



I DON'T KNOW WHO MY PARENTS ARE!!

Helping Individuals Navigate “*Face Blindness*” via Educational and Rehabilitation Approaches.

[Session 1]

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Mary Morse, Ph.D.
Special Education
Consultant & Licensed
Teacher of Students with
Visual Disabilities, NH
&
Sherryse Corrow, Ph.D.
Associate Professor,
Bethel University, MN

Sponsors



Why do we care about face recognition?



Session 1

- What is prosopagnosia?
- What are the consequences of having prosopagnosia?
- What causes developmental prosopagnosia?
- What do we know about prosopagnosia in childhood?
- Case Examples and Videos

Session 2: Looking Ahead

- How can we identify prosopagnosia in the classroom?
- What comorbidities often occur with prosopagnosia?
- How does prosopagnosia compare to ASD and CVI?
- How can prosopagnosia be treated or managed?

What is Prosopagnosia?

Prosopagnosia = Face Blindness

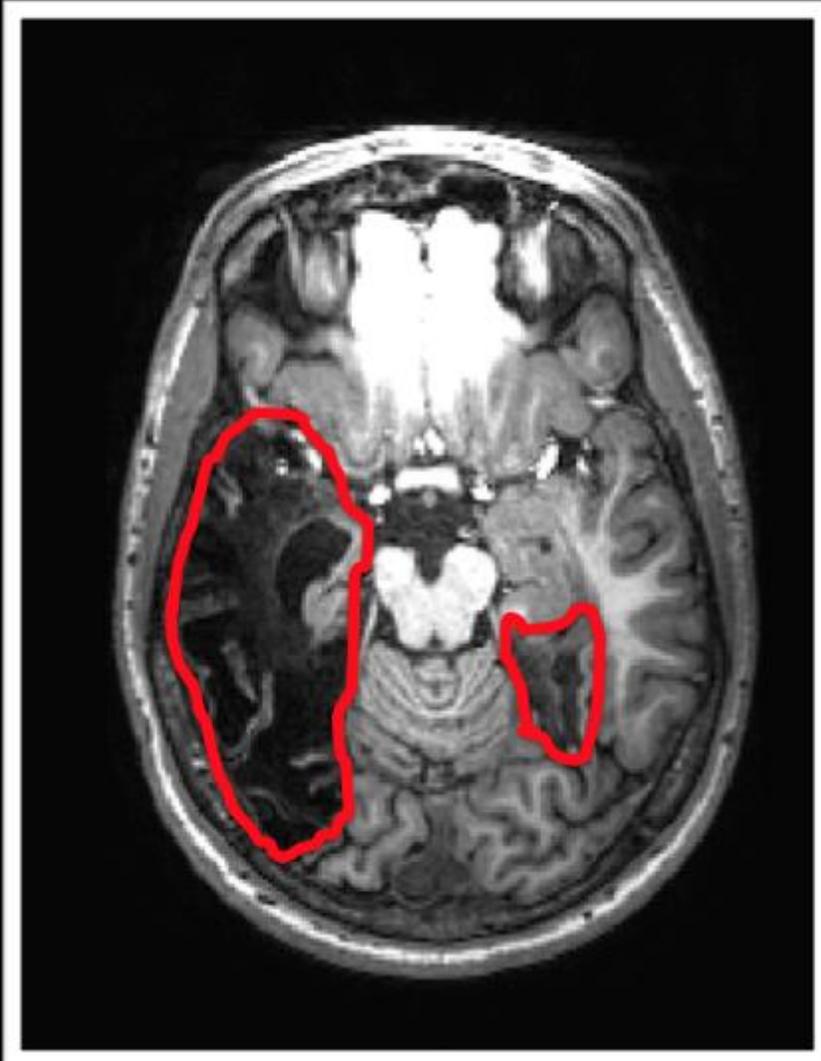
A neurological disorder characterized by a deficit in the ability to recognize faces.

“Prosopagnosia is clearly not “face blindness” - Most people with the condition can see faces fine - what they can't do is distinguish people by their facial features. Faces just seem all the same - in the same way that you might have trouble distinguishing sheep by their faces.”

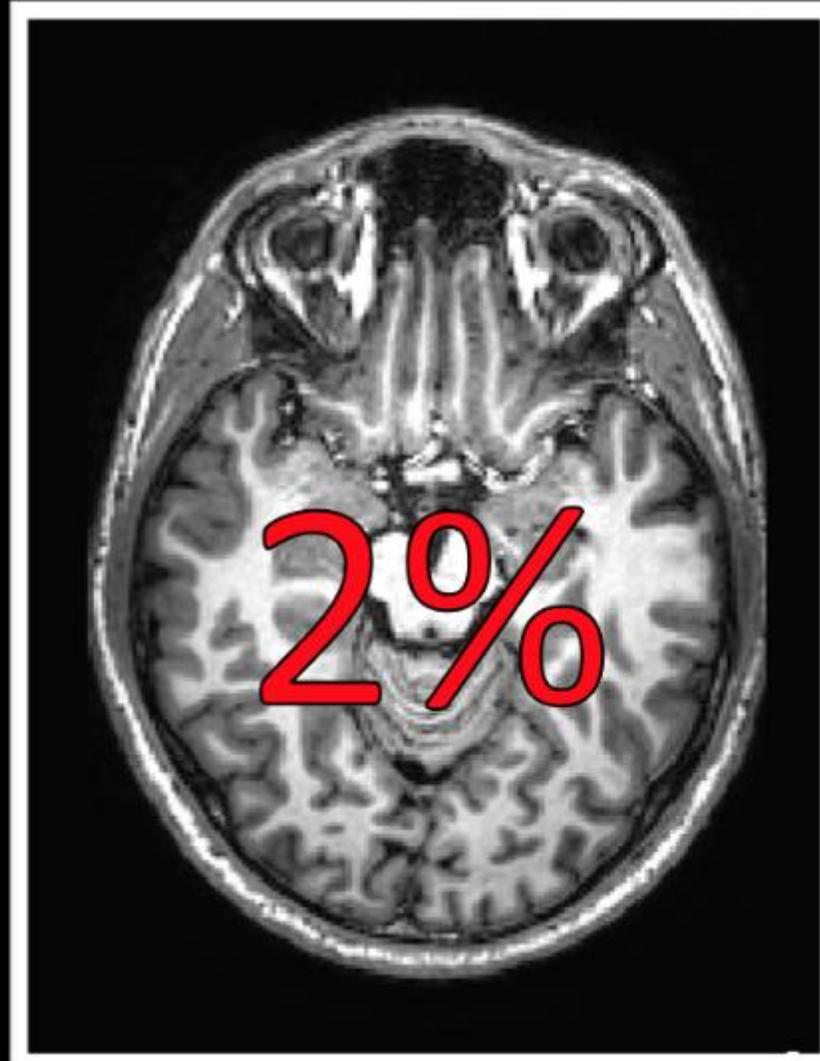
“Same thing for me with faces. I see them perfectly, but I can no more tell one face from another than one donut from another - even though they are all different - when they go away and come back.”



ACQUIRED PROSOPAGNOSIA



DEVELOPMENTAL PROSOPAGNOSIA



An Example of Acquired Prosopagnosia





Prevalence of Developmental Prosopagnosia

Prevalence rates of approximately 2% are common around the world.



Prevalence: Kennerknecht et al. (2006), Kennerknecht et al., (2008), Bowles et al. (2009), Duchaine, (2008)

Image: http://en.loadtr.com/World_Map-483552.htm

Possible Symptoms of Prosopagnosia

Developmental Prosopagnosia

- Thrown by changes in appearance.
- Heavy reliance on non-face cues.
- Little interest in TV shows with human characters.
- Social Isolation and anxiety

Acquired Prosopagnosia

- Often Immediately Apparent
- e.g. Unable to recognize nurses in hospital.
- Plus symptoms of DP.



“Four years ago on Christmas Eve we all laughed when he ran to me saying "there's a strange man at the door!" It was one of my Dad's infrequent visits, my older sons knew it was Grandpa.”

“She is 9 years old and has very few friends. We found it interesting that her 2 friends have distinctive looks. One has slightly darker skin and one has a round face.”

What are some possible social consequences of prosopagnosia?

Adulthood (Yardley et al., 2008)

- Feelings of embarrassment, guilt, and failure
- Social Anxiety
- Limited employment opportunities
- Loss of confidence
- Difficulty in telling others
- Dependence on others in social situations.

Childhood (Diaz, 2008)

- Safety
- Difficulty making and maintaining friendships
- Difficulty with transition to Middle School
- Social Anxiety
- Appears aloof and unfriendly
- Limitations in social activities



“A face blind child does not have the secure feeling to know whether she is talking with someone s/he knows or a stranger.”

“I remember in 2nd grade, not being able to tell Stuart the bully from Jack, the guy who protected me from the bully.”

What causes developmental prosopagnosia?

- Experience-based theories
- Neurologically-based theories
- Genetics-based theories



Experience-Based Theories

Do those with DP have limited experience with faces?

Children deprived of all visual input in the first few months of life showed a configural-deficit in face processing (Le Grand et al. 2001, 2003, & 2004).



Children who were raised in institutionalized settings (Pollack et al., 2010) or who were extremely shy (Brunet et al. 2010) showed deficits in face processing.



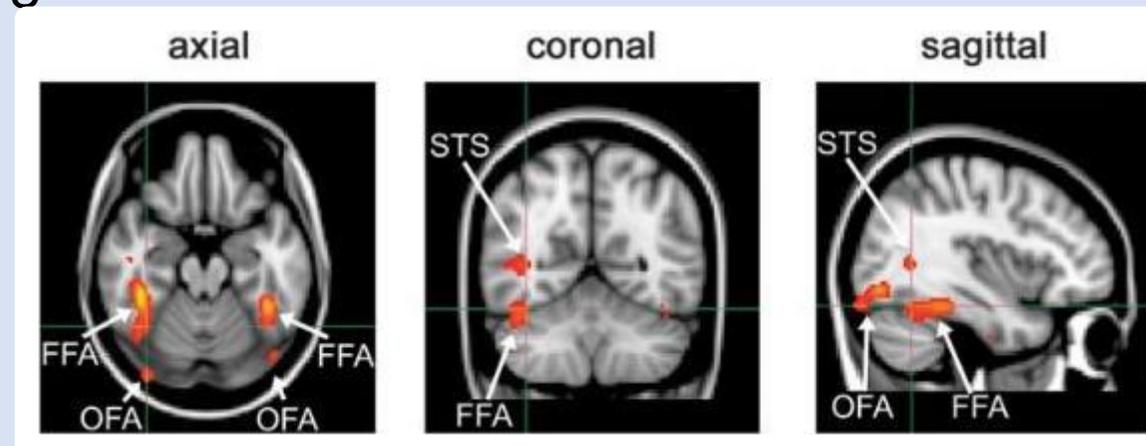
Neurologically-Based Theories

Do those with DP have subtle cortical abnormalities?



- The key face areas of the brain may be _____. So many possibilities.
- The connection between face areas may be reduced.
- There may be an early deficit in cortical migration.
- All of these may be true!

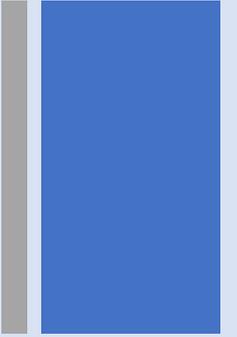
Davies-Thompson, et al. 2012





Genetics-Based Theories

Is face recognition inherited from our parents?



- Developmental prosopagnosia tends to run in families (Duchaine et al., 2007).
- Identical twins tend to have very similar face recognition ability compared to fraternal twins (Wilmer et al., 2010).
- However, it is unlikely that ALL cases of DP can be explained by genetic factors (Duchaine, 2008).

What do we know about prosopagnosia in childhood?

- Research vs Education
- Why study prosopagnosia in children?
- How is prosopagnosia in children assessed?
- Case Studies of Children with Prosopagnosia

Research vs Education

- Terminology differences
- End-goals between research and education
- Methodological differences

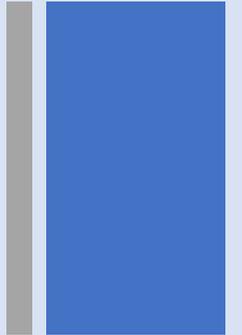


“Children change schools more often than adults change jobs. Children change classrooms more often than adults change offices. Children are expected to recognize their parents' friends who have no context for the child to know them.”

“Even if a child learns her classmates, when the school year changes, she has to [sometimes] relearn who they are.”



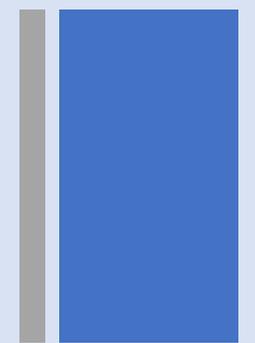
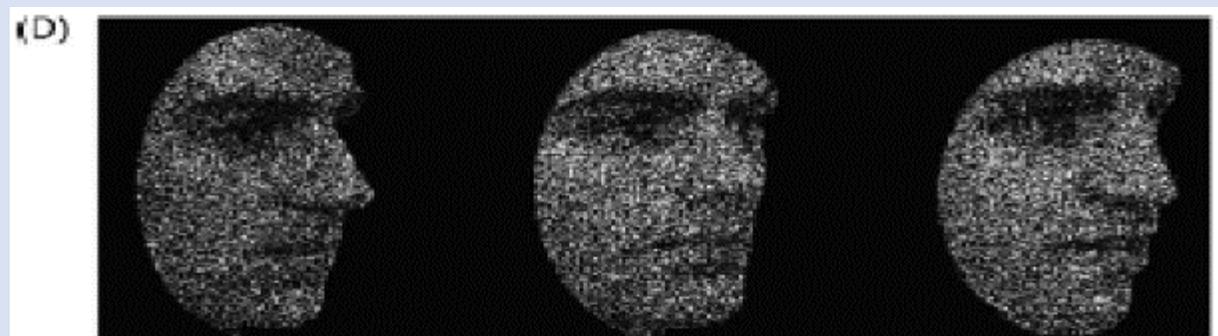
Where is research being done with children?





How is prosopagnosia in children assessed?

The Cambridge Face Memory Test for Children



identical (easy) test

harder

hardest



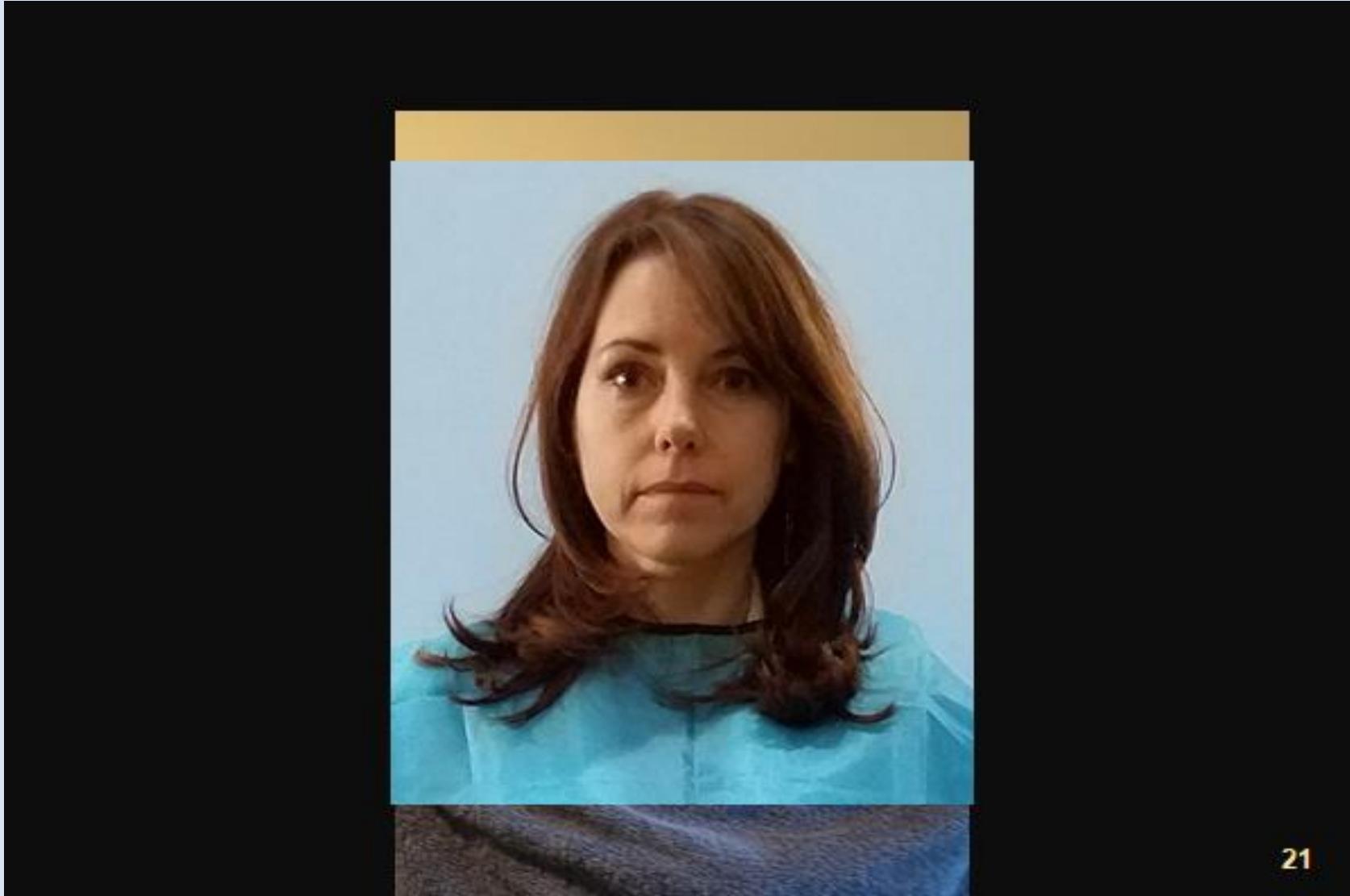
A Clinician's Experience



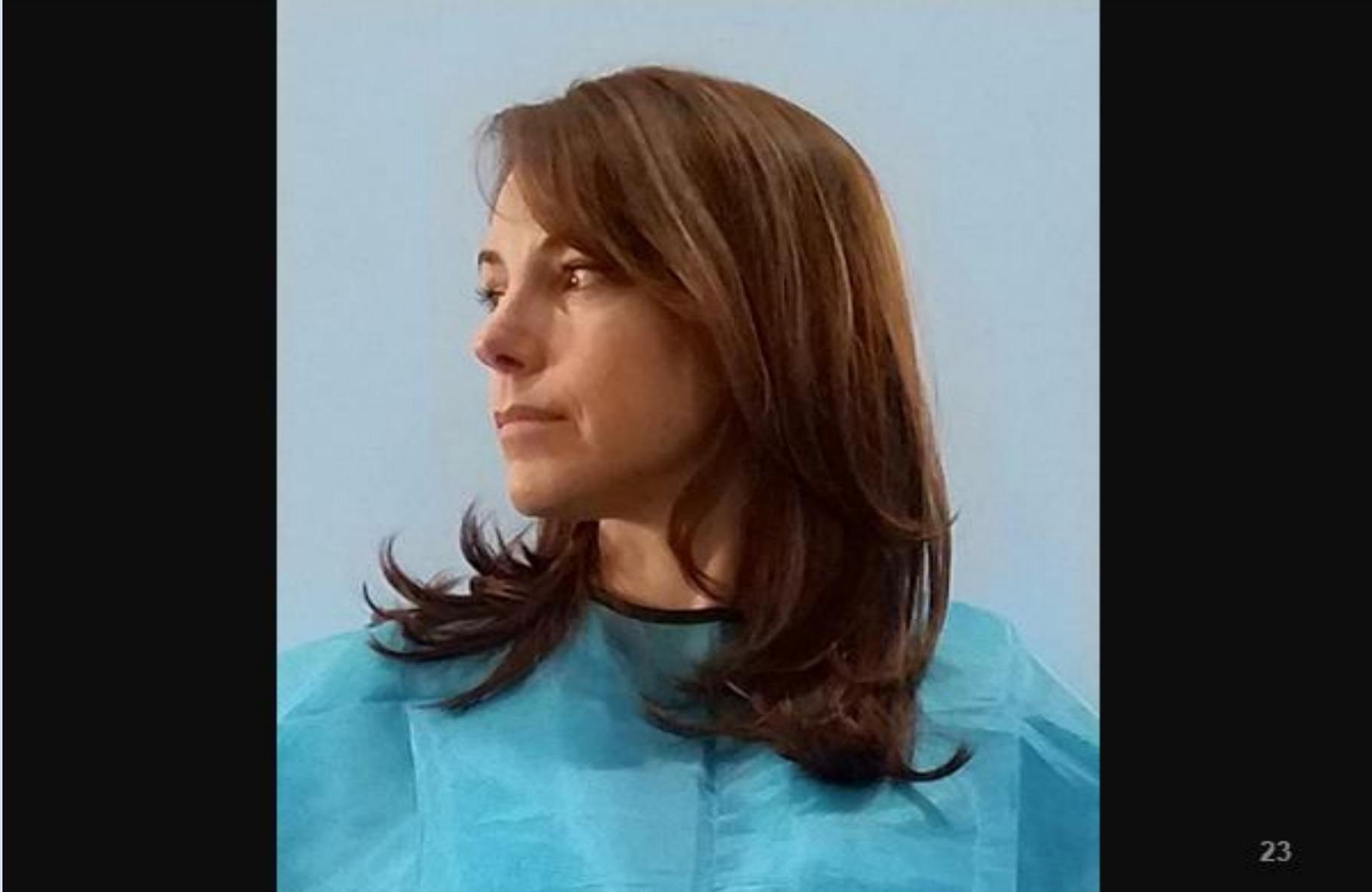
- Photographs: Familiar people from 3 orientations – full frontal, partial profile, full profile
- Follow guidelines for clarity of photos
- No clothes showing but hair is visible
- Presentation: Left-to-right, language used, time to fixate - scan - respond



PHOTOGRAPH GUIDELINES







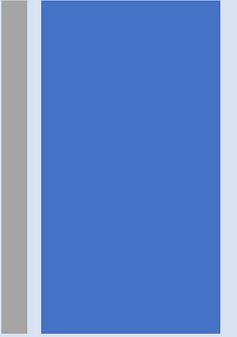
+ Case Study Details

Source	McConachie 1976	Ariel & Sadeh, 1996	Jones & Tranel, 2001	Joy & Brunsdon, 2002	Schmalzl, et al., 2008	Corrow et al., (unpublished)
Gender and Age	F 12	M 8	M 5	M 4-7 & 8	F 4	M 7-8
IQ (Verbal/NonVerbal)	144/100	142/90	140/110	109/68 ₁	108/119	Ab Avg/Avg
Visual-Spatial Abilities or Navigation Problems	ABN	ABN	ABN	ABN	?	N
Age Recog.	-	ABN	-	ABN	N	-
Gender Recog.	ABN	ABN	ABN	ABN	ABN	-
Emotion Recog.	-	ABN	N	ABN	ABN	N
Object Recog.	ABN	ABN	N	ABN	N	N



Summary

- While our understanding of prosopagnosia has grown greatly in recent years. We have barely scratched the surface.
- The study of prosopagnosia in children has been very limited.
- The social effects of the disorder are problematic for both children and adults.
- These cases need to be identified, and their needs addressed, before the cumulative effects of the disorder become too severe.





QUESTION & ANSWERS

REMINDER

Session 2: Looking Ahead

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