# Shifting the Focus:

## Exploring Video Accessibility Strategies and Challenges for People with ADHD

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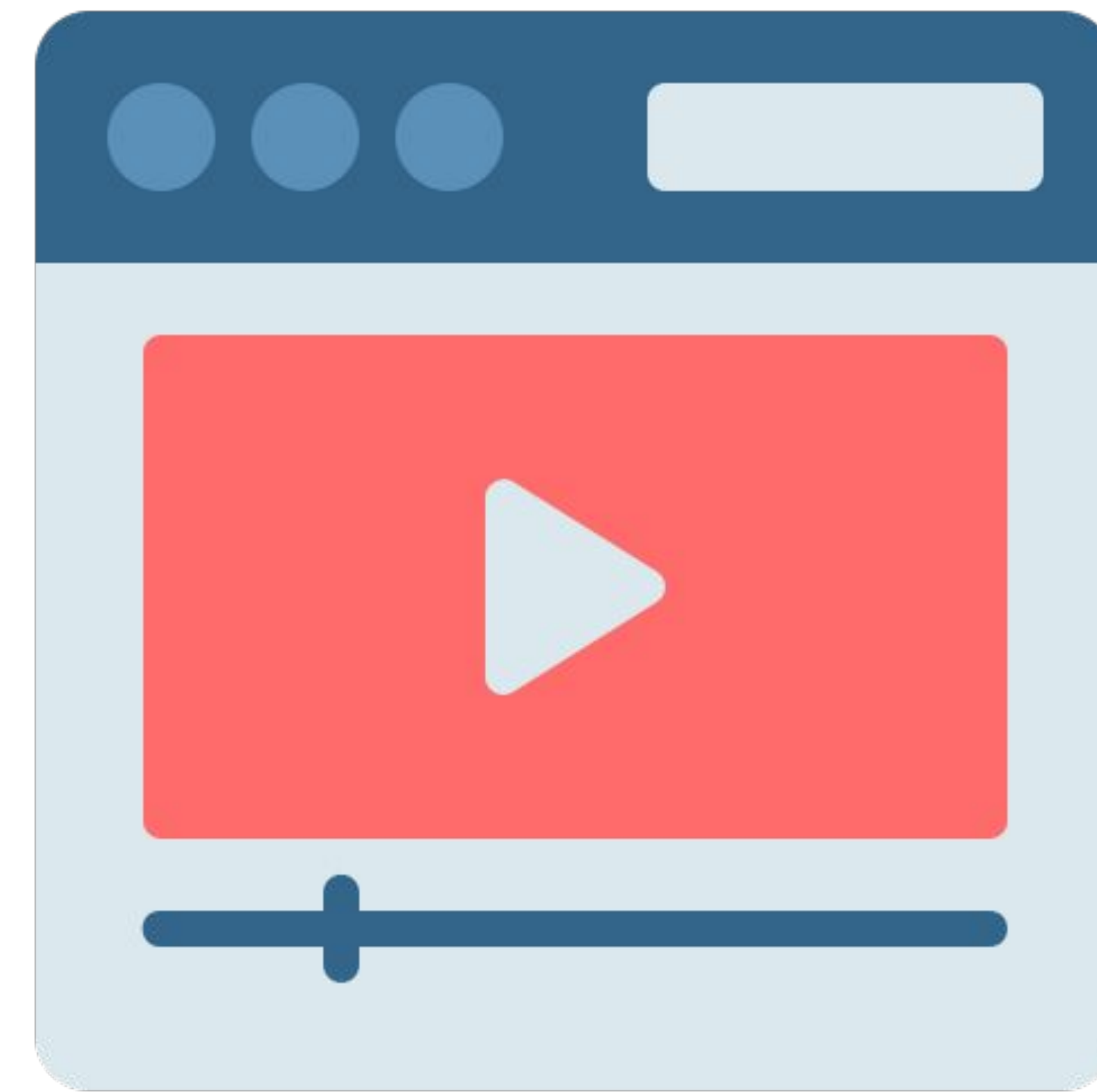[4] Oberlin College, Oberlin, OH

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# Attention-Deficit Hyperactivity Disorder (ADHD)

~ 366 million adults

**Characterized by:**
- Inattention
- Hyperactivity
- Impulsivity

# Prior Work: Video Accessibility for ADHDers

- ADHDers' experiences with **focus** and **attention** compared to non-ADHD peers
  - e.g., Yildirim et al. 2022, Hassner et al. 2014, Levenberg et al. 2023

- Designs for **platform tools** and **features** to support ADHDers' **information retention** from videos
  - e.g., Lewis and Brown 2012, Simpson et al. 2023, Cinquin et al. 2021

# Research Gap

Holistic understanding of ADHDers' experiences with videos, including ongoing challenges and potential solutions

**1** Across different **platforms** (YouTube, Netflix, TikTok, etc.)

**2** With different **goals** (entertainment, education, socializing, etc.)

**3** Using different **access measures** (captions, audio description, etc.)

## Research Question

What **challenges** do people with ADHD experience when watching videos, and what **patterns and practices** do they develop as a result?

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What challenges do people with ADHD experience when watching videos, and what patterns and practices do they develop as a result?

- How do people with ADHD **currently watch videos**?

- What accessibility challenges do people with ADHD face with regard to **attention**, **engagement**, and **information retention** when watching videos?

- How can **videos** and **video platforms** be made more accessible to better suit the needs of viewers with ADHD?

# Methodology

# Participants

- 20 participants with ADHD
  - Self-diagnosis or self-identification welcome

- Did not exclude people with additional disability identities as participants
  - Autistic (6)
  - Anxiety (7)
  - Depression (6)

# Interview Method

## Participants' Prior Experiences

Discussed viewing habits / experiences with **attention**, **engagement**, and **information retention**

▶

## Researcher-Led Co-Watching

Videos chosen by researchers as examples of **closed captions** and **audio description**

# Researcher-Selected Probes

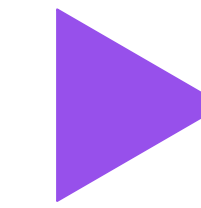Closed Captions

Audio Description

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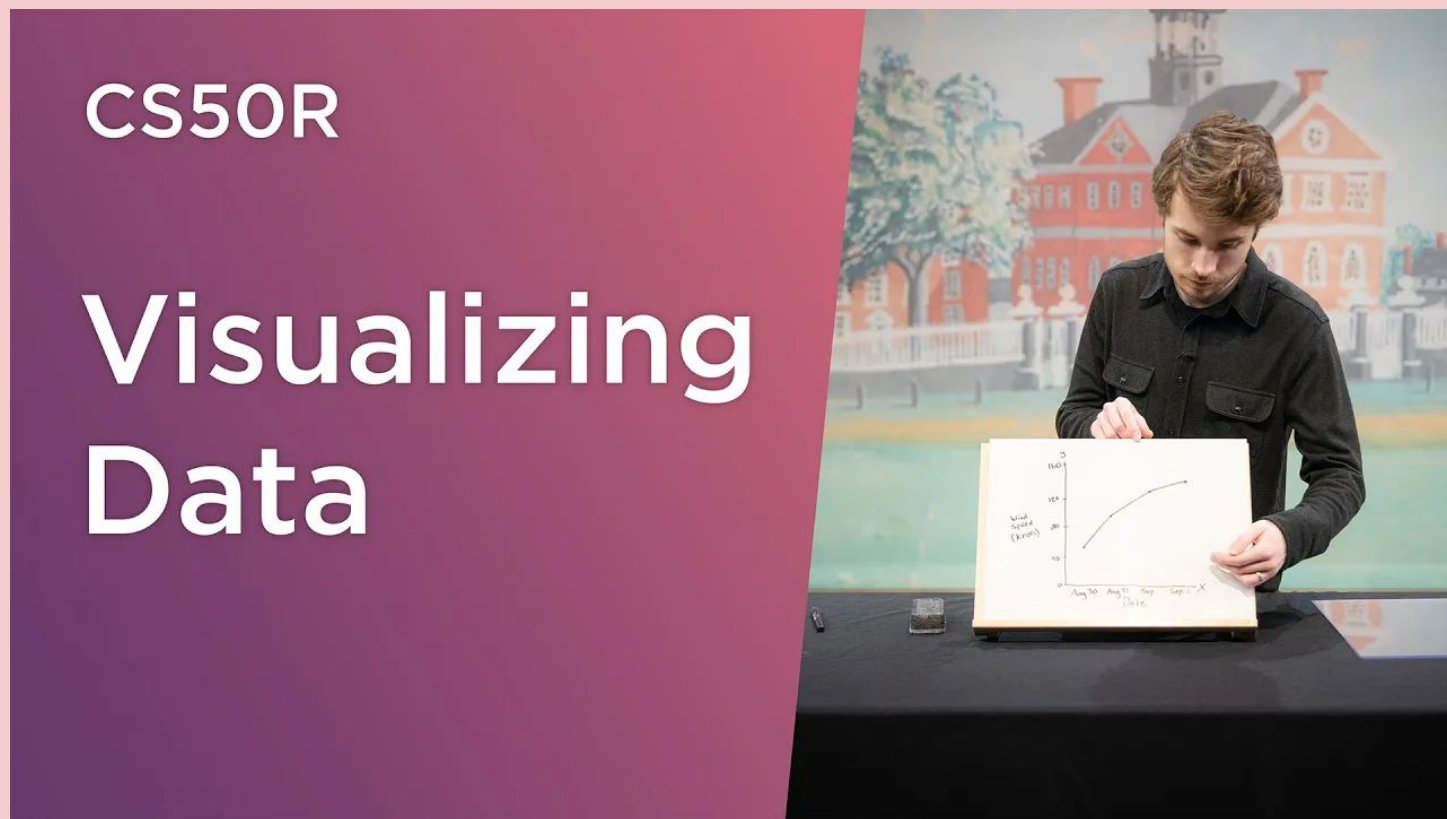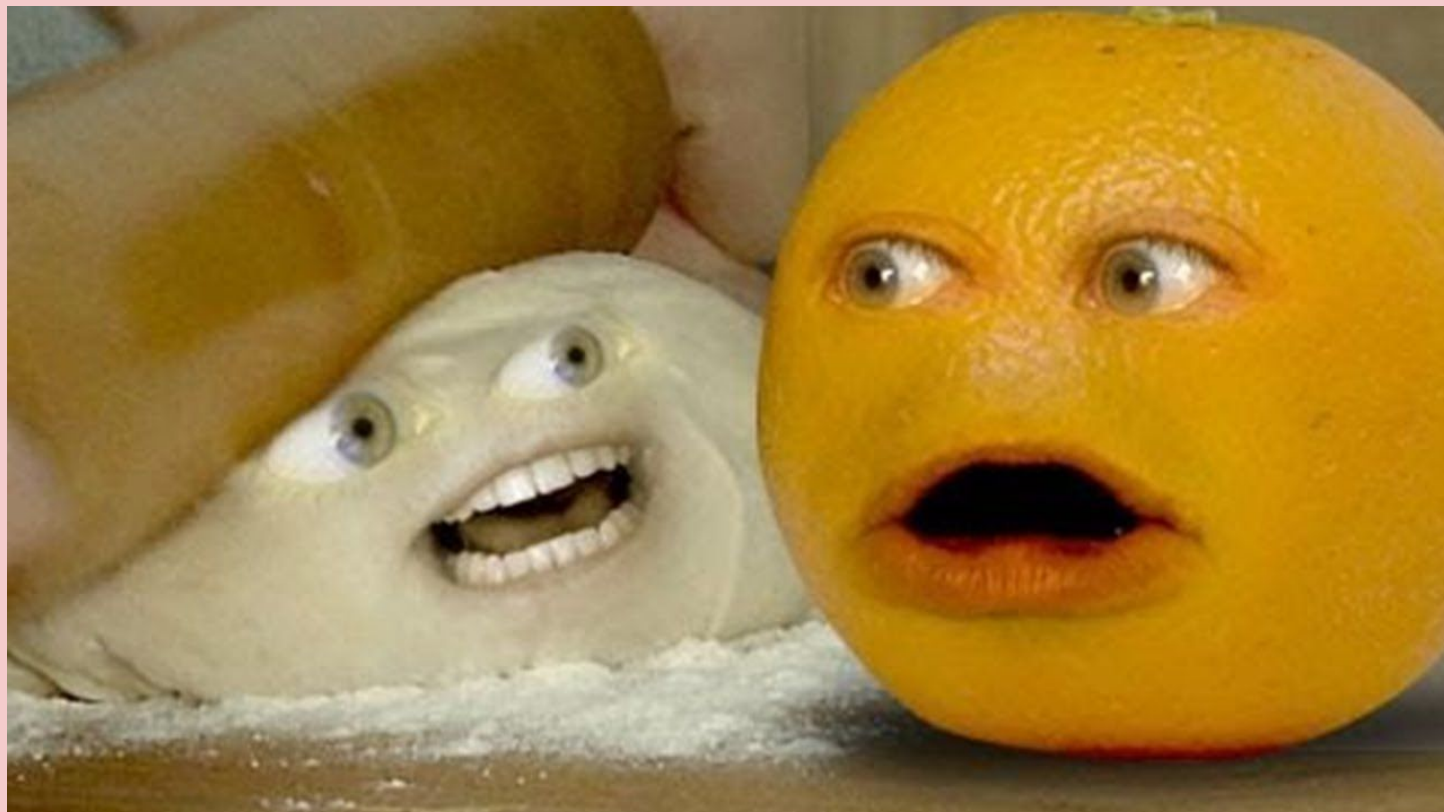
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## Participant-Led Co-Watching

Videos shared by participants as examples of videos they **"really like"** and **"find frustrating"**

# Participant-Selected Probes


Liked Videos


Frustrating Videos

# Findings

# Findings

1. Experiences with Attention, Engagement, and Information Retention
2. Current Frustrations and Strategies for Video Watching
3. Desired Video Accessibility Features
4. Video Platform Design
5. Misalignment Between Platform and Creator vs. Viewer Goals
6. The Importance of Video Accessibility for People with ADHD

# Findings

1. *Experiences with Attention, Engagement, and Information Retention*
2. *Current Frustrations and Strategies for Video Watching*
3. *Desired Video Accessibility Features*
4. *Video Platform Design*
5. Misalignment Between Platform and Creator vs. Viewer Goals
6. The Importance of Video Accessibility for People with ADHD

# Attention, Engagement, and Information Retention

- Video **content** *and* **presentation** were important

- Participants felt that retention improved when videos were **attention-grabbing**, **engaging**, or **relatable**

- ADHDers' challenges with **executive dysfunction** applied to videos
  - *"Task initiation, transitioning, and staying focused"* (Megan)
  - Difficult to begin watching videos, but equally if not more difficult to stop watching once they started

# Current Watching Habits

- 15 participants watched videos **in the background** / **while multitasking**

- Watching videos helped with modulating sensory stimulation

*"The stimulation from the video helps me engage with my other task more easily."*

(Atlas)

# Frustrations and Strategies

Auditory Content

Captions

Visual Content

Speed and Pacing

# Frustrations and Strategies: Auditory Content

- Frustrations
  - Unpredictable volume changes
  - Competing sounds
  - Overly loud background music
  - Specific noises / audio frequencies

- Strategies
  - Ending viewing sessions early
  - Disengaging from a video

# Frustrations and Strategies: Captions

- Frustrations
  - Typos / inaccuracies / timing discrepancies in captions
  - Especially wary of auto-generated captions
- Strategies
  - Helped for understanding videos with bad audio quality / background noise / accented speech
  - Pausing video to read more slowly
  - Screenshotting to *"take notes"*
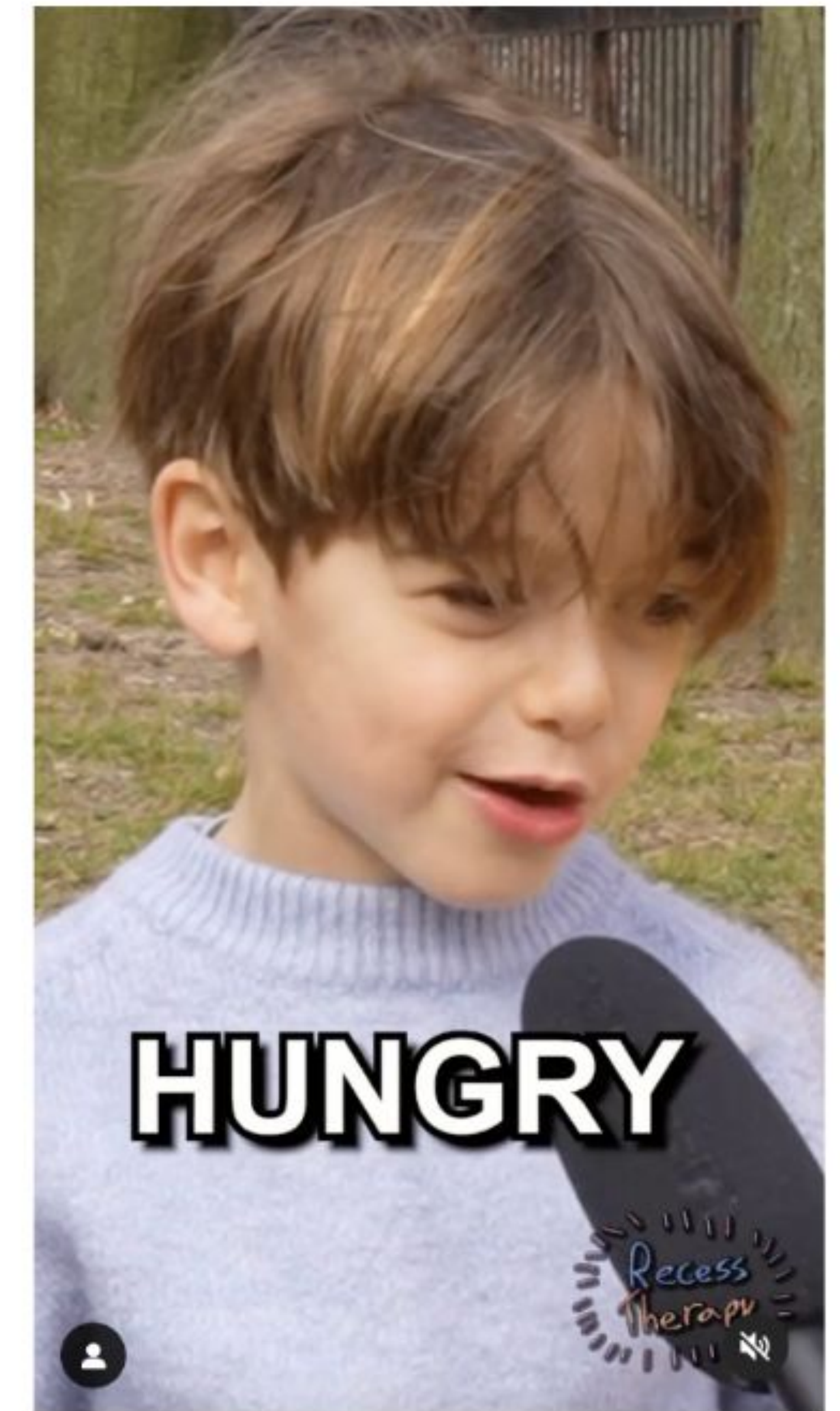  - Using captions as a way to stay focused (e.g., *"dynamic captions"*)

(a)      (b)      (c)      (d)      (e)

*"My stomach has a crush on food...*
*even if I eat a lot of lunch, I'm still hungry"*

Posted on r/ADHDmemes

# Frustrations and Strategies: Visual Content

- Frustrations
  - Dimly lit videos / videos without vibrant colors
  - Talking head videos
  - Too many colors / too much movement

- Strategies
  - Helped for conveying points / explaining ideas / capturing attention / improving retention
  - Audio description (only for a few participants)
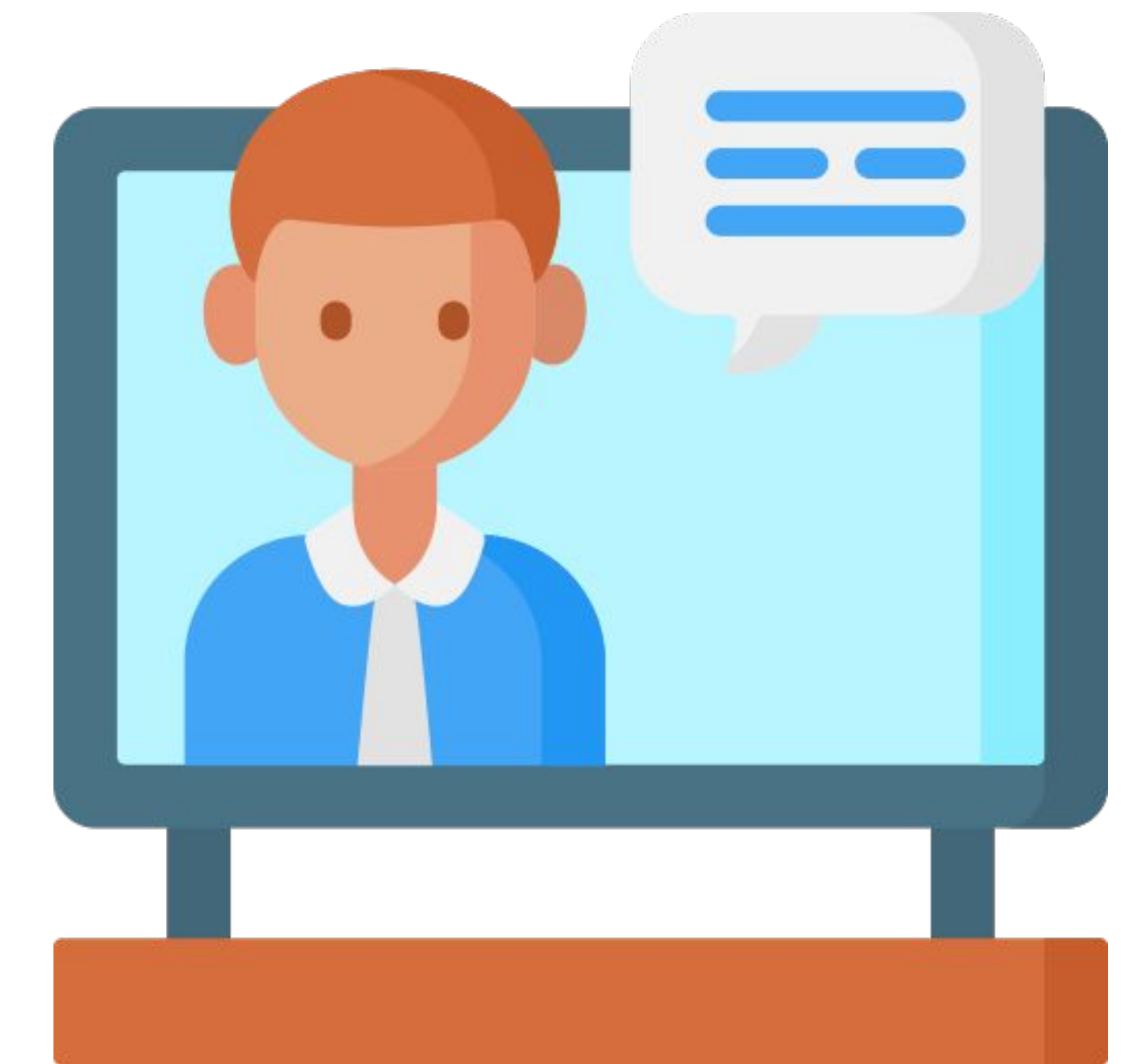
# Frustrations and Strategies: Speed and Pacing

- Frustrations
  - Slow / quick speaking speeds
  - Rewinding videos due to zoning out

- Strategies
  - Speeding up videos
  - Using chapters / sections / view peaks to skip to specific parts of a video
  - Reading video transcripts

# Desired Video Accessibility Features

- Chapters, sections, and timestamps
- Additional information in a text format
- Video summaries
- Adjustable sound channels
- More accurate captions and greater customization options
- Audio descriptions
- Tactile augmentations

# Video Platform Design

- **Dark patterns** reduced user autonomy

- Modern video platform interfaces are **"cluttered"**
  - Exacerbates tendency to mindlessly consume content
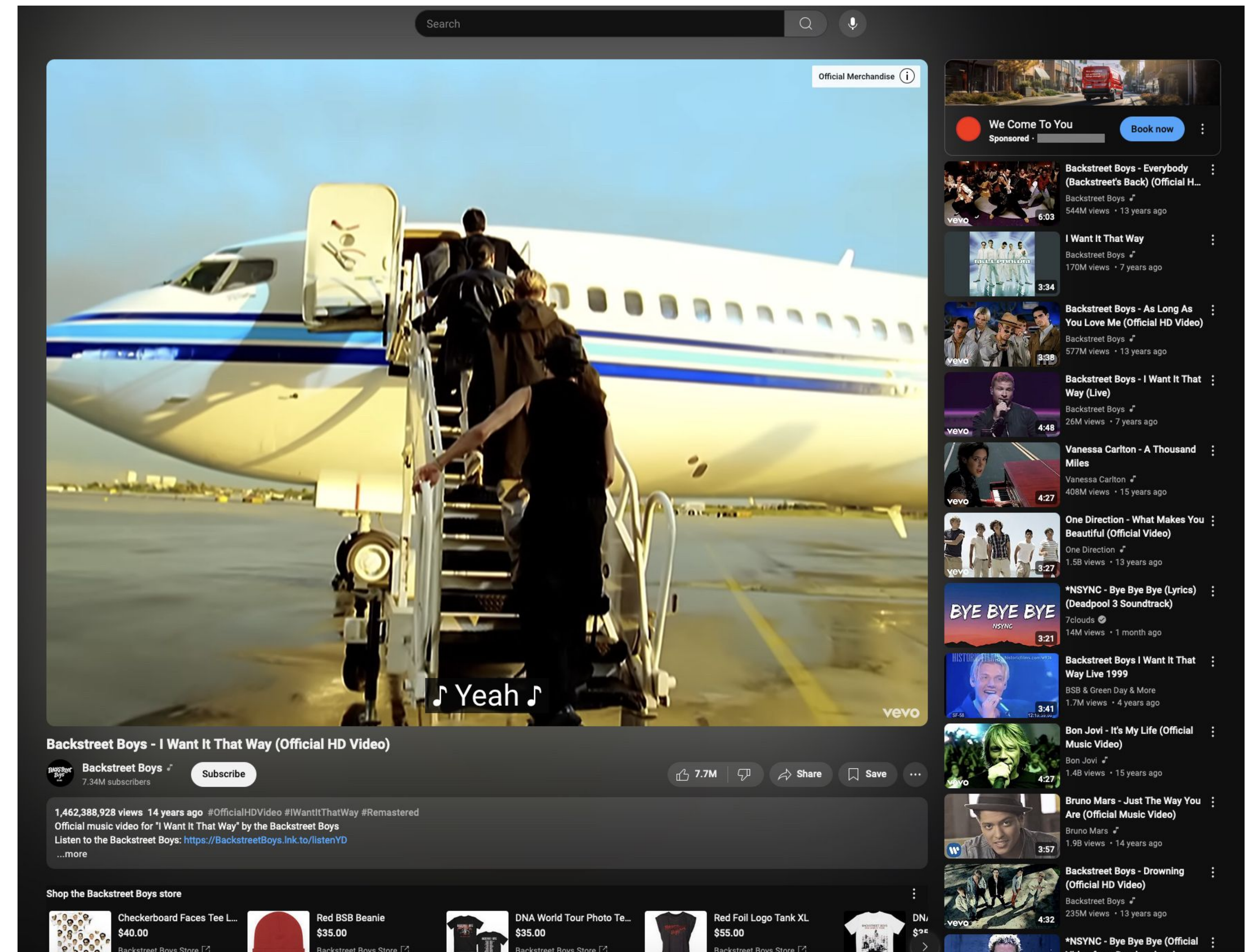
# Discussion

# ADHD-Inclusive Design Principles

**1** Designs should adapt to ADHDers' levels of focus

**2** Designs should utilize multisensory elements to support engagement

**3** Designers should involve people with ADHD throughout the design process

# ADHD-Inclusive Design Principles

**1** Designs should **adapt to ADHDers' levels of focus**, understanding that goals, motivations, and abilities may vary depending on time of day and external factors

- Adaptation and flexibility given variation in motivation
- Hyperfocus vs. non-hyperfocus

# ADHD-Inclusive Design Principles

**2** Designs should **utilize multisensory elements to support engagement**, while offering flexibility to adjust to each individual's threshold of sensory overstimulation and understimulation

- Multiple information streams are helpful for information retention
- Faster information processing

# ADHD-Inclusive Design Principles

**3** Designers should follow participatory design principles and **involve people with ADHD throughout the design process**, as building trust with end users can lower critical motivational barriers

- Core tenet of inclusive / participatory design
- Reduce motivational barriers to adopting new technologies, adjusting to new interfaces, or watching recommended videos

# Contributions

Link to the paper ➜

- Empirical insights on **ADHDers' frustrations, current strategies, and desired features** for video accessibility

- **Design recommendations for video platforms and creators** to better support user agency and ADHDers' goals

- **ADHD-inclusive design principles** to guide practitioners beyond videos and video platforms

Please read our paper and reach out to Lucy (lucjia@uw.edu) if you'd like to chat more about neurodivergence, videos, and subjective information accessibility!

# Thank you!

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Please read our paper and reach out to Lucy (lucjia@uw.edu) with any questions!