

The CHAT+ Review: An Annotated Bibliography of Clinical and Implementation Research

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This bibliography lists examples of different research studies and how these were categorized. Definitions of the stages and phases of research can be found by clicking on the corresponding links listed below. Check back later for a complete list of all studies included in the CHAT+ review, extended to include Basic and Other Applied Research.

Clinical Research

More information on Clinical Research can be found [here](#). Some studies were excluded from the review of clinical research because they used the M-CHAT to establish level of risk with no diagnostic evaluation (Altay et al., 2017; Ts et al., 2018), or to cross-validate another related instrument (Gardner et al., 2013; Glascoe, Macias, Wegner, & Robertshaw, 2007).

Pilot the practice

- CHAT: The CHAT was originally tested on a sample of high-risk 18 month-old siblings (Simon Baron-Cohen, Allen, & Gillberg, 1992)
- Q-CHAT: (Allison et al., 2008)
- M-CHAT: (Robins, Fein, Barton, & Green, 2001)
- M-CHAT R/F: (Robins et al., 2014)

Demonstrate the validity and reliability of the practice

- CHAT: Baron-Cohen followed his 1992 pilot research with an ambitious validation study involving a very large community sample (S. Baron-Cohen et al., 1996). This study also revealed the CHAT's low sensitivity – i.e., that it was likely to miss more children subsequently confirmed to have an ASD than it identified.
- M-CHAT: Eaves examined the sensitivity and specificity of the M-CHAT relative to the Social Communication Questionnaire in a sample of 2- and 3-year olds (Eaves, Wingert, & Ho, 2006)
- M-CHAT R/F: Hardy and her colleagues sought to compare the performance of the M-CHAT R/F with the Ages Questionnaire (Hardy, Haisley, Manning, & Fein, 2015).

Adapt the practice for use in a community setting

- CHAT: Baron-Cohen's large-scale study of the sensitivity of the CHAT also served to demonstrate that the CHAT+ can be used effectively by community-based practitioners under real-world settings and conditions (Baron-Cohen et al., 1996).
- M-CHAT: Wiggins and her colleagues explored how to integrate use of the M-CHAT with broadband screeners (Wiggins, Piazza, & Robins, 2014). Campbell and her colleagues tested an electronic version of the M-CHAT (Campbell et al., 2017).
- M-CHAT R/F. Sturner and his colleagues evaluated an online decision-making algorithm included with an digital M-CHAT R/F (Sturner et al., 2016).

Later phases

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Adapt the practice for other languages and cultures

- CHAT: Koyama and colleagues explored the validity of a Japanese translation of the CHAT (Koyama et al., 2010).
- M-CHAT: More than a dozen studies sought to translate and adapt the original M-CHAT or the M-CHAT R/F for a wide range of languages and cultures, including French (Badel et al., 2017), Spanish (Canal-Bedia et al., 2011), Chinese (Guo et al., 2018), and Arabic (Eldin et al., 2008).

Explore the validity of the practice with sub-populations

- CHAT: Scambler and his colleagues explored the validity of the CHAT in screening for ASD in a population of toddlers with Fragile X (Scambler, Hepburn, Hagerman, & Rogers, 2007).
- M-CHAT: The validity of the M-CHAT has been explored specifically in sub-populations of children with other conditions that might increase their risk for ASD, like siblings of children already identified with ASD (Kumar, Juneja, & Mishra, 2016), children born preterm (Dudova et al., 2014), children with very low birthweight (Beranova et al., 2017), and children with neurofibromatosis (Tinker et al., 2014) or Down syndrome (DiGuseppi et al., 2010).

Extend analyses of validity

- M-CHAT: Additional research sought to better characterize false negatives, or children determined not to be at risk based on an initial administration of the CHAT+ but who are nonetheless diagnosed with ASD at a later age (Beacham et al., 2018; Matson, Kozlowski, Fitzgerald, & Sipes, 2013).

Implementation Research

More information on Implementation Research can be found [here](#).

Assess delivery and gaps in access

- M-CHAT: Herlihy and her colleagues explored whether there were racial/ethnic or socioeconomic factors that impacted age of screening and diagnosis (Herlihy et al., 2014). Lynch and his colleagues evaluated the feasibility of implementing the M-CHAT by mail, with follow-up provided by a registered nurse acting as a developmental screening coordinator (Lynch et al., 2015).

Improve delivery and close gaps

- M-CHAT: Brooks and her colleagues introduced web-based screening to improve access to ASD screening in an urban population (Brooks, Haynes, Smith, McFadden, & Robins, 2016). Roux and her colleagues explored the provision of ASD screening over the telephone to an underserved urban population (Roux et al., 2012).

Demonstrate regional delivery

- M-CHAT: Rotholz and his colleagues evaluated the impact of a new policy that immediately connected children who failed a 2-tiered screening process (including the M-CHAT) to ASD-specific early intervention services, based on the assumption that a subsequent diagnostic evaluation would frequently confirm an ASD diagnosis (Rotholz, Kinsman, Lacy, & Charles, 2017).

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