adults plays an important role in improving language development. High television exposure means lowering interactions with adults. At the age of 24 months, the child can obtain information from television exposure, depending on the characteristics of the child, such as age and linguistic maturity. This will affect how the child responds to the television and what it gets from the television exposure. Children aged two years up to five years can also benefit from television exposure, depending on the quality of the program content, the compatibility of television program content with the age of the child, and the opportunity of interaction with the companion while watching. Children in this age group can build receptive language, expressive language, knowledge of letter sounds, and narrative knowledge. Children can also improve their understanding of familiar words from unaccompanied television exposure, while accompanied by a child's companion can improve language skills and understanding of unfamiliar words. (20) In contrast to previous evidence, it is stated that children with high television exposure may have low expressive language skills and possibility of speaking disorders. Although intermediate expressive language skills are associated with exposure to the child's television, the specific causes and effects of the relationship have not been identified.(20)

### **Summary**

Language development in children is one of the important developmental sectors. There are several important things in the process of language development such as physical preparation, mental readiness, the existence of a good model to be imitated, the opportunity to practice, as well as motivation and guidance. Television is one of the most effective media in delivering its message. Repeated television exposure can affect children's language development. There is still controversy from several existing studies on the relationship between television exposure and language development.

### **Compliance with Ethical Standards**

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