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The Relationship Between Television and Language Development

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THE RELATIONSHIP BETWEEN TELEVISION AND LANGUAGE
DEVELOPMENT

by

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A Research Paper
Submitted in Partial Fulfillment of the Requirements for
the
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TABLE OF CONTENTS

PAGE

Introduction 1

Background Television 2

Play 2

Joint Attention and Turn-taking 4

Adult Modeling 7

Child-Directed Television 8

Infant- Directed Television 9

Play 10

Imitation 11

Coviewing and Parent-Interaction 12

Vocabulary Acquisition 13

Interaction-based Shows 15

Narrative-based Shows 16

Summary 16

Future Research 18

Clinical Implications 20

REFERENCES 22

VITA 25

Introduction

In 1999 the American Academy of Pediatrics, Committee on Public Education issued a policy statement recommending that children under the age of six watch television no more than thirty minutes per day, and infants and toddlers below the age of two be exposed to no television (1999). Despite this recommendation, nearly 75% of parents of young children report that the television is on "about half the time" or more, even if no one is watching (Rideout & Hamel, 2006). In response to the dramatic increase in exposure to television, research is being conducted to determine its effects on child development, specifically language development.

Currently in research there are mixed results on whether the effects of the presence of television are beneficial or harmful to language development in children. The article "Television Viewing Associates with Delayed Language Development" concluded that children who started watching television before 12 months and watched more than 2 hours a day were six times more likely to have language delays (Chonchaiya & Pruksananoda, 2008). At the same time researchers contend that infants and toddlers are able to make meaningful gains in learning from screen media (Linebarger & Vaala, 2010). The purpose of this paper is to

explore current research on the relationship between television and language development in infants, toddlers, and preschool-aged children. Both the presence of adult-directed television (i.e., background television) and child-directed television will be examined, as well as, the effects on pre-linguistic and linguistic skills.

Background Television

Background television is defined as television largely incomprehensible to a very young child and to which they ordinarily pay little cumulative attention (Schmidt, Pempek, Kirkorian, Lund, & Anderson, 2008). Because of the presence of background television in the homes of young children, it is important to consider its implications on language development.

Play

Play skills are indicated as important for development of language skills. Play is considered a platform for social interaction and social communication as well as a context for using intentionality and knowledge. In typical play development, stages include functional play (i.e., using toys in the way they were intended) and symbolic play (i.e., using objects to represent something other than its intended purpose.). Symbolic play is further divided between self-pretend (e.g., pretending to drink from a

cup), other-pretend play (e.g., giving a doll an imaginary drink), and combined self-pretend and other-pretend play (e.g., pretending to drink from a cup and sharing that with a doll) (Toth, Munson, & Meltzoff, 2006). It is important to consider how development and use of play skills can be effected by the presence of background television.

In the article "The Effects of Background Television on the Toy Play Behavior of Very Young Children," researchers explored the consequences of background television on play episodes in young children. Participants of the study included fifty children divided by their various age groups (i.e., 12 months, 24 months, and 36 months). Children were observed playing with toys in the presence and absence of background television with recordings coded for looking at the television, length of focused attention during play episodes, and maturity of play. Results showed that while attention to the television was fleeting, there was less play overall, shorter play episodes, and shorter bouts of focused attention in the presence of background television. Despite these findings, maturity of play (e.g., manipulation, functional, pretend) was not affected (Schmidt, Pempek, Kirkorian, Lund, & Anderson, 2008).

In a similar study, "Background Television and Infants' Allocation of Their Attention During Toy Play", infants

were observed engaging in toy play in the presence and absence of background television at 6-months-old, 12-months-old, and 24-months-old. Recordings were coded for time spent looking at the television and toys and the length of play episodes. Results were consistent, showing that the television frequently elicited, but did not hold the infant's attention. In addition, there was an overall reduction in the length of play episodes and duration of focused attention (Setliff & Courage, 2011).

Based on the knowledge that play skills are important in the development of language, and that research suggesting the presence of background television disrupts play episodes and duration of focused attention, it is plausible to assume that background television would have some effect on language development.

Joint Attention and Turn Taking

Joint Attention.

Joint attention (JA) is defined as the coordinated and shared visual attention between two people (Bono, Daley, & Sigman, 2004). Skill development encompasses a series of steps including sharing attention (e.g., through the use of alternate eye gaze), following the attention of another (e.g., following eye gaze or a gesture), and directing the attention of another. The skills are divided between

initiating and responding to JA. Responding to joint attention (RJA) usually emerges first followed by initiating joint attention (IJA) (Moore & Dunham, 1995).

In the article "Joint Attention and Early Language", researchers found that during periods of JA both mothers and children produce more utterances, the duration of conversation is longer, and mothers use shorter sentences and make more comments. In addition, it was found that within periods of JA with objects, mothers adjusted their language to the developmental level of the child. These periods of focused JA were thought to create the scaffold between mother-child interactions (Tomasello & Farrar, 1986). The presence of background television may have effects on the efficacy of establishing joint attention between infants and toddlers and their parents.

Turn Taking.

Turn taking is a skill that is required for later conversational skill development. Turn taking may begin with body games such as tickling, lifting, and bouncing and contain pauses for infant responses. Conversational behaviors emerge from these interactions including reciprocal and alternating patterns of vocalizations and later words (Owens, 2008).

In a study by Bloom, Russell, and Wassenberg (1987), two groups of twenty infants were exposed to either conversational turn taking or random responsiveness of an adult. Infant vocalizations were counted and coded for being syllabic-like or vocalic-like. The results showed that when adults maintained a give-and-take pattern of interaction, infants produced a higher ratio of syllabic/vocalic utterances (Bloom et al., 1987). Turn taking between children and parents may be affected by the presence of background television.

Relationship Between Joint Attention, Turn Taking, and Background Television.

The effects of background television may permeate both JA and turn taking. In the study, "The Impact of Background Television on Parent-Child Interaction," fifty-one 12-, 24-, and 36-month-old children were chosen to participate in an hour of play with one parent in the presence of adult-directed (background) television. The quality and quantity of interactions were coded. Results showed that even though adults were not given directions to watch the television, in the presence of adult-directed television parents were less verbally interactive with their children. In addition parents were less responsive when their children made bids for attention. Also, children were

shown to have a 19% decrease in socially interactive behavior (Kirkorian, Pempek, Murphy, Schmidt, & Anderson, 2009).

Based on the knowledge about the importance of JA and turn taking, the study supports the idea that background television could produce a negative effect on language development. With a reduction of responsiveness from parents, any bids for JA may be ignored. Also, the reduction of responsiveness may result in shorter episodes of turn taking thus effecting language development. Finally, with lessened verbalizations from parents, the opportunities for turn taking decrease. Overall, these changes in quantity of interactions can affect language development.

Adult Modeling

More important aspects of language development in young children are the models provided by parents and caregivers. According to Owens (2008), mothers provide increasingly complex models of utterances to scaffold language in their children. Language input is altered, meeting the comprehension level of the developing child. Models may begin as object labels, but grow into phrases and sentences. Parents may reformulate a child's utterance by restating the phrase without grammatical error to

increase error-free utterances later produced by the child. Parents may also extend or expand a child's utterance by providing a semantically related comment. For example, if a child says "Doggie play", a parent may respond by saying "The doggie is playing with the ball." These techniques provide models of mature language and reinforce child verbal behavior (Owens, 2008).

In Kirkorian et al.'s (2009) research, a key finding about the presence of background television was that in addition to affecting the quantity of parent-child interactions, it also affects the quality of interactions. Verbal responses were described as passive in nature with parents verbally acknowledging without looking or not responding to their children (Kirkorian et al., 2009).

Because the quality of verbal responses is reduced in the presence of background television, it is plausible that parents and caregivers are not providing the same types of language models that they may otherwise. A reduction in mature models could potentially have an affect on language development.

Child-Directed Television

Infant-directed videos are videos marketed explicitly or implicitly to increase early learning and have positive effects on early development (Courage, Murphy, Goulding, & Setliff, 2010). Similarly, educational videos are videos designed to enhance learning in children (Fisch, 2008). The next section of this paper will aim to explore the relationship between language development, language skills and the videos targeting them.

Infant-Directed Television

Currently the opinion of researchers is mixed on the value of infant-directed television in child development. Frequently cited is an article by Zimmerman, Christakis, and Meltzoff. The article, "Associations between Media Viewing and Language Development in Children Under the Age of 2," criticizes the use of infant-directed television. Researchers found evidence to support that infant-directed television can have a deleterious effect on child development, more specifically language development. Through use of a short-form of the Communicative Development Inventory (CDI), it was found that each hour of television viewed a day for infants under 16-months was correlated with a 16.99 point decrease in language skills (Zimmerman et. al., 2007). While there is evidence to

suggest negative effects of infant-directed television on language development, some suggest that there are methods to mitigate the adverse impacts (Mendelsohn, Brockmeyer, Dreyer, Fierman, Berkule-Silberman, & Tomopoulos, 2010).

Play

As previously established, play is important in the development of language development (Toth et. al, 2006). In the article, "When The Television is On: The Impact of Infant-Directed Video on 6- and 18-month-olds Attention During Toy Play and On Parent-Infant Interaction," researchers looked at the effect of infant-directed videos during free-play sessions of infants. Forty-eight infants were chosen with their parents to participate with research sessions occurring at 6- and 8- months. Results showed that while infants spent the majority of their time attending to the toys, brief moments of attending to the television occurred (i.e., 1.6 times/min. at 6 months; 1.36 times/min at 18 months). These distractions function to disrupt ongoing play (Courage et. al., 2010).

Based on the results, the presence of the infant-directed video disrupted play, which may result in disruptions of language development. In addition, because the looks towards the television were fleeting, it raises

the question of the effectiveness of infant-directed videos themselves.

Imitation

Imitation is also implicated as integral for language development. It is often divided between immediate (i.e., occurring promptly after a model) or deferred (i.e., occurring outside the context the model is presented). In addition to being categorized between immediate and deferred, imitation includes imitation of body movements and imitation on objects. Toth et al. emphasized that deferred imitation was important to further language gains (Toth et al. 2006).

In the study, "Imitation from Television by 24- and 30-month-olds", thirty 24-month-olds and thirty 30-month-olds were chosen. Adults demonstrated a task using novel items in either a live or video-recorded format. Imitation of the task was assessed immediately and then deferred. Results showed that both 24-month and 30-month-olds were both able to complete the imitation tasks from both models. However, it was also found that both age groups were better able to perform imitation tasks when the demonstration was live (Hayne, Herbert, & Simcock, 2003).

In a similar article, "The Effect of Narrative Cues on Infants' Imitation From Television and Picture Books"

children aged 18- and 24-months-old were chosen as participants. Imitation of demonstrations from books and video were compared. It was found that children were more likely to engage in imitation when presented via video (Simock, Garrity, & Barr, 2011).

When considering if infant-directed television is effective in producing growth in language development, the pre-linguistic skill, imitation, should be examined. While it is significant to know that imitation can be derived from viewing television, it is important to consider that imitation is more likely to be derived from a live demonstration (Hayne et. al., 2003).

Coviewing and Parent-Child Interaction

Coviewing.

Parental direction of a child's attention to the television is often referred to as coviewing. Through coviewing parents are able to endorse the message of the show to aid in understanding of the content (Pempek, Demers, Hanson, Kirkorian, & Anderson, 2011). By definition coviewing is essentially the same as a parent establishing JA with the child having the television show as the object of shared reference (Moore & Dunham, 1995; Pempek et. al., 2011).

Coviewing and Parent-Child Interaction During Infant-Directed Television.

Researchers have observed parents scaffolding infants learning experiences when viewing television in many of the same ways as they might during picture book reading; parents label, describe, and ask questions (Fender, Richert, Robb, & Wartella, 2010). There are several articles that suggest positive effects of coviewing on child development including language development. For example, the article "Parent Teaching Focus and Toddlers' Learning from an Infant DVD" showed that through parent mediation, children were better able to use target vocabulary (Courage et. al., 2010).

However, while there was support to show that coviewing can have positive effects on language development, some findings may affect the practicality of coviewing outside of a testing situation. In Courage et. al.'s (2010) article, researchers reported that parents vocalized to their children more often when the television was off than on. Also, there was less labeling of toys and almost no labeling of images from the video.

In the same article, researchers reported that unless prompted, parents rarely drew their infants' attention to

the video through labeling and pointing, and periods of JA were infrequent (Courage et. al., 2010).

Vocabulary Acquisition

When looking at infant-directed and child-directed television, vocabulary acquisition from viewing is of special interest to researchers (Robb, Richert, & Wartella, 2009; Allen & Scofield, 2010). While the research in this area has been growing, there is a lack of consensus on whether video is a viable source of word learning (Allen & Scofield, 2010).

In the article, "Just a Talking Book? Word Learning from Watching Baby Videos", researchers randomly assigned 12 and 15 month old children to view *Baby Wordsworth*, a DVD highlighting words around the house. After controlling for age, gender, cognitive developmental level, income, and parental education, the most significant predictor of vocabulary skills (both comprehension and production), was the amount of time children were read to. There was no increased growth in vocabulary development in children who viewed the DVDs, even after multiple exposures (Robb et al., 2009).

Similarly, the article "Word Learning from Videos: More Evidence from 2-year-olds", examined the feasibility of vocabulary acquisition from television. In this article two

studies were completed. In Study 1, 2 year-olds were shown a video of a target image labeled with a novel word and were later asked to point to and name the image and live counterpart. In Study 2, 2-year-olds were asked to solve video and live versions of the disambiguation task (i.e., to point to and name a distractor image and its live counterpart). The results showed that 2-year-olds learned and disambiguated words from video and that learning was similar on the video and live versions of each task. Overall the study showed that learning vocabulary may be viable from video (Allen & Scofield, 2010).

Because of the lack of consensus in determining the benefits of television in vocabulary development, it is difficult to understand the specific effects that television shows have on language development.

Interactive-based Television Shows

Interactive-based television shows are shows that mimic language learning in live situations to facilitate learning via television. In the shows, an onscreen character may speak directly to the child to actively elicit participation, label objects, and provide opportunities for the child to respond (Linebarger & Walker, 2004).

In the article, "Infants' and Toddlers' Television and Language Outcomes," researchers had 51 Midwestern families keep viewing logs of their child's television habits. In addition, they conducted standardized assessments for cognitive development, vocabulary development, and expressive language productions using *The Bayley Scale of Infant Development (BSID-II)*, *The MacArthur Communicative Development Inventory*, and *The Early Childhood Indicator*. When looking at television shows that are interaction-based, viewing of these shows were positively correlated with increased expressive language production and vocabulary skills (Linebarger & Walker, 2004).

Narrative-based Television Shows

Narrative-based television shows have a storybook-like nature to facilitate language learning. These programs have a strong narrative, present new vocabulary words both visually and verbally, model social interactions with characters, and are visually pleasing (Linebarger & Walker, 2004).

In Linebarger and Walker's (2004), researchers found that programs designed to mimic book reading support both emergent and later literacy skills (Linebarger & Walker, 2004).

Summary

The purpose of this paper was to examine the relationship of technology, specifically television, to language development in children. First background television, or television that is incomprehensible to young children, was examined (Schmidt, Pempek, Kirkorian, Lund, & Anderson 2008). Pre-linguistic skills including play, joint attention, and turn-taking were examined. It was found that play can be disrupted by background television in the form of shorter play episodes and shorter amounts of focused attention (Schmidt et al., 2008; Setliff & Courage, 2011).

When the relationship between JA, turn-taking and the presence of background television was examined, it was found that parental responsiveness decreased with background television as a distraction (Kirkorian et al., 2009). Furthermore, when looking at adult modeling in the presence of background television the overall quality and quantity of models were reduced (Kirkorian et al., 2009).

Next, educational and infant-directed videos were examined looking at pre-linguistic skills and factors affecting language development. Similar results to those found in the presence of background television were revealed. Specifically, in the presence of infant-directed

television, play episodes were shorter with decreased focused attention (Courage et. al., 2010).

When examining imitation, it was found that children were able to imitate models from a screen. However, it was also found that they were better able to imitate from a live model (Hayne et al., 2003). By definition, joint attention and coviewing are very similar, but it should be noted that it was reported that very few parents actually utilized coviewing when watching television with their children (Moore & Dunham, 1995; Pempek et. al., 2011; Courage et. al., 2010).

In terms of vocabulary acquisition, there was a lack of consensus between researchers on the benefits that children can derive from television (Allen & Scofield, 2010). Furthermore, interactive-based and narrative-based television were examined with viewing positively correlated to increased expressive language and vocabulary skills as well as increased emergent literacy skills (Linebarger & Walker, 2004).

Future Research

The connection between the benefits of television and child development is a growing area of research. Further studies are needed to enhance understanding of the benefits or detriments of television consumption.

It is difficult to compare current studies because of the age differences across participants. This difference provides insufficient support to assert the claim that television, either background television or child-directed television, is beneficial or detrimental to language. Future research should target multiple projects with children of the same ages, or longitudinal studies following children as they age. These types of studies would add to the body of literature and increase the ability to draw conclusions.

Second, research would benefit by differentially comparing the effects of television as a dyadic relationship between child and television and a triadic relationship between parent, child, and television. It can be hypothesized that for a certain age, benefits from television use are limited to those who participate in triadic relationships—when the parents are utilizing covieing. Furthermore, it can be hypothesized that after a certain age, children are able to have educationally valuable experiences via television sans parent involvement. Future research is needed to better establish these connections.

Finally, further research is necessary to discretely view pre-linguistic and linguistic skills in language

development to provide specific evidence of the effects of television on child language development. Additionally, it would be beneficial to determine whether television exposure contributes to language delay due to lack of exposure or a language deficit area. This information would be useful to speech-language pathologists (SLPs) when evaluating and designing treatment plans for these children.

Clinical Implications

Research into the connection between television (i.e., background and child-directed) and language development is significant due to the pervasiveness of television in modern society (Rideout & Hamel, 2006). With television viewing increasing in homes, any effects, both positive and negative, have implications for a large population of children. An SLP's awareness of the effects of television allows them to provide counsel to parents and caregivers who may be concerned about child development.

More specifically, when communicating with parents of children with language delays, therapists can provide education on the potential effects that the presence of background television can have on parent-child interaction. In addition, SLPs can inform families regarding the importance of parent involvement during child-directed

television in the form of covieving to maximize learning potential.

REFERENCES

- Allen, R. & Scofield, J. (2010). Word learning from videos: Evidence from 2-year-olds. *Infant and Child Development, 19*, 649-660.
- American Academy of Pediatrics, Committee on Public Education (1999). Media education. *Pediatrics, 104*, 341-342.
- Bloom, K., Russell, A., & Wassenberg, K. (1987). Turn taking affects the quality of infant vocalizations. *Journal of Child Language, 14*, 221-227.
- Chonchaiya, W. & Pruksananonda, C. (2008). Television viewing associates with delayed language development. *Acta Pædiatrica, 97*, 977-982.
- Courage, M., Murphy, A., Goulding, S., & Setliff, A. (2010) When the television is on: The impact of infant-directed video on 6-month and 18-month-olds' attention during toy play and parent interaction. *Infant Behavior and Development, 33*, 176-177
- Fender, J.G., Richert, R.A., Robb, M.B., & Wartella, E. (2010). Parent teaching focus and toddlers' learning from an infant DVD. *Infant and Child Development, 19*, 613-627.
- Fisch, S. (2008). *Children's learning from educational television: Sesame Street and beyond*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc.
- Hayne, H., Herbert, J., & Simcock, G. (2003). Imitation from television by 24- and 30-month-olds. *Developmental Science, 6*, 254-261.
- Kirkorian, H.L., Pempek, T.A., Murphy, L.A., Schmidt, M.E., & Anderson, D.R. (2009). The impact of background television on parent-child interaction. *Child Development, 80*, 1350-1359.
- Linebarger, D. & Vaala, S. E. (2010). Screen media and language development in infants and toddlers: An ecological perspective. *Developmental Review, 30*, 176-202.

- Linebarger, D. L. & Walker, D. (2004). Infants' and toddlers' television viewing and language outcomes. *American Behavioral Scientist, 46*.
- Mendelsohn, A. L., Brockmeyer, C. A., Dreyer, B. P., Fierman, A. H., Berkule-Siberman, S. B., Tomopoulos, S. (2010). Do Verbal Interactions with Infants During Electronic Media Exposure Mitigate Adverse Impacts on their Language Development as Toddlers? *Infant and Child Development, 19*, 577-593.
- Moore, C., & Dunham, P. J. (1995). *Joint attention: Its origins and roles in development*. Hillsdale, NJ: Lawrence Erlbaum.
- Owens, R. E. (2008). *Language development: An introduction*. New York: Pearson Education.
- Pempek, T.A., Demers, L.B., Hanson, K.G., Kirkorian, H.L., & Anderson, D.R. (2011). The impact of infant-directed videos on parent-child interaction. *Journal of Applied Developmental Psychology, 32*, 10-19.
- Rideout, V., & Hamel, E. (2006). *The media family: Electronic media in the lives of infants, toddlers, and preschoolers*. Menlo Park, CA: The Henry J. Kaiser Family Foundation.
- Robb, M. B., Richert, R. A., & Wartella (2009) Just a talking book? Word learning from watching baby videos. *British Journal of Developmental Psychology, 27*, 27-45.
- Setliff, A. E. & Courage, M. L. (2011). Background television and infants' allocation of their attention during toy play. *Infancy, 16*, 611-639.
- Simcock, G., Garrity, K., & Barr, R. (2011). The effect of narrative cues on infants' imitation from television and picture books. *Child Development, 82*, 1607-1619.
- Schmidt, M. E., Pempek, T. A., Kirkorian, H.L., Lund, A.F.,

- & Anderson, D.R. (2008). The effects of background television on the toy play behavior of very young children. *Child Development, 79*, 1137-1151.
- Tomasello, M. & Farrar, M. J. (1986). Joint attention and early language. *Child Development, 57*, 1454-1463.
- Toth, K., Munson, J., & Meltzoff, A.N. (2006). Early predictors of communication disorders in young children with autism spectrum disorder: Joint attention, imitation, and toy play. *Journal of Autism Developmental Disorders, 36*, 993-1005.
- Zimmerman, F.J., Christakis, D.A., & Meltzoff, A.N. (2007). Associations between Media Viewing and Language Development in Children Under Age 2 Years. *The Journal of Pediatrics, 151*, 364- 368.

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