

# Accessibility has many names Audio description has many roles



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# What were the study's goals? (1)

General objective of the study: **to verify whether AD may enhance (visual) information processing by young viewers with ASD**

Hypotheses and specific research questions:

**H1: Autistic people are much more sensitive to sounds, so AD may irritate and distract them instead of helping them.**

**RQs related to H1:**

- Did AD make children with ASD annoyed, nervous and/or distracted?
- Did AD negatively affect children's understanding of the films they watched?

# What were the study's goals? (2)

**H2: Additional (aural) source of information could be helpful for processing and remembering the animated films' content.**

## **RQs related to H2:**

- How a child's understanding of the animated films changed when they were accompanied with AD of different types?
- Did a child score better after watching a film with neutral and emotionally tuned AD than after watching it without any AD?

**H3: Any AD will guide children's attention, any AD will work similar to video modelling, and help them focus on the key parts of the films.**

## **RQs related to H3:**

- How children's focus on visual elements changed when the films were supplemented with different AD tracks?
- Were they more focused on the watched content?
- Can we say AD works just like video-modelling?

# What were the study's goals? (3)

**H4: Emotionally tuned AD would contribute to better emotions processing by children with autism.**

## **RQs related to H4:**

- Did emotionally tuned AD help them understand emotional states of characters?
- Did emotionally tuned AD work better than neutral one?
- Was the same (or similar) tendency observed in neurotypical children?

**H5: All the participants will benefit from the two kinds of AD, but in the case of ASD children this difference will be more significant.**

## **RQs related to H1:**

- Do both the groups of participants benefit from AD?
- What is the difference (if any) between neurodiverse and neurotypical children when it comes to the ADs' impact on their understanding of the watched content?

# How did the study look like?

**Tools:** a computer with an eye-tracker (Tobii PRO Nano 60HZ); three semi-structured questionnaires (each with 10 questions)

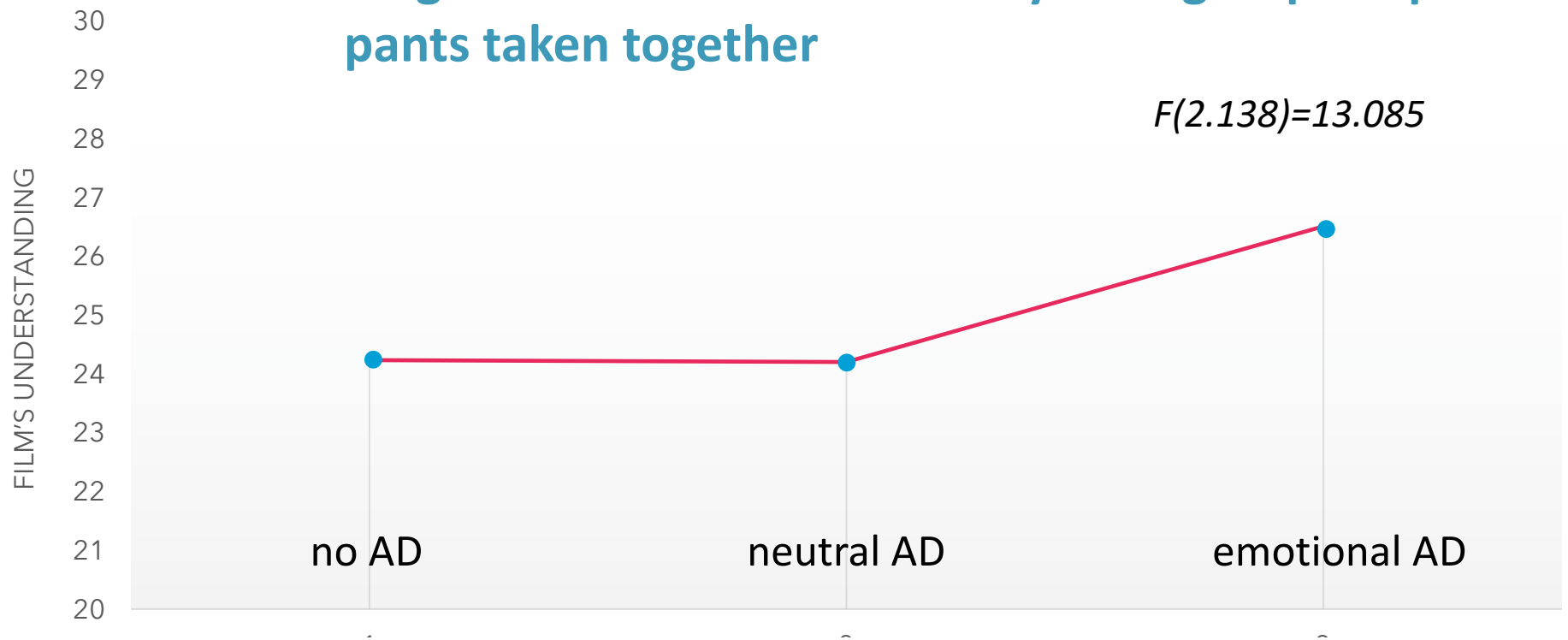
**AV materials:** three short animated films with no dialogues; three conditions for each participants: **(1)** no AD; **(2)** neutral, child-friendly AD; and **(3)** emotionally tuned AD;

**Participants:** sighted children aged 6-12 both with autism (33; 5 girls & 28 boys) and neuronormative (38; 22 girls & 16 boys) being a control group;

**Procedure:** every child participant watched three different films: one with neutral AD, one with emotional AD, one with no AD; the order of the films and the type of AD (incl. no AD) was selected randomly. After watching every of the films, participants answered the questions included in the questionnaires.

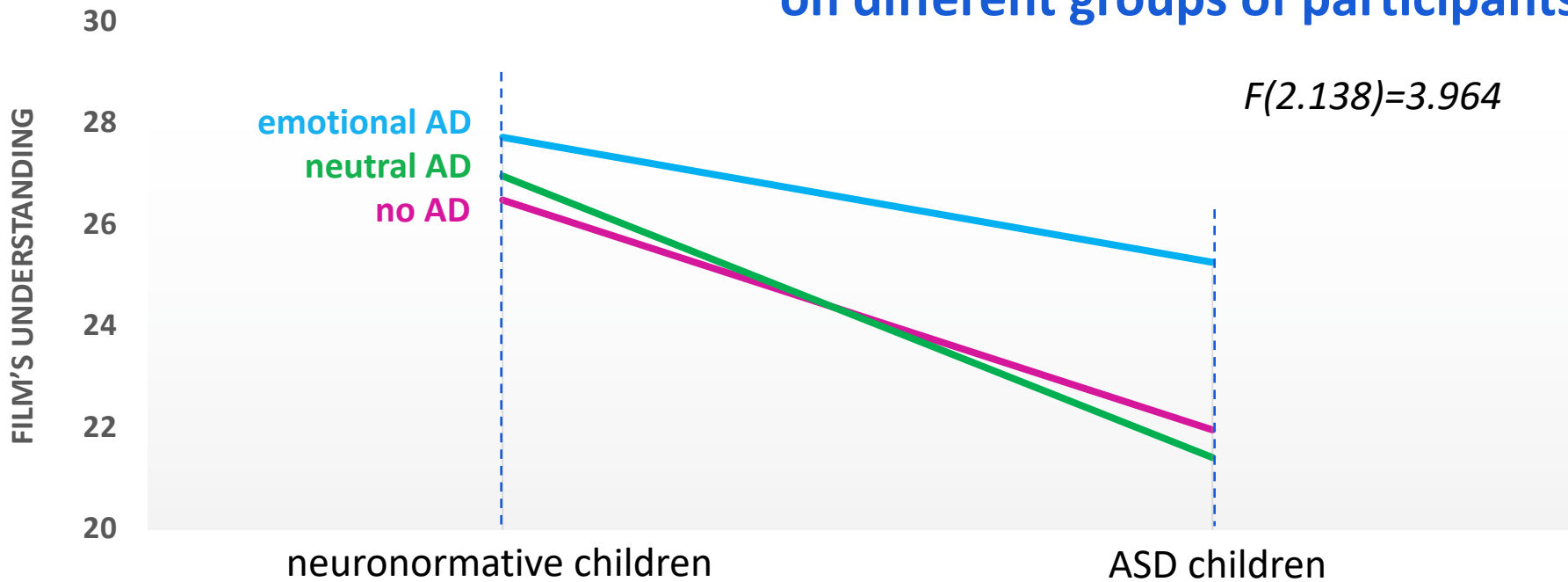


# The general effect of the three AD types on understanding of the watched content by both groups of participants taken together

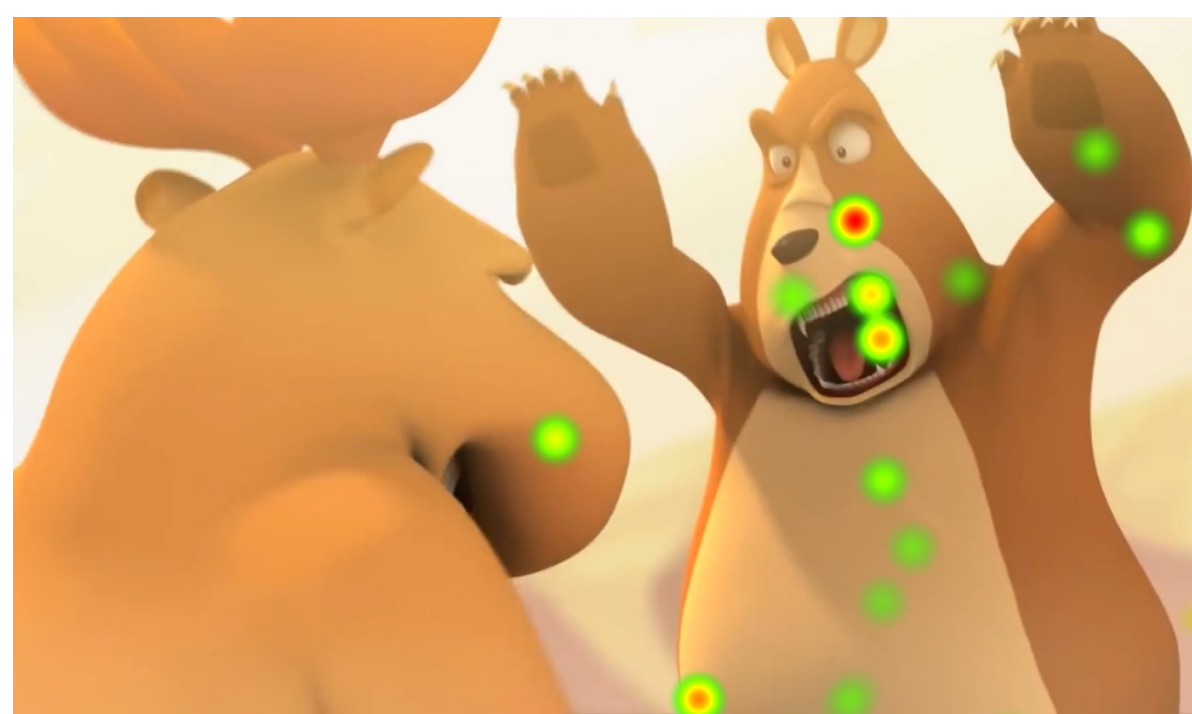


Type of AD	M	SD	Effect size (hp2)
<b>no AD</b>	24.39	5.50	<b>0.159</b>
<b>neutral AD</b>	24.00	6.47	
<b>emotional AD</b>	26.59	4.50	

## Influence of different of AD types on different groups of participants



Type of AD	Neuronormative children		Children with ASD		Effect size (hp2)
	M	SD	M	SD	
no AD	26.50	3.04	21.97	6.65	<b>0.054</b>
neutral AD	26.97	2.69	21.42	8.14	
emotional AD	27.74	1.78	25.27	6.11	



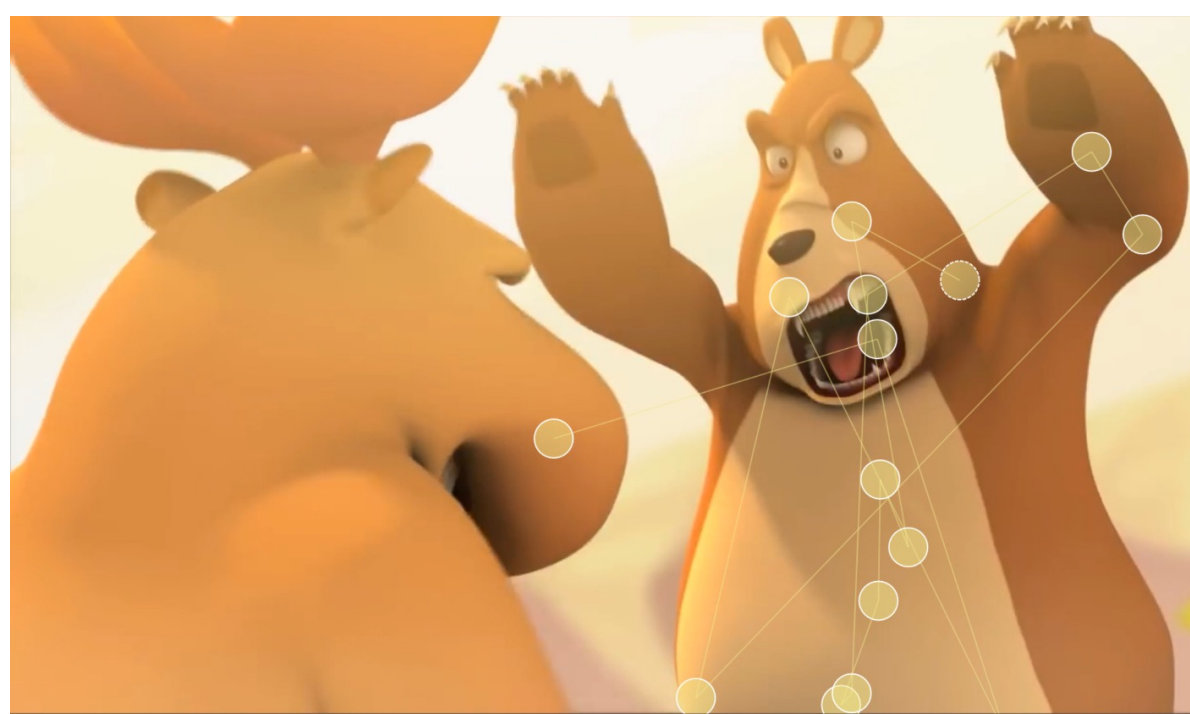
no AD



emotionally  
tuned AD







no AD



emotionally  
tuned AD



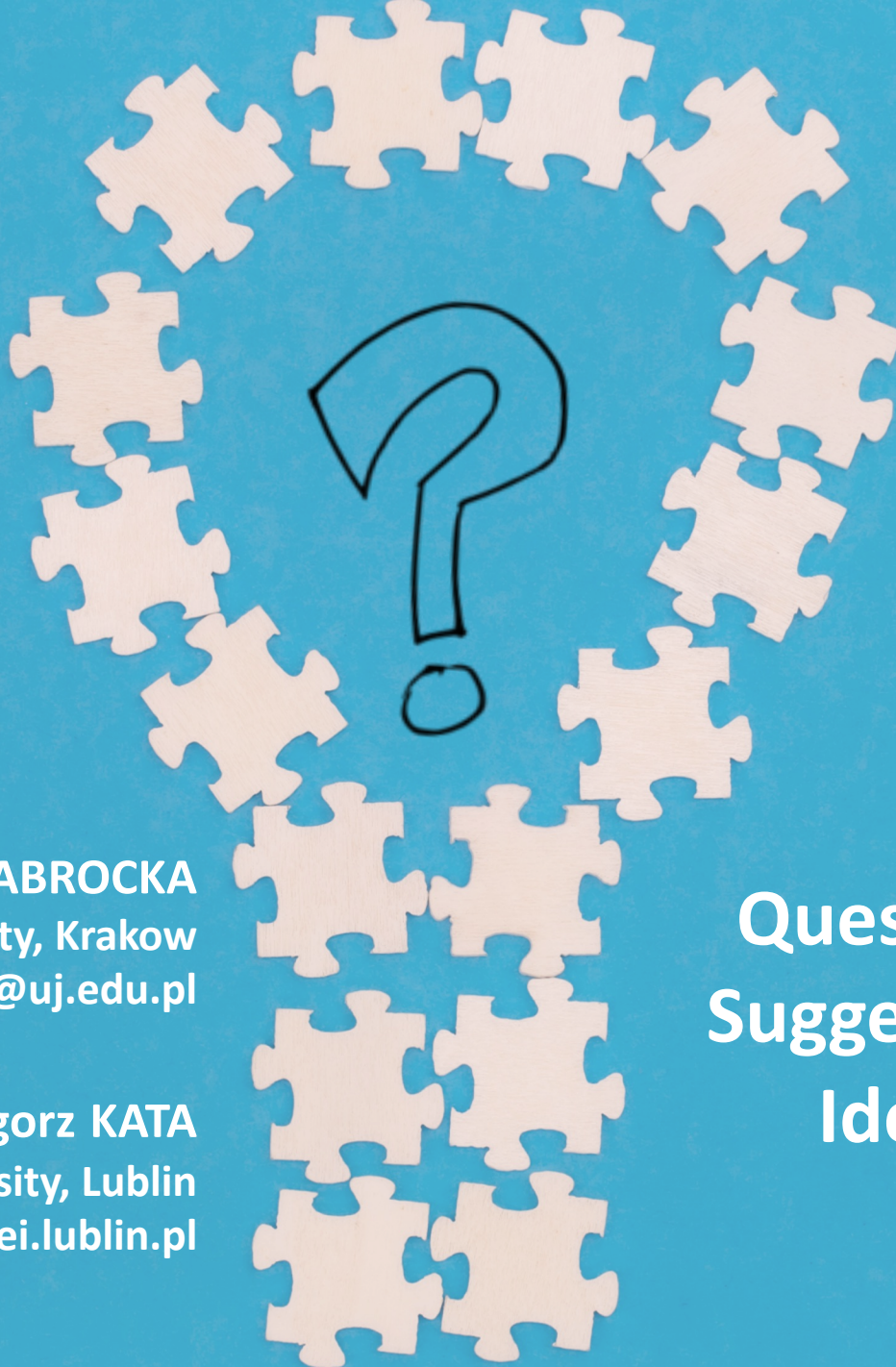
# What did we learn from the study?

## The study allowed us to determine that e.g.:

- ❄️ emotionally tuned AD improved children's comprehension of the films;
- ❄️ neutral AD did not improve children's understanding of the film's plot: (the results obtained after watching a film with neutral AD and without AD at all were comparable);
- ❄️ all the children understood better AV content when it was accompanied by emotionally tuned AD;
- ❄️ the positive effect of emotional AD was more pronounced in children with ASD than in their neuronormative peers.

## Continuation of here presented study includes:

- ❄️ tests with the use of various formats of AD;
- ❄️ tests with the use of different AV materials;
- ❄️ tests engaging other groups of neurodiverse respondents;
- ❄️ tests with the use of various tools measuring viewers' reactions to the content shown.



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**Questions?**  
**Suggestions?**  
**Ideas?**

