

Keynote Conversation - Research

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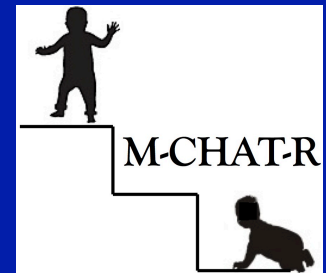
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- ✧ First author of the M-CHAT/F & M-CHAT-R/F
- ✧ Co-owner of M-CHAT, LLC
- ✧ Funding: Eunice Kennedy Shriver NICHD R01HD 039961, 2014–2019; Autism Speaks 8368, 2012–2016; Drexel CURE Grant, 2015
- ✧ Collaborators: U of CT (Deborah Fein); GSU (Lauren Adamson)

Early Detection & Intervention Program

↑ Prognosis

Early Intervention

Early Detection



M-CHAT

Please fill out the following about how your child usually is. Please try to answer every question. If the behavior is rare (e.g., you've seen it once or twice), please answer as if the child does not do it.

1. Does your child enjoy being swung, bounced on your knee, etc.?
2. Does your child take an interest in other children?
3. Does your child like climbing on things, such as up stairs?
4. Does your child enjoy playing peek-a-boo/hide-and-seek?
5. Does your child ever pretend, for example, to talk on the phone or take care of a doll?
6. Does your child ever use his/her index finger to point, to ask for something?
7. Does your child ever use his/her index finger to point, to indicate interest in something?
8. Can your child play properly with small toys (e.g., cars or blocks) without just mouthing, fiddling, or dropping them?
9. Does your child ever bring objects over to you (parent) to show you something?
10. Does your child ever seem oversensitive to noise? (e.g., plugging ears)
11. Does your child look you in the eye for more than a second or two?
12. Does your child smile in response to your face or your smile?
13. Does your child respond to his/her name when you call?
14. Does your child respond to his/her name when you call?
15. If you point at a toy across the room, does your child look at it?
16. Does your child walk?
17. Does your child look at things you are looking at?
18. Does your child make unusual finger movements near his/her own face?
19. Does your child try to attract your attention to his/her own face?
20. Have you ever wondered if your child is deaf?
21. Does your child understand what people say?
22. Does your child sometimes stare at nothing or wander off?
23. Does your child look at your face to check your reaction to something unfamiliar?

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M-CHAT-R™

Please answer these questions about your child. Keep in mind how your child usually behaves. If you have seen your child do the behavior a few times, but he or she does not usually do it, then please answer **no**. Please circle **yes** or **no** for every question. Thank you very much.

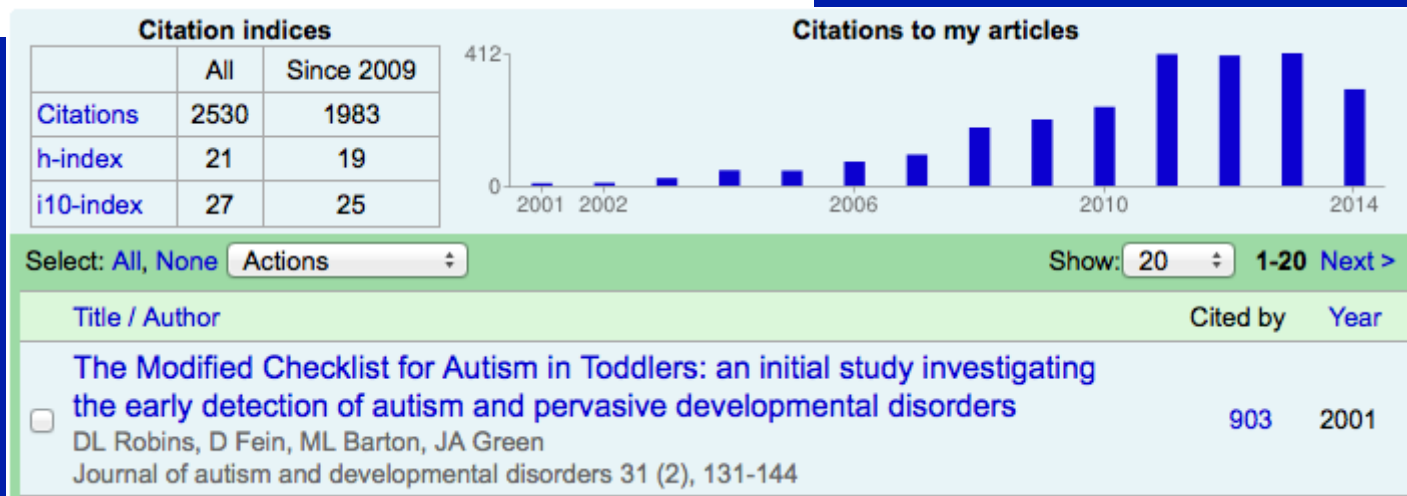
1. If you point at something across the room, does your child look at it?
(FOR EXAMPLE, if you point at a toy or an animal, does your child look at the toy or animal?) Yes No
2. Have you ever wondered if your child might be deaf? Yes No
3. Does your child play pretend or make-believe? (FOR EXAMPLE, pretend to drink from an empty cup, pretend to talk on a phone, or pretend to feed a doll or stuffed animal?) Yes No
4. Does your child like climbing on things? (FOR EXAMPLE, furniture, playground equipment, or stairs) Yes No
5. Does your child make unusual finger movements near his or her eyes?
(FOR EXAMPLE, does your child wiggle his or her fingers close to his or her eyes?) Yes No
6. Does your child point with one finger to ask for something or to get help?
(FOR EXAMPLE, pointing to a snack or toy that is out of reach) Yes No
7. Does your child point with one finger to show you something interesting?
(FOR EXAMPLE, pointing to an airplane in the sky or a big truck in the road) Yes No
8. Is your child interested in other children? (FOR EXAMPLE, does your child watch other children, smile at them, or go to them?) Yes No
9. Does your child show you things by bringing them to you or holding them up for you to see – not to get help, but just to share? (FOR EXAMPLE, showing you a flower, a stuffed animal, or a toy truck) Yes No
10. Does your child respond when you call his or her name? (FOR EXAMPLE, does he or she look up, talk or babble, or stop what he or she is doing when you call his or her name?) Yes No
11. When you smile at your child, does he or she smile back at you? Yes No
12. Does your child get upset by everyday noises? (FOR EXAMPLE, does your child scream or cry to noise such as a vacuum cleaner or loud music?) Yes No
13. Does your child walk? Yes No
14. Does your child look you in the eye when you are talking to him or her, playing with him or her, or dressing him or her? Yes No
15. Does your child try to copy what you do? (FOR EXAMPLE, wave bye-bye, clap, or make a funny noise when you do) Yes No
16. If you turn your head to look at something, does your child look around to see what you are looking at? Yes No
17. Does your child try to get you to watch him or her? (FOR EXAMPLE, does your child look at you for praise, or say "look" or "watch me"?) Yes No
18. Does your child understand when you tell him or her to do something?
(FOR EXAMPLE, if you don't point, can your child understand "put the book on the chair" or "bring me the blanket"?) Yes No
19. If something new happens, does your child look at your face to see how you feel about it?
(FOR EXAMPLE, if he or she hears a strange or funny noise, or sees a new toy, will he or she look at your face?) Yes No
20. Does your child like movement activities?
(FOR EXAMPLE, being swung or bounced on your knee) Yes No

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The Modified Checklist for Autism in Toddlers: An Initial Study Investigating the Early Detection of Autism and Pervasive Developmental Disorders

Diana L. Robins,^{1,2} Deborah Fein,¹ Marianne L. Barton,¹ and James A. Green¹

Journal of Autism and Developmental Disorders, Vol. 31, No. 2, 2001



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Large-Scale Use of the Modified Checklist for Autism in Low-Risk Toddlers

Colby Chlebowski, Diana L. Robins, Marianne L. Barton and Deborah Fein

Pediatrics; originally published online March 25, 2013;

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e1121-1127

Validation of the Modified Checklist for Autism in Toddlers, Revised With Follow-up (M-CHAT-R/F)

Diana L. Robins, Karís Casagrande, Marianne Barton, Chi-Ming A. Chen, Thyde Dumont-Mathieu and Deborah Fein

Pediatrics; originally published online December 23, 2013;

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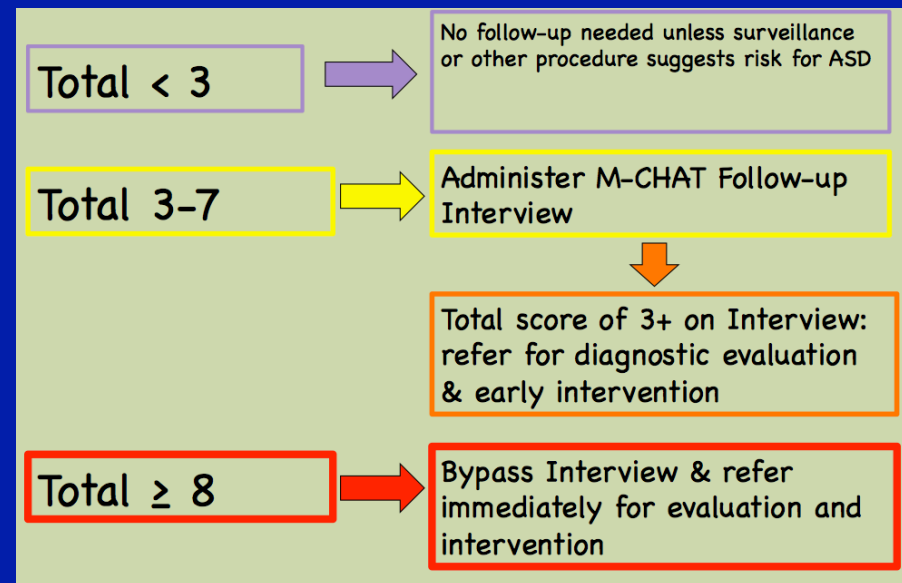
Scope of M-CHAT work

- ✧ Total published samples exceed 35,000 toddlers
 - 221 children diagnosed with ASD; 206 children identified with other developmental delays or concerns

M-CHAT-R(/F)	Sens	Spec	PPV ASD	PPV any	NPV	LR+	LR-
Total 3/2	.85	.99	.48	.95	.99	114.05	0.15

- ✧ Age of ASD diagnosis 2 years younger than national median

- ✧ Recommended algorithm



Current and Future Directions

- ✧ Validate electronic administration of 2-stage M-CHAT-R/F (AS 8368)
- ✧ Examine optimal ages for ASD-specific screening (NICHD 039961)
- ✧ Test brief, cost-effective physician training (NICHD 039961)
- ✧ Expand screening beyond medical home
- ✧ Early intervention research