

Madison LaMonica

Learning Manners or Misbehavior

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Introduction

The age of prosocial children's programming began with *Mister Rogers' Neighborhood* program, as Fred Rogers sought to teach children about honesty, respect, kindness, and helping behaviors through television. Now, there are many programs that attempt to teach children prosocial messages like the ones above, as well as sharing, inclusivity, acceptance of other cultures, and friendliness. While these television shows have good intentions, it is not yet clear if children learn how to be prosocial from these shows. For this project, learning a prosocial message is defined as understanding the message from the episode as measured by assessments about the meaning of the content. Understanding the message also includes evidence that the child applied the prosocial lesson to a real-life situation, either hypothetical or real.

A limited number of studies have attempted to answer this question. Several publications have attempted to measure this by having a child watch an episode of television that teaches a prosocial message, supports that child's learning with different strategies depending on the study, and then assesses the child for their comprehension of the lesson and conducts behavioral testing to see if they apply the lesson to their behavior (Bonus & Mares, 2019; Cingel, Sumter, & van de Leur, 2019; Mares & Acosta, 2010; Mares et al., 2022; Mares

& Sivakumar, 2014; Peebles, Bonus, & Mares, 2018). In each of these studies, the authors found that, generally, there was no effect on the children's behavior after viewing, and the children largely struggled to comprehend the lesson told in the story. Currently, there is no literature supporting the idea that children learn prosocial messages from children's television programming.

The current body of literature does have limitations, however. Many studies use a small sample size such as 46 children (Bonus, 2019), 70 children (Bonus et al., 2019), or 80 children (Cingel et al., 2019). In most of the research, the children are only visited once or twice in a one-month span. Children were assessed longitudinally to see impacts of prosocial television on their behavior in just one study (McHarg et al., 2021). Because the body of literature is currently very small, each study has attempted a different set of conditions to see if children will be able to transfer the moral lesson to their own behavior. A consequence of this is that currently no set of conditions has been tested again with a larger sample size or refining of the experimental method. This indicates insufficient consideration of the topic as replication is necessary to support the previous findings.

This paper sought to address the insufficient consideration of this topic, present a thorough discussion of current findings, and propose specific focuses for future research. If

research exploring children's ability to understand prosocial messages in television continues to suggest that children are not learning positive messages, policies should be put in place to caution parents and educators that while this content may be entertaining, children cannot learn the moral lesson proposed. Additionally, production companies of children's programming such as PBS or Disney Junior could be provided with guidance for future content to support children's learning, based on the research findings.

Based on previous understanding of the literature, it is proposed that preschool-aged children cannot learn prosocial messages from television content aimed to teach such messages. This paper also hypothesizes that the fantasy elements included in many television shows decrease children's understanding of these lessons. This hypothesis will be investigated by analyzing the current research, primarily mixed-methods empirical studies.

Methods

To investigate this question, the University of Arizona Libraries, EBSCO, Wiley, and JSTOR databases were initially used to search for primary, peer-reviewed articles that answer this research question. Keywords such as early childhood, preschool, toddler, and kindergarten were used to narrow the population when searching. Then, words

such as screen time, television, media, content, movies, episode, and video were used to narrow the focus to the impact of media. Words like prosocial, lesson, inclusive, honesty, kindness, and sharing were used to focus the search on prosocial lessons. These initial searches did not yield many results other than two articles by Mares, an author cited many times in this article. Using the University of Arizona Libraries tool, more articles were found by looking at research that cited Mares or was cited in Mares' works. This technique yielded many more articles by other authors. The same process was repeated on works by other authors to ensure that the articles gathered were not only supporting one position or were only from one perspective. After these searches, fourteen articles relevant to the topic had been identified. One was by Mares, one of the main authors on the subject but was excluded from this research because it was published in 2008, and this project was focused on more recent research. Two more articles were excluded because they were meta-analyses, rather than primary research. One was excluded because its focus was on how prosocial television impacted children's sleep, rather than their behavior.

The remaining ten articles were read several times, summarized, and compared according to the primary themes. For example, several studies are concerned with understanding learning and fantasy elements, so those studies' findings were gathered

and compared. Another primary theme is seeing if scaffolding, or helping children to learn the lesson, helps with young children's understanding of the lesson and applying the prosocial theme to their own behavior.

Literature Review

This literature review will discuss current studies that address children's ability to learn prosocial messages from television, children's ability to learn from fantastical television, and current prosocial content in children's television. This review will be arranged thematically according to the focus of the study and aims to give an in-depth view of the current body of research.

Studies Addressing Fantasy Content and Learning

To identify if children can more easily transfer knowledge from a children's science television show to real life when the content is presented realistically or fantastically, Bonus published an experimental study (Bonus, 2019). This study does not look at children's ability to transfer prosocial messages, as the research question specifies; however, the study begins to establish evidence that fantasy elements in television lead to confusion for young children. This study used mixed methods and recruited 46 4-year-

old children from a Midwestern preschool in the United States. About half of the children were girls, and the group was relatively racially diverse, as 41% of the participants were white and 43% of them were Black; the makeup of the other 16% of participants was not disclosed. These children were assigned to a fantasy or reality condition. In the fantasy condition, children learned about insect communication through clips of anthropomorphic animals. In the reality condition, children learned about insect communication while watching real video clips. Children were then tested for comprehension of the video immediately after watching. One week later the children were assessed for their memory of the information and ability to transfer the information to real life situations. The author measured the children's learning of biological facts, judgments of whether the material was real, their visual attention, their ability to transfer the biological facts to real life, and their transfer of anthropomorphic ideas about animals to real life. Children in both conditions learned an equal amount about insect communication, but children in the reality condition were more easily able to transfer their knowledge to real life. These children also transferred more information than was provided in the video, indicating that in the week since learning, they had connected that knowledge to new findings or discussions. These findings suggest that for children to learn from television,

they may need certain conditions to be met, such as the information to be presented in the way they will see it in real life and to allow time for the children to reflect on the information learned. This study has a very small sample size, and thus the results are not generalizable. However, the finding that children learned more when the content was presented realistically is theoretically relevant.

Bonus, seeking to expand on these findings, completed another study with author Mares in 2019. This study evaluated whether children could transfer messages of understanding about other cultures from *Sesame Street* to real life scenarios and if children think the cultures presented in TV are real (Bonus & Mares, 2019). In this mixed methods study, 70 children were recruited from their childcare center. 25 children were 3-years-old, 22 were 4-years-old, and 23 were 5-years-old. 55% of the children were girls. The children were overall racially diverse with 21% Hispanic children, 15% Black children, and 21% Asian children. These 70 children were visited at their school and shown an episode of *Sesame Street* depicting fiestas in Guatemala using Spanish words and anthropomorphic animals. After viewing, children were asked questions to see how real they thought the cultural elements shown were. They were also tested for how much they understood the episode. After a week, the children were visited at their school again and the researcher pretended that they were there to talk about toys before mentioning

they were planning a fiesta for a friend. The children were asked about what they knew about fiestas and for advice about specific elements such as food selection and decorations. After, the children were evaluated for how much they remembered about the episode. The children were evaluated on previous exposure to Hispanic culture, the child's perspective on if the show was real or made-up, content comprehension, how real the children thought the content was, ability to transfer episode content, memory of episode content, transfer of fantasy elements, and judgment of reality in the episode. The researchers found that while all children remembered the content of the episode, only the oldest group of children, the 5-year-olds, were able to apply the episode content to real life problems. This may suggest a developmental milestone that is present for 5-year-olds, but not younger children. This study does not present the episode in a realistic or fantastic way as Bonus (2019) does. Future research on the topic could present an edited, realistic version of the episode to compare the children's results to. When the researchers asked the children if Spanish was a real language spoken somewhere in the world, and if fiestas were a real custom celebrated somewhere in the world, many children said no, it was not real. This finding might imply that young children assume what they see on television is make-believe. This study might also suggest that if one thing in the show appears to be make-believe, such as a fantasy element, children

may conclude that all of the content may not be real.

Next, Mares and Sivakumar explored whether children can learn about other cultures and have more inclusive beliefs through targeted television content (Mares et al., 2014). This was a qualitative study that, like Bonus et al. (2019), presented television shows to children that depicted other cultures, but had fantastical elements. This study was run twice. The first time the study was run, 145 preschool children ages 3 to 5 were recruited. 50 of the children were 3-years-old, 57 were 4, and 38 were 5 years-old. 46% were girls. 98 of these children were white, which indicates the sample was largely racially homogenous. The second time the study was run, 115 children ages 3–5 were selected. 44% of them were girls and 91% were white. Children were assigned to watch an episode of a show with a Hispanic protagonist, *Dora the Explorer*, a Chinese protagonist, *Ni Hao Kai-Lan*, or a white protagonist, *Franny's Feet*. Each of these shows featured anthropomorphic animals, characters talking directly to the audience, and family interactions. After watching the show, children were asked about their understanding of foreign language words in the episode and if the content showed how real people elsewhere in the world celebrate or live. The following measures were evaluated: children's belief in the reality of characters, the reality of fantasy elements, understanding of the reality of Spanish and

English words, and the child's perceived learning. The researchers found that the 3- and 4-year-old children were more likely to believe that the Spanish and Chinese words were made up for the show. The 5-year-old children understood some of the educational parts of the show to be true but believed the Spanish and Chinese words were made up and that the characters were real people who could hear them. It appears there may be a developmental belief in younger preschool children that most content in fantastical shows is made up, but older preschool children begin to discriminate which parts are real and which are not. Like Bonus et al. (2019) most children did not conclude that the cultural elements were how other people live and celebrate, but that they were made up. This study has a much larger sample size than Bonus et al. (2019) as 260 children in total participated, leading to more convincing results. However, the sample was primarily made up of white children, and the findings should not be generalized to children of other races.

An older study sought to understand if children can transfer TV show concepts to real life better when they learn from a fantasy character or a real character (Richert et al., 2009). This was a mixed methods study and the experimenters conducted three similar studies with different populations. For the first experiment, 64 white, middle-class children were selected ages 3.5 to 5.5 from preschools in

a college town. For the second experiment, 34 children ages 4 and 5 were selected. Half of these children were girls, and all children were white and middle-class. For the third experiment, 34 children were recruited from ages 4 to 6. These children were all white and middle-class. There is no racial diversity in this sample, like in Mares et al. (2014) and likewise these results cannot be generalized to children of other races. In the first experiment, researchers told children a story about *Monsters Inc.* characters Mike and Sulley or about their teacher encountering a problem. Then, the child was told a scenario with the opposite character (if they heard the story about their teacher, the scenario was about Mike and Sulley) encountering a similar problem and were given props to solve it. They were expected to solve it with the same solution as was in the initial story. These problems could only be solved with physical solutions. Researchers observed and provided prompting to remember the story if children were stuck. In the second experiment, the same procedure was repeated, but the real character was replaced with a young child, like the children listening, and the fantasy character was a novel talking bug. In this experiment, the solutions to the situation were to take prosocial action. In the final iteration of the experiment, the real character was the listening child inserted into the story and the fantasy character was a novel fairy. Children's memory of the solutions in the stories and whether children

were able to complete the scenario were measured. Each child was given a score and children received higher scores when completing the task without prompting, a lower score when completing it with prompting, and no score if they did not complete the scenario. In the first experiment, the 3- and 4-year-old children were able to transfer the solution from the story about the teacher to the scenario with Mike and Sulley but not the other way around. This indicates that they were able to transfer the solution from a realistic and familiar character to the novel situation but could not transfer the solution from a fantasy and familiar character. For the 4- and 5-year-olds, there was no difference in transfer ability. In all experiments across all conditions, children could more easily transfer the solution when they heard it from a real character. In this way, the findings are like those of Bonus (2019) which also found that children were able to transfer more knowledge when they learned in a realistic way, rather than with fantastical elements. While this study did test children's transfer of prosocial messaging in the second and third experiments, the children learned the content through oral storytelling, rather than through video content. The research question is specifically asking whether children transfer knowledge from television, so these results may only be tentatively applied to the current project. Still, these findings might suggest that children learn prosocial lessons from stories generally better when

they are presented with realistic characters, whether they are presented orally or through video.

Studies that Attempt to Scaffold Children's Learning or Mimic the Home Environment

In 2019, a group of researchers recognized that while children tend to watch TV with a peer or sibling outside of the laboratory context, no study had tested children's learning of prosocial lessons with a peer present (Cingel et al., 2019). The study wanted to understand if children viewing television with a peer impacts their ability to learn and apply messages about inclusion or stigmatization. This study uses a mixed method design. 80 children in kindergarten and first grade were selected in the Netherlands from three different schools. 57% of the children were girls, and no racial data is provided, suggesting that the sample is racially homogenous. This lack of information decreases the credibility of the paper. Children were assigned to one of several conditions where children are evaluated: one without watching television, one where children watched an episode of *Clifford the Big Red Dog* about inclusion alone, or where children watched the episode with a familiar peer. All children were tested, either after watching the episode or without watching for the control group, for their inclusivity and stigmatization of other children. Comprehension of the episode,

judgments about the morality of exclusion, and peer stigmatization were measured. Stigmatization was evaluated using a well-known measuring tool to measure the stigmatization of adults, and the tool was modified for the current population. For all children who viewed by themselves, the episode targeting inclusion had no effect on the children's inclusion of others. The 5-year-olds who viewed with a peer also had no effect after viewing. For the 6-year-old children who viewed with a peer, they were less inclusive of others after viewing the episode than the control group. While the number of 6-year-old children in this condition is small, this finding may suggest that under some circumstances, children learn an antisocial message rather than the intended prosocial message from children's television. The authors suggested this may be because children who co-viewed perceived the peer as a bystander who implicitly approved of the bad behavior on-screen. This study supports previous findings in social psychology surrounding the bystander effect. The sample size of this study is small and lacks diversity, but it is the only study to have children co-view an episode of television, like children often do at home or at school.

Mares, an author who has published on the topic several times before, investigated children's ability to learn inclusiveness from television but attempted to use scaffolding measures to support children's learning (Mares et al., 2010). Scaffolding

is an educational idea that children can learn new skills when given support. In this case, the researchers edited *inserts*, or explicit narrations of the moral lesson, into the episodes. The study wanted to identify if children can more easily apply messages about inclusiveness in television episodes if explicit explanations of the lesson are inserted. This was a mixed methods design with 128 participants from ages 4 to 6. These children lived in urban communities in the Midwestern United States. 24% of these children were 4-years-old, 44% were 5-years-old, 32% were 6-years-old. As 74% of the children were white, the sample is racially homogenous. Most of the children were from low- and middle-class families. Children in the control group watched a *Berenstain Bears* episode unrelated to inclusion. Children in experimental groups watched either *Sagwa* or *Arthur* episodes aimed at teaching inclusion. The *Arthur* episode specifically addressed inclusion of children of the opposite gender. Some of these children watched the episode with inserted voiceovers in the episode reinforcing and explaining the message. Then, children were tested for their inclusion and stigmatization of others using the same method as was used in Cingel et al. (2019) and asked about how they would behave in situations like those in the episode. The following items were measured: prior viewing of the episode, how much the child liked the episode, inclusiveness, understanding of the lesson, memory of the insert, and prior exposure

to other prosocial television. The researchers found that children in the groups with inserts were more easily able to comprehend the moral lesson, but all children demonstrated the same levels of inclusivity of others. Children who watched the episode of *Arthur* without inserts were less likely to be inclusive than the control group and demonstrated more gender bias than before watching. This study, like Cingel et al. (2019), identifies a small subset of children in the study who displayed a negative effect on their behavior after viewing a prosocial episode. In this study, because it is children who watched the *Arthur* episode without inserts that were less inclusive, and the children who watched with inserts had a null effect, it is possible that unmediated viewing of the episode can lead to misunderstanding of the message in some children.

More recently, Mares and other authors attempted to scaffold the moral lesson through songs that explicitly restate the message, rather than a spoken narration (Mares et al., 2022). In this study, building on previous research that people can be “primed” to be more loving by playing songs about love, the authors wanted to understand if children could be primed to transfer messages more easily about helping and sharing from a show to real life. This study uses mixed methods. For the first study, 107 participants ages 3–5 were recruited. 70% of these children were white. This is the only data provided about them. For the

second study, 64 children ages 3–5 were selected. This time 65% were white. Initially, children were randomly assigned to groups. Some groups were shown episodes of *Daniel Tiger's Neighborhood* about helping. A second group watched this episode with a song inserted that primes children to feel loving or to feel “fun.” Other groups of children watched an episode about waiting that was edited with priming songs about either helping or loving. Then, children were put through behavioral tests like a researcher dropping pens, prompting the child to help, or being told if they waited a certain amount of time, more cookies could be theirs. The children were also tested on their likelihood to share by giving them 10 stickers and telling them they could keep them for themselves or share them with another child. The study was repeated, and children were shown only 90 second songs from *Daniel Tiger's Neighborhood* that explained the message about waiting or helping and either had helping or loving priming themes. The children were put through the same behavioral tests. Then, 636 parents were surveyed and asked about times they remember their child behaving more prosocially after watching educational television. For the experimental studies the following was measured: children's demonstrated helping, sharing, and waiting; comprehension of the lesson in the episode; prior exposure to *Daniel Tiger's Neighborhood* and other prosocial shows; parent-reported empathy;

amount of television viewing; age; ethnicity; response time of children in helping and how many pens were picked up. For the survey, measures included whether parents remembered a time their child's behavior changed from watching television, the nature of times parents reported their child's behavior changing, the source of the media that changed behavior, length of behavior change, child's age at exposure, thoroughness of parents' discussion about content, content of discussion, and amount of child's media use. In the study where children watched full episodes with priming songs, they demonstrated very little understanding of the episode. This is a relatively surprising finding as *Daniel Tiger's Neighborhood* is often referred to as a show that is very successful at presenting prosocial messages. Children in all conditions behaved similarly, just as prosocially, in the behavioral tests when they watched full episodes. In the song-only priming study, children who listened to songs about helping were more likely to help the researcher and pick up pens. The children in other conditions were not more likely to be prosocial. In the survey, 70% of parents reported that they had noticed their child's behavior change after watching television. In most of these instances, parents discussed the content with children and reminded them of it, which influenced behavior. This study is the first one to find a true positive effect on behavior after viewing something with a prosocial

message, with the children in the song-only helping group demonstrating more helpful behavior. This contradicts the findings by Mares et al. (2010) and Cingel et al. (2019) which found negative behavioral effects in some groups. It is possible that in all three of these studies the negative or positive effects of the episodes are due to some difference in those groups of children and the study variables are not what led to those results. It is also worth noting that when the study switched from watching episodes with songs to watching only a music video, the children were no longer watching a story that attempted to teach a lesson. For this reason, the positive behaviors found in children who watched only the song can be only marginally relevant to the current research question as the children did not watch an entire episode or story.

In this body of literature, there is a lack of longitudinal data. There is only one study to date that undertook a naturalistic approach as researchers followed up with a group of toddlers over time and measured their prosocial behavior (McHarg et al., 2021). At each time, the researchers surveyed the child's families about what kinds of television shows they were watching, and these shows were coded for prosocial content. The study aimed to understand if the number of prosocial interactions children view on television impacts their likelihood to behave prosocially on a series of stimulation tests. This was a mixed methods study. Of the participants, the parents

of all the children lived together, were monolingual English speakers, and lived in the United Kingdom. 85% of the mothers and 75% of the fathers had bachelor's degrees or higher. 92% of mothers and 94% of fathers were white. All parents were first-time parents. To conduct the study, 190 sets of first-time parents in the UK were recruited and sent surveys when their children were 14 months old, 24 months old, and 36 months old. These surveys measured the types of television children were watching (by listing 5 programs children watch most often) and the amount of screentime the children had. At the 24- and 36-month marks, researchers visited each child at their home or group care setting. During both visits, researchers conducted the Infant Distress Paradigm, a common evaluation method of empathy. This is a test in which the child's caregiver reads the child a book and plays a realistic crying baby sound coming from a doll in another part of the room. The child's empathetic responses are coded and measured on a modified Global Code of Empathic Concern scale. This scale is a standardized measurement system that uses photos to measure adults' bias and ability to empathize with people who look different from them. For this study, researchers modified this scale to be developmentally appropriate for children. At the 36-month visit, children were also evaluated on sharing behaviors by being given stickers and told they can keep them all or share them with another

child. Researchers coded the programs the parents mentioned and developed a coding system for measuring the number of prosocial and antisocial interactions in the programs. Researchers measured the amount of screen time watched by children, format of the screen time, top 5 most watched shows, coded number of prosocial and antisocial interactions in shows, infant distress paradigm (or how empathetically the children responded to a crying baby), and number of stickers shared. Children's screen time increased through each follow up visit. The amount of prosocial television children watched did not correlate to how empathetically they responded to the crying baby or how many stickers they shared. In each other study that uses behavioral stimulations to measure prosocial behavior, the behaviors tested are the same behaviors as the ones targeted by the show (Mares et al., 2022; Richert et al., 2009). In this study, all children are tested on the same behaviors, even though they watched different television shows that may not have addressed the behaviors that were evaluated. Additionally, the shows children watched and amount of viewing were reported by parents through surveys, which may not be reliable.

In order to increase the chance that children will be able to apply moral lessons to their behavior, researchers created interactive media (Peebles et al., 2018). This research question was designed after considering that children generally watch,

or co-view, television with their parents, who may help to scaffold a prosocial lesson through interaction. Children also typically watch interactive media that directly asks the audience questions that may help to scaffold the lesson. Examples of shows that directly ask the audience questions are *Mickey Mouse Clubhouse* and *Dora the Explorer*. This is a mixed-methods study in which 97 kids from ages 3-to-5 were recruited from preschools in the Midwest United States. 41% of the children were white, 26% were Hispanic, 6% were Asian, 5% were Black and 17% were multiracial. This indicates that the racial makeup of the children sampled was relatively diverse. In this study the children were randomly assigned to the control condition, to watch an episode of *Sheriff Callie* unrelated to honesty, to watch an unaltered episode of *Sheriff Callie* about honesty, to watch an edited version to include multiple choice questions asking children to call out answers and saying "good job," to watch that episode with a novel adult experimenter asking multiple choice questions and providing responsive feedback, or to watch the episode with multiple choice questions for children to touch on the device and receive feedback about their response from the device. The interactivity was intended to reflect dialogic interaction. After watching, the children were tested on comprehension, labeling the emotions of the characters in the episode, understanding which characters' statements were truthful and which were

lies, their ability to generalize the message about honesty, and their ability to transfer the content to a realistic situation. The children's parents were asked about their current iPad usage. Children's episode comprehension, labeling emotions of characters, recognizing emotions of characters, understandings of truths versus lies characters told, evaluation of how moral truths and lies were, ability to generalize the episode's lesson, ability to generalize the lesson to other storylines, ability to recognize human emotions, evaluation of human truths and lies, and transfer of lesson to a new context were measured. All children in all conditions performed well on identifying emotions. Children who watched the episode with no interactive element scored the same as children who watched with interactive elements on recognizing the lies and truths of characters, generalization of lessons, or transfer of the lesson to novel scenarios. Watching the episode with the questions asked by the show or watching the episode with an experimenter did not result in the children testing better on any measure than the non-interactive viewing condition. Children who watched with the interactive questions on the device that they got to select by touching the touch screen scored better on comprehension of truths and lies and comprehension. All groups were not able to transfer the lesson to other scenarios. This suggests that while we can scaffold the lesson with interactive questions to help children comprehend the lesson

better, this type of scaffolding still does not help children to transfer the lesson.

Study Describing Children's Educational Television

A final quantitative study analyzed 88 popular children's shows for their number of prosocial interactions modeled, fantasy elements, educational content, and violent content. Nielsen Ratings were used to identify the most watched shows by preschoolers from 2014–2015. This resulted in a list of 23 shows. 42 shows were gathered from diaries parents completed of their child's media use. 10 more shows were obtained from surveying parents who came into a research lab. Most of the parents who provided shows were middle-class and white. There were 88 total shows coded. For each show, ratings from Common Sense Media and other measures were gathered. Then two undergraduate research assistants randomly selected two episodes from each show to code on a scale of 1–5 for modeling prosocial interactions. They did the same for fantastical content. Each show was also coded on that scale for anthropomorphic content. A second coder repeated the process and discrepancies in points were addressed. The following is a comprehensive list of all measures in the study: style of the show, network the show airs on, violent content as rated by Common Sense Media, educational

content as rated by Common Sense Media, and prosocial content and fantastical content rated on a scale of 1 to 5. The study found that almost all the shows were animated. Shows on some networks like Disney Channel and PBS were less violent and more prosocial. PBS was more educational than other networks. Shows with fantasy content were more likely to be violent. Anthropomorphism was common in all children's shows. In general, shows scored poorly on showing prosocial behavior, even shows that tend to be considered very prosocial like *Daniel Tiger's Neighborhood*. It is interesting that this study found that almost all of the popular children's shows contained anthropomorphism, a type of fantastical content, as other studies noted that children have a harder time learning from fantastic media (Bonus, 2019; Bonus et al., 2019; Mares et al., 2014; Richert et al., 2009).

Summary

This literature review provides a broad understanding of the current publications on the topic of children's ability to transfer prosocial messages learned from television to their lives. Several studies ask parents about the shows children are watching and measure the prosocial content in these programs, providing information about the types of content children are watching outside of laboratory settings (Mares, Bonus, & Peebles, 2019; McHarg & Hughes, 2021; Taggart, Eisen,

& Lillard, 2019). Each of these studies suggested that there are many children's television shows that attempt to teach moral messages. One study looked for a correlation between the amount of prosocial content children watched and their prosocial behavior displayed in experimental simulations, but found no effect (McHarg et al., 2021). This may indicate that overall, the television children watch does not influence their behavior. Other studies conducted experiments in which children watched an episode of a television show, with various alterations, and their prosocial behavior was measured. In two of these studies, the researchers evaluated if children could transfer messages of inclusion from episodes about being inclusive (Cingel, Sumter, & van de Leur, 2019; Mares & Acosta, 2010). In others, the episodes taught honesty (Peebles, Bonus, & Mares, 2018); helping, sharing, and waiting (Mares, Bonus, & Peebles, 2022); and the understanding of other cultures (Bonus & Mares, 2019; Mares & Sivakumar, 2014). Several of these studies used interventions intended to make the child's transfer of the prosocial message easier through inserting explicit explanations of the message (Mares & Acosta, 2010), songs explaining the lesson (Mares et al., 2022), or interactive questions while watching the show (Peebles et al., 2018). Two studies aimed to incorporate elements more like how children watch television at home, such as with a peer (Cingel et

al., 2019) or with dialogic questioning from an adult (Peebles et al., 2018). All these articles address the research question by suggesting with their findings that while children can occasionally comprehend moral messages through television, they cannot transfer the message to real life. Many articles are concerned with understanding if children are less likely to generalize information when it is delivered by fantasy characters versus reality characters, and in each of these the children had a harder time transferring new knowledge from fantasy characters than they did reality characters (Bonus et al., 2019; Bonus, 2019; Mares et al., 2014; Richert, Hoffman, & Taylor, 2009). This is interesting as another study suggests that nearly all shows contain fantasy content through anthropomorphic characters, suggesting that the poor transfer from fantasy content may be happening with most programs (Taggart et al., 2019). No study resulted in findings that children behaved more prosocially because of the prosocial messages in television.

Results

While each item in the body of literature approaches the research question differently, the results are largely homogenous. This section will summarize the results of the literature thematically.

Children's Ability to Comprehend Moral Lessons from Television

Each empirical study analyzed children's comprehension of the episodes they watched. Some studies found that children were able to comprehend the message overall (Bonus et al., 2019; Cingel et al., 2019; Mares et al., 2014; Peebles et al., 2018). Other studies found that the children in their samples could not understand the moral lesson well or could only understand the moral lesson when there was explicit narration of the lesson edited into the episode (Mares et al., 2010; Mares et al., 2022). Evidence is mixed on children's ability to comprehend moral lessons from children's media.

Children's Ability to Transfer a Lesson from Television to Real Life

In the studies that measure whether children can transfer lessons from television, or another kind of story, to real life situations, no author demonstrated that children could transfer this information. Several studies found this to be true even when the researchers scaffolded the lesson to make it easier for children to learn (Cingel et al., 2019; Mares et al., 2010; Peebles et al., 2018). Other studies focused on how fantasy content may make it more challenging for children to transfer the information and found that children who viewed

fantasy content were not able to transfer the lesson to real life (Bonus et al., 2019; Bonus, 2019; Mares et al., 2014; Richert, Hoffman, & Taylor, 2009). In only one study were children reliably able to transfer a lesson from television to real life, and the lesson was scientific, not prosocial (Bonus, 2019). This is significant because it is possible that it is easier for young children to transfer scientific knowledge from television to real life than prosocial lessons.

Prosocial Content Children Watch

Three studies used surveys or Nielsen ratings to record the common television shows children watch (Mares et al., 2022; McHarg et al., 2021; Taggart et al., 2019). In two of these studies, children's television shows were coded for the number of prosocial interactions they had per episode (McHarg et al., 2021; Taggart et al., 2019). One of these studies found that in general, even the most prosocial shows modeled very few prosocial behaviors (Taggart et al., 2019). The other found that the number of prosocial interactions a child saw on television did not correlate to more prosocial behavior during behavioral testing paradigms and that the number of hours of television children watch increases significantly over the first few years of life (McHarg et al., 2021). Another found that 70% of parents believe that their child's behavior had been positively affected after watching a television episode (Mares et al., 2022). This anecdotal

reporting by parents is contrary to the results of the empirical studies above. Additionally, a survey of children's television found that nearly all children's television shows contain fantasy content (Taggart et al., 2019), which is relevant as other studies mentioned above found that children have a harder time transferring messages from fantasy content compared to children presented with realistic content.

Summary

These results do not support the idea that children younger than 5 can comprehend moral lessons from television shows and transfer them to real life. Most of the evidence supports this, but there were several contradictions within small subgroups in certain studies. In only one study and in one condition group did viewing content have a positive impact on children's behavior (Mares et al., 2022). This effect was only found when a child listened to a song, rather than a story or episode, about helping. This contradicts much of the research as well as findings by Mares et al. (2010) and Cingel et al. (2019) that found television content had a negative impact on children's behavior in certain small conditions.

Discussion

The project sought to understand if young children can comprehend prosocial messages like inclusivity or helping through episodes of children's television and if those messages can impact their behavior. In general, the research tentatively suggests that children do not always comprehend these messages, and they are not able to transfer these messages. While these findings are interesting, there are many gaps in the research that must first be addressed. First, only one study looked at the effect of children viewing prosocial content over time on their behavior (McHarg et al., 2019). This is also the only study to look at all the television children watch, rather than looking at the effects of only one episode a child has seen. Future research should look at the effect of watching prosocial content over time and see how much exposure is needed to have an effect, if any, on children's behavior. Without that information, it is challenging to generalize this project's findings as most of the research looked at such limited exposure. While many studies attempt to address gaps in the literature through scaffolding the prosocial information, there has only been one study for each scaffolding method and each one used for only one or two episodes (Cingel et al., 2019; Mares et al., 2010; Peebles et al., 2018). This is a limitation because these findings cannot be generalized beyond the individual shows that are shown to

children in these studies without more inquiry into other television shows. Each of these gaps in the literature also represents limitations to the findings of this paper. This small body of literature does not yet have any studies with large enough sample sizes, longitudinal designs, or wide-scale experimenting methods to accept the findings presented in this paper.

Because the results of this project are tentative, and need further research to confirm, there are not yet policy implications for this research. However, with the understanding that current research suggests that children may not be able to learn prosocial messages from television, parents and educators may use caution when showing these shows to their children. As the research does suggest that children can learn from other content areas, such as science, parents and educators could choose programming that teaches from core subject areas, particularly when these shows present the information in a realistic way (Bonus, 2019). Until future research demonstrates conditions in which children can apply prosocial lessons to their behavior and value sets, shows exploring these ideas do not seem to be more beneficial to children than other programming.

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