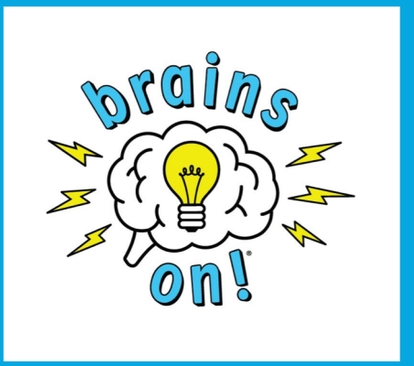
The Role of the Brains On! Podcast in Supporting Children and Their Families During the COVID-19 Pandemic: Research Summary



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This material is based upon collaborative work supported by the National Science Foundation under Grant No. 2029209 titled *RAPID: Addressing Families' Covid-19 Information and Education Needs Through Podcast Media*. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.

Suggested citation: Grack Nelson, A., Christian Ronning, E, Her, C., &Van Cleave, S.. (2021). *The role of the Brains On! podcast in supporting children and their families during the COVID-19 pandemic: Research summary*. Science Museum of Minnesota: St Paul, MN.

If you have questions about this study, please contact Amy Grack Nelson at agnelson@smm.org.

What is Brains On!?

Brains On! is a science-focused podcast for children ages 5 to 12 years old and their families, produced by American Public Media. A unique feature of Brains On!, compared to other children's science podcasts, is that the content of each episode is based on questions children submit to the show. Each 15-30 minute episode features a Brains On! host, a kid co-host, and a guest scientist or expert. Episodes also use humor and fun to convey information in a kid-friendly way, often using skits, characters, or a song to help explain complex scientific concepts.

Brains On! was well-positioned to rapidly respond to children's and their families' information needs that emerged during the COVID-19 pandemic. Since Brains On! episodes had always been based on kids' questions and they already had a process in place for audience engagement (they receive an average of 100 questions from children each week), Brains On! didn't need to change the way they worked to quickly produce episodes in response to what kids wanted to know about the pandemic and could easily be responsive to children's changing questions over the course of this global crisis. As of June 2021, Brains On! has produced eight coronavirus-related episodes. The first four of these episodes were the basis of the research findings reported in this Research Summary.

Brains On! Coronavirus Episodes Included In the Research

The following Brains On! coronavirus episodes were included in the research. All eight episodes can be found on Brains On!'s Coronavirus Episodes & Resources page www.brainson.org/page/coronavirus.

Understanding coronavirus and how germs spread

Released March 10th, 2020

*As of the time of this report, **the March 10th episode was the most downloaded** (136,402 downloads within the first 15 days of posting) of all of Brains On's 190 episodes.

Staying home: How social distancing helps fight coronavirus

Released March 24th, 2020

Virus Busters: How scientists are working to stop the coronavirus

Released April 7th, 2020

Coronavirus: How to be a helper from home

Released May 19th, 2020

Research Overview

Research Questions

This research summary shares some high level findings related to the following research questions.

1. How and to what extent do Brains On!'s coronavirus-based episodes help children and their families **understand** and **talk** about science-related pandemic topics?
2. What kind of **conversations** are sparked by these episodes?

Method

We conducted an online survey with Brains On! listener families in June 2020. Since Brains On! episodes were first released in early March, responses cover the time period of **March through June 2020**, which was still early in the COVID-19 pandemic.

Sample

The sample was 5 to 12 year olds who had listened to at least one of the four coronavirus episodes released between March – May 2020. A total of 401 caregivers of kids 5 to 12 responded to the survey. Children in the sample tended to be 5-10 years old, male, and white-identifying. They came from households that tended to be highly educated, high income, and have an adult working in a STEM field.

A Limitation of Our Study

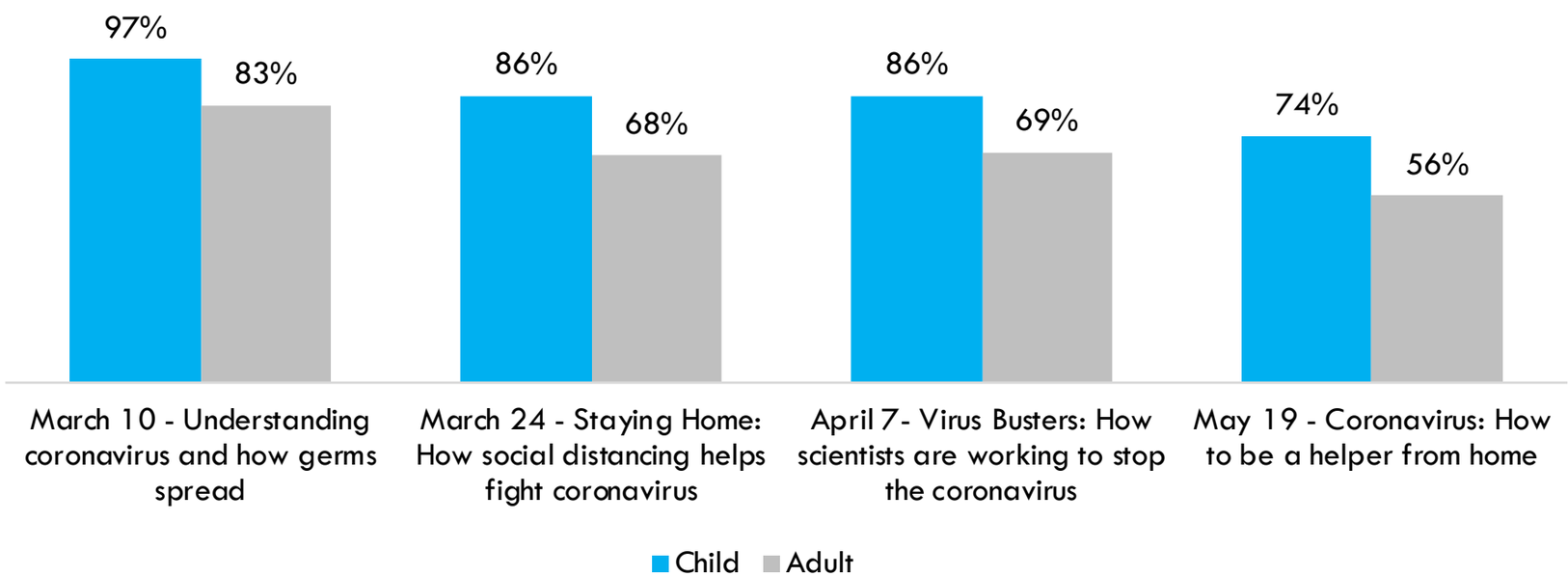
Even though this study provides valuable insights about children's experiences with the podcast Brains On! during the COVID-19 pandemic, the survey sample tends to be reflective of the experiences of white identifying, high income, and highly educated families (which aligns with Brains On!'s general listening audience). This means the experiences and voices from populations of children and families that have been most affected by the COVID-19 pandemic in terms of economic and racial disparities were not adequately represented in our study.

We acknowledge that this is a major limitation of our research and we hope other researchers can build on these findings and help to fill in the gaps of how informal science education media can support all children and their families during future pandemics and other science-related crises (natural disasters, climate change, etc.).

Brains On! Coronavirus Episodes Listening Habits

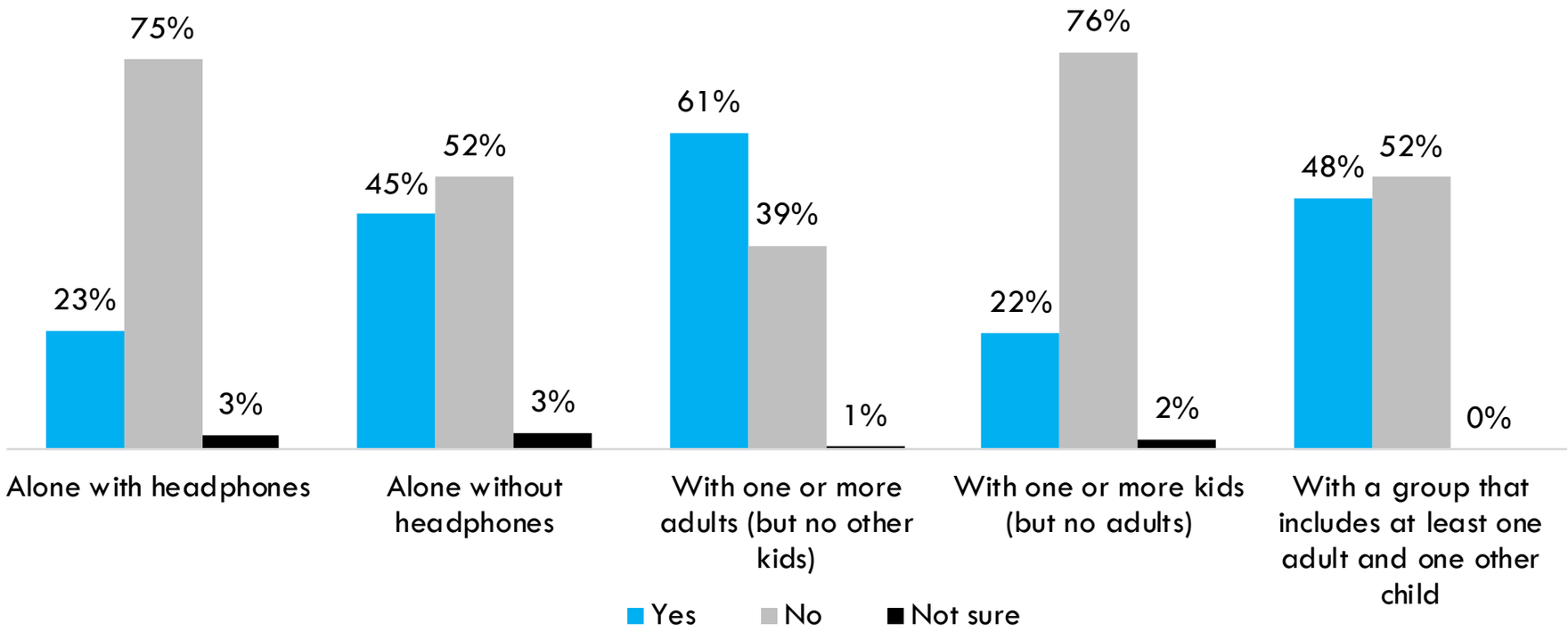
Children were not the only ones listening to the Brains On! coronavirus episodes. **Most households (89%) had an adult that had listened to at least one of the episodes.**

When comparing the number of adults and children listening to the coronavirus episodes, more adults and children listened to the first episode compared to the other three episodes. Listenership was lowest for the fourth episode, however that episode hadn't been available for very long before people took the survey.



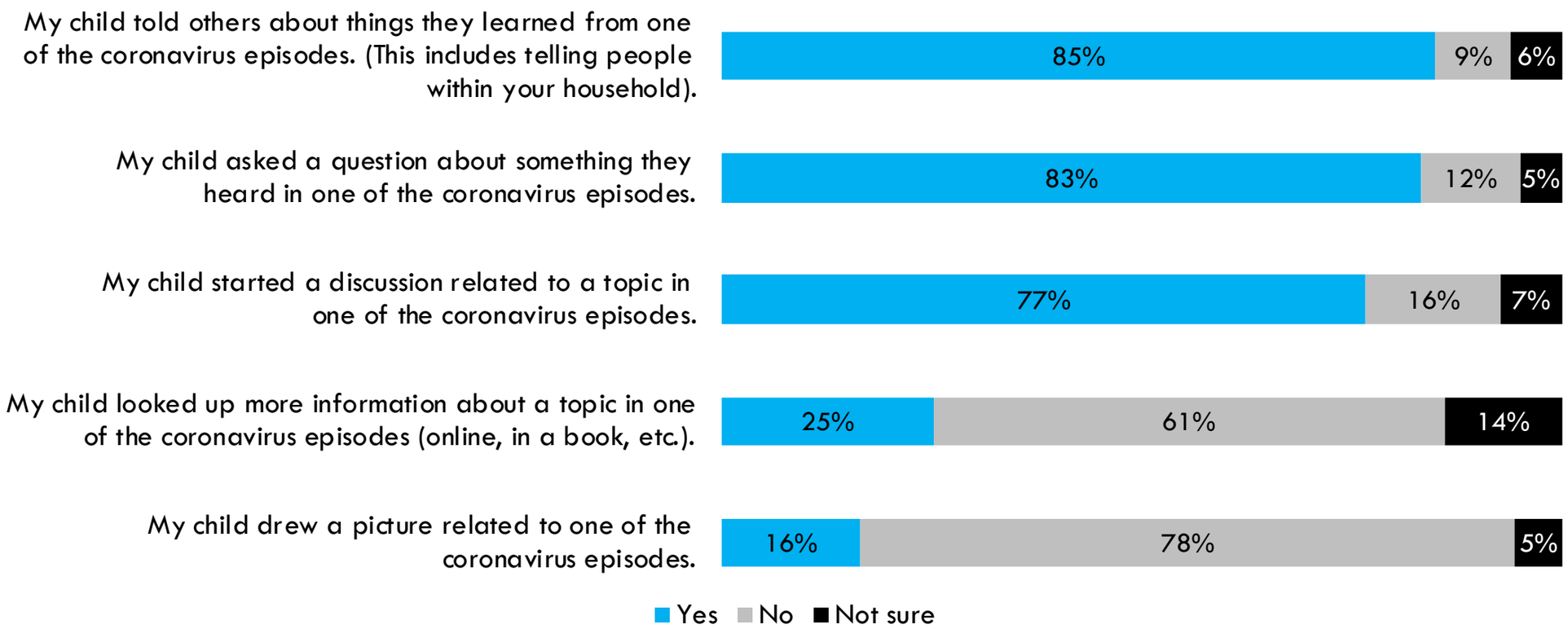
How Children Listened to the Coronavirus Episodes

Children listened to the coronavirus episodes in various ways, both by themselves and with other people in their household. **Most children (86%) listened with an adult.** Half of children (51%) listened alone, which is similar to the listening habits for Brains On! episodes in general.



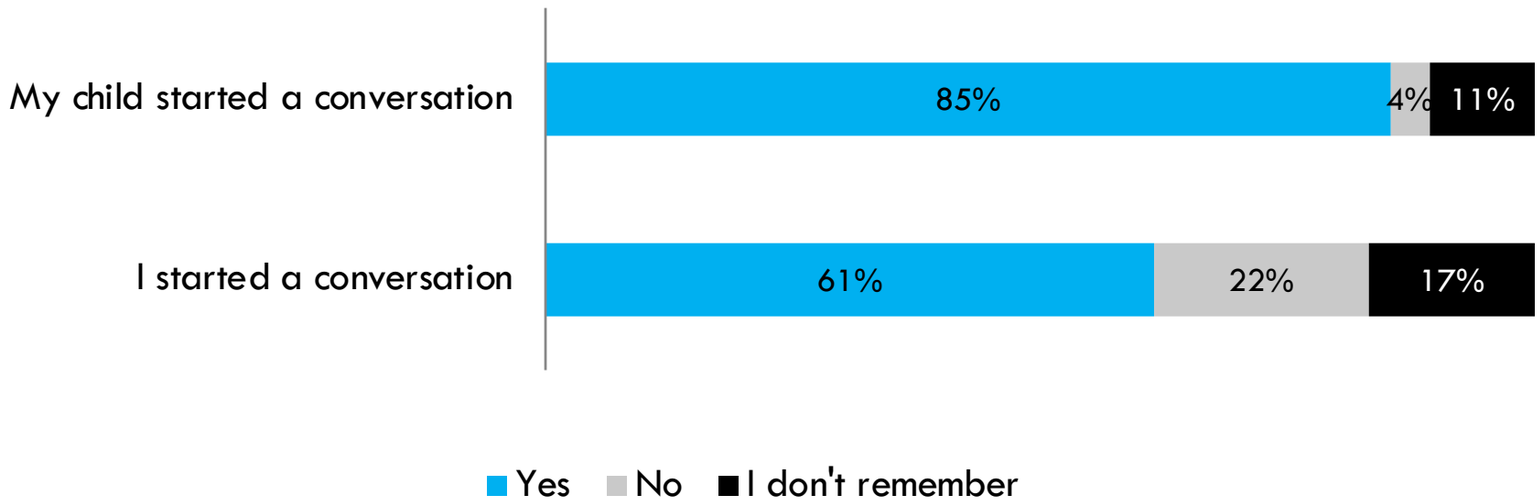
Children's Activities After Listening

Children engaged in a variety of learning activities after listening to a Brains On! coronavirus episode. A majority engaged in conversation-related behaviors after listening - they told others things they learned, asked a question, and/or started a discussion. **Almost all of the children in the study (97%) engaged in at least one of these three conversation-related behaviors.**



Brains On! Influenced Child-Caregiver Conversations

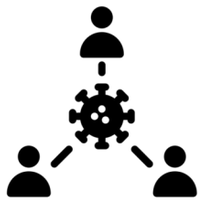
Of the child-caregiver conversations supported by the Brains On! coronavirus episodes, **children are more often starting a conversation after listening** to an episode than caregivers.



Topics of Conversations Based on Brains On! Episodes

Brains On! coronavirus episodes supported child-caregiver conversations about pandemic-related topics. Coronavirus episodes were mentioned as topics of child-caregiver conversations for over three-quarters (79%) of children in our study.

We asked caregivers to describe the topic of one of their Brains On!-supported coronavirus conversations. Topics were categorized based on how frequently a topic came up across the 289 caregiver responses.



Topics most frequently mentioned

- Preventative measures

Topics sometimes mentioned

- Vaccine
- Transmission

Topics least frequently mentioned

- Scientists studying the coronavirus
- General topics about viruses
- Coronavirus origins
- School
- How the coronavirus may affect people differently
- Infection
- Uncertainty related to the length of the pandemic
- Coronavirus features
- Being a helper
- Comparisons to other illnesses
- Other topics

Brains On! Features that Helped Support Conversations

A variety of features of the Brains On! coronavirus episodes helped support child-caregiver conversations about pandemic-related topics.

We asked caregivers what about the Brains On! coronavirus episodes helped to support conversations with their child. Podcast features were categorized based on how frequently a feature came up across the 272 caregiver responses.

Features most frequently mentioned

- Episode topic

Features sometimes mentioned

- Kid-friendly and age-appropriate content
- Reinforces information
- Information presented in an interesting and fun way

Features least frequently mentioned

- Serves as a conversation prompt
- Accurate information from a trusted source
- Models calmness
- Conveys that we are in this together
- Features scientists on the show
- Features kids on the show
- Positive messaging
- Encourages kids to ask questions
- Provides shared vocabulary
- Brains On! hosts
- Other features of Brains On!

Brains On! Features that Helped Children Understand Pandemic Topics

Brains On! played an important role in increasing children's knowledge about the pandemic, with almost all caregivers (93%) indicating that Brains On! coronavirus episodes helped their child better understand topics related to the coronavirus.

We asked caregivers what about the Brains On! coronavirus episodes helped their child understand pandemic topics. Podcast features were categorized based on how frequently a feature came up across the 184 caregiver responses.

Features most frequently mentioned

- Kid-friendly and age-appropriate content
- Information presented in an interesting and fun way

Features sometimes mentioned

- Accurate information from a trusted source
- Features scientists on the show

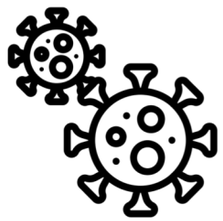
Features least frequently mentioned

- Models calmness
- Relevant to children
- Features kids on the show
- Reinforces information
- Brains On! hosts
- Conveys that we are in this together
- Features kids' questions
- Other features of Brains On!

Brains On! Features that Helped Ease COVID-19 Worries

Worry and fear were common emotions among children during the pandemic. Over two-thirds (68%) of children in our study had expressed worries about the coronavirus.

For close to three-quarters of these children (73%), Brains On! played an important role in helping to ease their worries. We asked caregivers what about the Brains On! coronavirus episodes helped to ease their child's worries and fears. Podcast features were categorized based on how frequently a feature came up across the 179 caregiver responses.



Features most frequently mentioned

- Episode topics

Features sometimes mentioned

- Kid-friendly and age-appropriate content

Features least frequently mentioned

- Features kids on the show
- Models calmness
- Conveys that we are in this together
- Information is presented in an interesting and fun way
- Features scientists on the show
- Accurate information from a trusted source
- Positive messaging
- Other features of Brains On!

Many features of Brains On! coronavirus episodes supported **child-caregiver conversations**, contributed to **children's learning** about pandemic-related topics, and helped to ease **children's pandemic worries.**

Beneficial Features of Brains On! Coronavirus Episodes

Episode topics

"Knowing that staying at home helps protect us and everyone else. Understanding that social distancing visits are fun but being 6' apart is a serious rule. She frequently reminds other adults about that guideline. Brains On! has given her the language and information to talk about and process this complicated situation."

Brains On! coronavirus episodes covered a wide range of topics. The topics that Brains On! covered and what children learned about these topics were important for supporting conversations, particularly in relation to child-caregiver conversations about preventative measures and children's role in prevention.

Caregivers also mentioned how important it was that the episodes provided a range of content that helped their child develop greater understanding of the coronavirus and have a sense of confidence in their knowledge. This increased understanding and knowledge helped to alleviate children's worries.

Beneficial Features of Brains On! Coronavirus Episodes

Kid-friendly and age-appropriate content

"Brains On! has excelled at presenting relevant information and practical actions at a level that children can understand and process, and makes factual information engaging."

The kid-friendly nature of the show is one of the key reasons why children listen to Brains On!. Episode content is age-appropriate and child-centered, using kid-friendly language to describe complex scientific topics in a way that is easy for children to understand. Brains On! uses examples relevant to children's lives and delivers content in a fun way that is engaging for children.

Caregivers talked about the importance of Brains On! delivering scientific information for children at a grain-size and difficulty level that encouraged them to be inquisitive, to ask more questions, and to engage in conversations. Brains On! also served as a guide for caregivers wanting to have developmentally appropriate pandemic-related conversations with their child.

Beneficial Features of Brains On! Coronavirus Episodes

Information presented in an interesting and fun way

"I think the use of humor has helped him both understand and process the information. My son is a smart, but fairly anxious kid and humor was such a helpful element for him."

Brains On!'s humor, engaging stories, silly characters, and skits all served to lighten and make accessible a complex science topic that was scary for some children. Many caregivers associated these moments of light-heartedness with the ability to engage in a more sustained and deeper conversation with their child. Some caregivers felt the humor helped to alleviate their child's pandemic worries, by easing the tension of a serious, ongoing situation.

The skit *"Going Viral with Kara and Gilly"* was frequently mentioned by caregivers as an example of how Brains On! used humor and fun to help children learn. The skit was a recurring feature of the Brains On! coronavirus episodes and featured two virus hosts that had their own podcast. Kara and Gilly discussed a wide range of virus-related topics in a silly, yet scientifically accurate way.

Beneficial Features of Brains On! Coronavirus Episodes

Accurate information from a trusted source

"Presenting reliable information from trusted hosts - this made the kids listen and understand better what is going on."

Brains On! was seen as a reliable, accurate, and trusted media source for caregivers and children to learn about pandemic topics.

For some children, listening to Brains On! helped to put their worries at ease because they trusted Brains On! hosts and as a result the information they were receiving.

Providing children with accurate and factual information was important during a time when children may have heard rumors and misinformation about the pandemic. Some caregivers used Brains On! to help their child weigh the accuracy of information they had received from other sources.

Beneficial Features of Brains On! Coronavirus Episodes

Models calmness

"Hearing adults and scientists and doctors and children calmly discussing it calmed her fears."

The tone of the hosts and guests on Brains On! modeled a calm, measured approach to having conversations about pandemic-related topics. This allowed for more productive child-caregiver conversations and helped to ease children's worries.

Some caregivers referenced how the tone of Brains On! was distinctly different from other information sources they used to understand the pandemic, which talked about the pandemic in fearful ways, rather than the calm, matter-of-fact approach of Brains On!.

Beneficial Features of Brains On! Coronavirus Episodes

Conveys that we are in this together

"It reminds her that kids everywhere are grappling with the same issues. She feels less isolated and alone."

Brains On! has listeners from around the world and the coronavirus episodes included questions and voices of a wide variety of children experiencing the pandemic. This helped to convey the communal aspects of the pandemic - how the pandemic affects everyone and children and families around the world were facing similar situations and challenges. Understanding that children are not alone and they are in it together with children everywhere helped to ease some children's worries.

Beneficial Features of Brains On! Coronavirus Episodes

Features scientists on the show

"He loved learning about how vaccines are made! He tells everybody now that scientists are working on a shot to protect us from the coronavirus. I think that section really made him hopeful."

Every Brains On! episode features a scientist or expert. Scientists and experts on the show allowed children to hear firsthand from the wide range of people working in the sciences to understand more about topics such as the coronavirus and transmission, how vaccines are developed, and how to treat COVID-19 patients.

Hearing from scientists about the work they were doing to understand the coronavirus and develop pandemic-related solutions helped to relieve worries for some children.

Beneficial Features of Brains On! Coronavirus Episodes

Features kids on the show

"I think it has really helped by listening to other kids talk about it. He knows he is not the only one with questions, he can relate."

Every Brains On! episode features a kid co-host and the voices of children reading questions they submitted to the show. Caregivers felt the children featured on the show helped to support child-caregiver conversations by encouraging their child to engage because they heard other children talking around the same topics or questions that interested them.

Some caregivers mentioned that hearing other kids on the show helped to reduce their child's worries – whether the child on the show was reflecting emotions that their child was also feeling or kids on the show were talking about their behaviors, knowledge, and/or experiences related to the pandemic.

Beneficial Features of Brains On! Coronavirus Episodes

Positive messaging

"She felt reassured when she listened to the episodes - the tone was real, but optimistic, and there were always concrete things the show suggested that helped her feel like she could help out or actually do something/have agency within this crazy situation."

The Brains On! coronavirus episodes had a positive and hopeful tone. Their focus on solutions to the challenges of the pandemic (such as vaccine development, use of preventative measures, and how healthcare workers are helping COVID-19 patients) helped to reduce children's worries.

The positive messaging also influenced the tone and direction of some child-caregiver conversations.

Beneficial Features of Brains On! Coronavirus Episodes

Reinforces information

"They offer a second voice reinforcing what his parents are telling him, which at nine he believes a lot more than just us alone! I've noticed a definite easing of his general tween grumpiness about it all after each episode."

Brains On! reinforced information that caregivers, teachers, or other caring adults were also talking to children about.

Caregivers could also use Brains On! episodes as a reference to support later conversations, particularly in relation to conversations around preventative measures.

This repetition of information, as some caregivers noted, was key to engaging children in productive pandemic-related conversations around actions they could take to keep them and others safe.

Beneficial Features of Brains On! Coronavirus Episodes

Kids questions in each episode

"The episodes answer questions from kids which helps kids know they are not alone in having their own questions about what is happening in the world around us. Hearing the kid questions gives what feels like permission or maybe prompts our child to ask questions."

Brains On! encourages children to be curious about their world. Brains On! episodes are based on questions children submit to the show and children are featured reading questions in each episode.

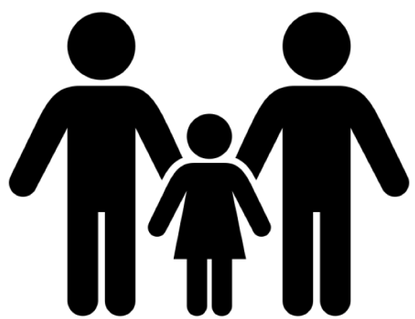
Some caregivers mentioned that the way Brains On! encourages questions from and curiosity in its young listeners helps facilitate conversations in families.

The kids' questions featured in the show also sparked additional questions from some children and led to an interest in finding information to help answer their questions.

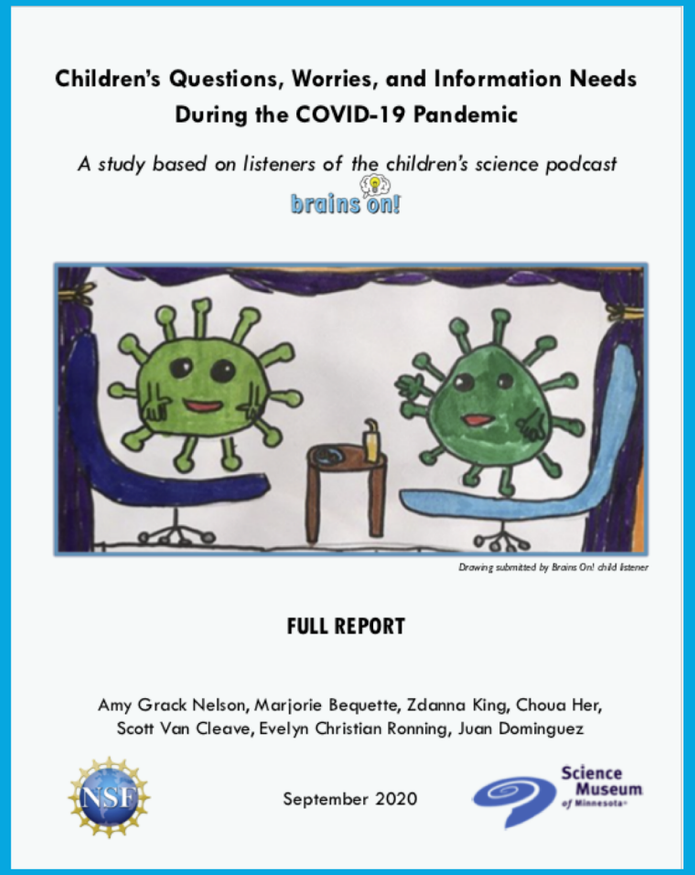
Podcast media, such as Brains On!, can play an important role supporting children and their families during pandemics and other science-related crises.

During the COVID-19 pandemic, Brains On! saw record downloads of some of their coronavirus episodes. These episodes were filling a need for families when there was a dearth of child-focused educational resources about the coronavirus and other pandemic-related topics.

Brains On! was not only seeing high listenership of these episodes, the episodes were having a positive impact on children and their families. Brains On! helped to increase children's understanding of a variety of pandemic-related topics. Episodes helped to spark and support child-caregiver conversations. Brains On! also played an important role in helping to ease children's pandemic worries. The success of Brains On!'s high listenership and positive impacts during the pandemic can be attributed to the wide array of features that combined created an engaging and educational podcast for children and their families.

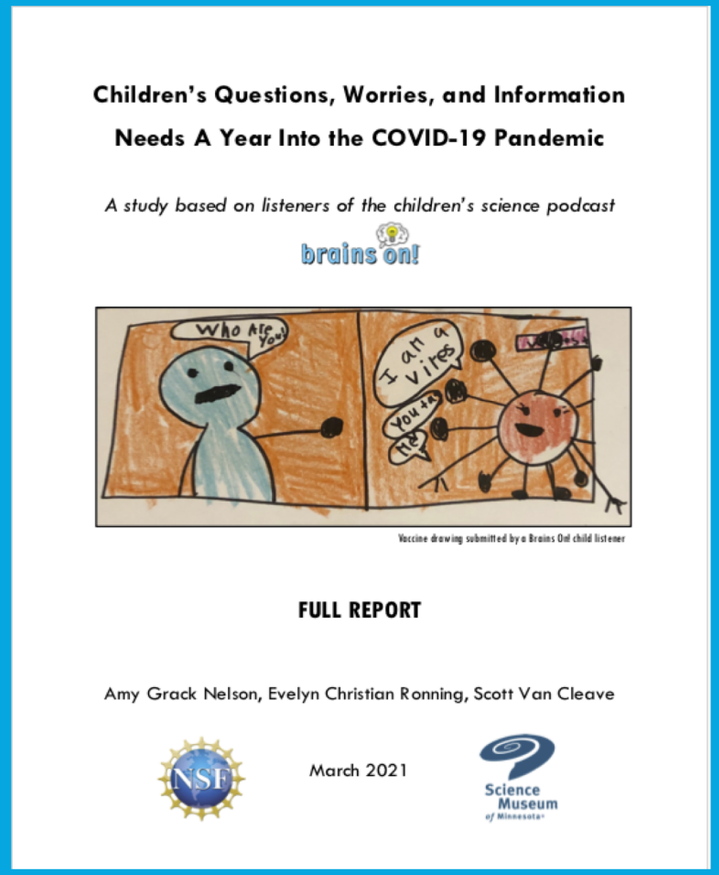


Learn more about our other pandemic-related research studies.



Full Report: http://bit.ly/SMM_Covid1_FullReport

Executive Summary: http://bit.ly/SMM_Covid1_Summary



Full Report: http://bit.ly/SMM_Covid2021_FullReport

Executive Summary: http://bit.ly/SMM_Covid2021_Summary

This study builds on National Science Foundation-funded research about Brains On! and the impacts of children's science podcasts.

Learn more about that research by visiting https://bit.ly/BrainsOnResearch