

## WEB APPENDIX I

### INCLIN Diagnostic Tool for Autism Spectrum Disorder: Development and Validation

Name of the Child: _____	
Date of Birth: DD/MM/YYYY	Age: __ years __ months
Sex:	
Complete Address:	
Phone number:	
Date of Assessment: DD/MM/YYYY	
Name of the Assessor:	

**INSTRUCTIONS FOR EVALUATION**

- **Primary caregiver** must be present with the child
- These behaviors are to be assessed in the context of children of **same age**
- Explain to parents that the answers should be based on the child's **behavior most of the time**
- Follow the age directions given along with the question. For questions where no age cut-off is given, they should be asked for all children i.e. all ages (2-9 years)
- Ask the questions **verbatim**  
Question can be **repeated** if the respondent can not understand  
Still, if the respondent cannot understand, give **example** for the particular behavior;  
**No further elaboration** is allowed
- The questionnaire should be **supplemented by observations** for the suggestive behavior in the child **throughout** the assessment.
- Observe the behavior of child during the entire interview to confirm the presence or absence of a particular behavior (First ask, then observe if observation is discrepant, then re ask the question and re-check the observation)
- When there is discrepancy between parental response and your observation, \* indicates whether parent report or observation should take precedence, and marked accordingly
- When the parent's response is "unsure" your observation of the particular behavior will be given weightage even asterisk (\*) is on parental response. In case you are also unable to observe the behavior, and then only mark the response as "Unsure".
- Some criteria have multiple questions. **While scoring**, consider the criteria fulfilled even if response to **any one** of the questions is abnormal. For example, the criterion A1a is considered fulfilled if any one of i, ii, iii, or iv is abnormal in the child

## INCLIN Diagnostic Evaluation for Autism

### SECTION A

	Ask (Tick ✓ in the box if response is based on answer)	Observe (Tick ✓ in the box if response is based on observation)	Encircle the appropriate response		
<b>A1a</b>	i) * <i>For children aged less than 4 years:</i> Does your child <b>usually</b> enjoy being taken in the lap or hugged?  <i>For children aged 4 years or more:</i> When your child was a baby/toddler, did he/she enjoy being taken in the lap or hugged? <div style="text-align: right;"><input type="checkbox"/></div>	In children below 4 years age: Response to being touched and cuddled by parent: enjoys/tolerates/squirms/ stiffens/ gets upset/ Indifferent <div style="text-align: right;"><input type="checkbox"/></div>	Yes	No	Unsure
	ii) Does your child <b>usually</b> make eye contact with you or other people? <i>E.g. While playing, asking for things, talking to you.</i> <div style="text-align: right;"><input type="checkbox"/></div>	* Quality of eye contact <div style="text-align: right;"><input type="checkbox"/></div>	Yes	No	Unsure
	iii) * Does your child <b>usually</b> use various gestures appropriately during social interactions? <i>E.g. Namaste, Salaam, waving bye-bye, hello, touching feet etc.</i> (At least sometimes spontaneously) <input type="checkbox"/> <i>(use appropriate example as required)</i>	Use of these gestures in response to your greeting and while departing <div style="text-align: right;"><input type="checkbox"/></div>	Yes	No	Unsure
	Further elaborate if required about inappropriate gestures like repeatedly greets anybody without knowing				
	iv) Does your child <b>usually</b> show appropriate facial expressions according to the situation? <i>E.g. being happy, sad, afraid etc.</i> <div style="text-align: right;"><input type="checkbox"/></div>	*Appropriateness of facial expressions while interacting with parents, with you (stranger), while playing, when given toy/favorite food or when scolded. <div style="text-align: right;"><input type="checkbox"/></div>	Yes	No	Unsure
<b>A1b</b>	i) * Does your child <b>usually</b> enjoy the company of other children? <div style="text-align: right;"><input type="checkbox"/></div>	Child's interaction with other children <div style="text-align: right;"><input type="checkbox"/></div>	Yes	No	Unsure

	ii) * <b>For children aged 4 years or more:</b> Does your child have friends of his/her age (In school and neighbor-hood) with whom he/she loves to chat, share food or play together? <input type="checkbox"/>	Quality of child's interaction with other children of his/her age <input type="checkbox"/>	Yes	No	Unsure or NA
	iii) * <b>For children aged 4 years or more:</b> Does your child play <b>mostly</b> with children who are much older or much younger than him/her? <input type="checkbox"/>	Quality of child's interaction with other children <input type="checkbox"/>	Yes	No	Unsure or NA
<b>A1c</b>	i) * <b>For children aged less than 4 years:</b> Does/did your child <b>ever</b> point with his/her index finger to bring your attention to show the things that interest him/her ? <i>E.g. kite, plane flying in the sky, cow/dog on the road etc.</i>  <b>For children aged 4 years or more:</b> Does your child <b>usually</b> bring things to show you on his/her own he/she has made painted or new toy/gift? <input type="checkbox"/>	Observe how the child draws attention toward a toy/object of interest; Look for coordinated pointing <input type="checkbox"/>	Yes	No	Unsure
	ii) * <b>For children aged 4 years or more, and are able to speak:</b> Does your child talk to you about things he/she likes or has achieved without being asked about them? <input type="checkbox"/>	<input type="checkbox"/>	Yes	No	Unsure Or NA
<b>A1d</b>	i) * Does your child <b>usually</b> prefer to play alone <b>and</b> gets irritated/moves away when his/her sibs or other kids try to play with him/her? <input type="checkbox"/>	Quality of play activity in a group of children or with siblings <input type="checkbox"/>	Yes	No	Unsure
	ii) * Does your child play <b>games involving turn taking or rule based</b> with other children <b>properly</b> ? <i>E.g. Cricket, Hide and seek/I-spy, Ludo, Stapoo, Ring-a- ring roses etc.</i> <input type="checkbox"/>	Quality of child's involvement in rule-based games or games involving taking turns <input type="checkbox"/>	Yes	No	Unsure
	iii) * Does your child <b>usually</b> share his/her happiness with you or come to you for comfort when hurt or upset? <input type="checkbox"/>	Sharing happiness or distress with the parents <input type="checkbox"/>	Yes	No	Unsure

	iv) * <b>For children aged 4 years or more:</b> Does your child <b>usually</b> share your happiness or try to comfort you when you are upset / sad? <input type="checkbox"/>	Sharing of parent's happiness or distress by the child <input type="checkbox"/>	Yes	No	Unsure or NA
<b>A2a</b>	* Does your child speak normally for his/her age? <i>If the child cannot speak normally: Can he/she communicate with you by using gestures? E.g. pointing with index finger, nodding/shaking head for yes/no etc.</i> <input type="checkbox"/>  <b><i>If the child cannot speak at all AND cannot communicate by appropriate gestures, then only mark as "NO".</i></b> <b><i>If the child cannot speak BUT can communicate by appropriate gestures, then mark as "YES".</i></b>	Use of age-appropriate language (words and phrases); Spontaneous use of gestures for communication; *Quality/maturity of pointing (Mature or immature pointing and 'hand over hand' pointing) <input type="checkbox"/>	Yes	No	Unsure
Ask A2b only if child is speaking at 2-3 word sentences level Ask A2c only if the child is speaking at few words level					
<b>A2b</b>	i)* Does your child <b>initiate</b> a conversation with you? <input type="checkbox"/>	Quality of child's conversation with parents or yourself <input type="checkbox"/>	Yes	No	Unsure or NA
	ii)* <b>For children aged 4 years or more:</b> Can you have conversation with your child during which he/she not only answers your questions, but also <b>adds</b> something new to <b>continue</b> the conversation? <input type="checkbox"/>	Quality of child's conversation with parents or yourself <input type="checkbox"/>	Yes	No	Unsure or NA
<b>A2c</b>	i) Does your child <b>usually</b> repeat words or phrases regardless of meaning (in part or whole) that he/she has heard? <i>E.g. If you say 'toffee' he will also say 'toffee' if you say 'come' he will also say 'come' and if you ask "what is your name", he/she also says "what is your name".</i> <input type="checkbox"/>	* Immediate echolalia (words or phrases) <input type="checkbox"/>	Yes	No	Unsure or NA
	ii) Does he/she <b>incessantly</b> repeat things/T.V serial dialogue regardless of meaning/ context, whatever he/she has heard <b>later on</b> ? <input type="checkbox"/>	* Delayed echolalia <input type="checkbox"/>	Yes	No	Unsure or NA

	iii) <b>For children aged 4 years or more:</b> Does your child <b>usually</b> use “I for me” and “me for you” incorrectly? <i>E.g., when you ask “do you want milk?” he/she says “yes, you want milk” or “Rohit wants milk” (referring to him self).</i> <input type="checkbox"/>	* Pronoun reversal  <input type="checkbox"/>	Yes	No	Unsure or NA
	iv) <b>For children aged 4 years or more:</b> During conversation does your child <b>often</b> speak ‘out of context’ or irrelevantly? <input type="checkbox"/>	Out-of-context speech and neologisms  <input type="checkbox"/>	Yes	No	Unsure or NA
	v) * <b>For children aged 6 years or more:</b> Does your child understand that somebody is making fun of him/her or can he/she understands jokes? <input type="checkbox"/>	Child’s response to an age-appropriate joke  <input type="checkbox"/>	Yes	No	Unsure or NA
A2d	Does your child participate in games like “Pat-a-cake”, “Peek-a-boo”, “Ring-a-ring rose”, “Akkad bakkad bambe po”, “Posam paa”, “Chal chameli baag mein” and “Totaa ud-maina ud” etc.?  <b>OR</b> Does your child play <b>variable</b> imaginative play with toys like For girls:- kitchen set/ dolls/clay or dough For boys:- telephone/ toy gun/motor car?  <b>OR</b> Has your child played different games like “ghar-ghar”, “teacher-student” (school-school), “chor-police” etc. with other kids interactively <input type="checkbox"/>	Quality of child’s play with toys or other objects Look for any form of <b>variable</b> pretend play  <input type="checkbox"/>	Yes	No	Unsure
	(May add age appropriate regional examples of variable pretend play as necessary) <b>Note for interviewer: If <u>any</u> one is positive will be marked as “Yes”</b>				
A3a	i)* Does your child have <b>excessive</b> interest in <b>odd</b> things/activities which other children do not have? <i>E.g., collecting toffee wrappers, polythene bags, piece of string or rope, pulling thread and rubber band etc.</i> <input type="checkbox"/>	Any <b>unusual</b> interests i.e. unusual for child’s age  <input type="checkbox"/>	Yes	No	Unsure

	ii)* Does your child have <b>excessive</b> interest in <b>typical</b> things but the interest is so <b>all encompassing</b> that it <b>interferes</b> his/her activities? (Excluding T.V watching) <input type="checkbox"/>	<b>Excessive and all-encompassing</b> interest in activities that are <b>typical</b> for other child his/her age <input type="checkbox"/>	Yes	No	Unsure
	iii)* Does your child like lining or stacking objects/toys <b>excessively</b> ? (Excluding blocks) <input type="checkbox"/>	<b>Excessive</b> lining of objects or toys <input type="checkbox"/>	Yes	No	Unsure
<b>A3b</b>	Does your child unreasonably <b>insist</b> on doing things in a particular way and/or become <b>upset</b> if there is any change in the daily routine? <input type="checkbox"/> <i>E.g., Taking exactly the same route to the school or market, insisting on food being served in the same pattern or sequence etc.</i>	Child's insistence on any unusual routines or rituals <input type="checkbox"/>	Yes	No	Unsure
<b>A3c</b>	i) Does your child keep on <b>repeating</b> any of the followings, like • flapping hands, • hand wringing, • toe-walking, • rocking or spinning, • making <b>unusual</b> finger or hand movements near his/her face? <input type="checkbox"/>	* Any type of motor stereotypes, unusual finger/hand movements near face <input type="checkbox"/>	Yes	No	Unsure
<b>Note for interviewer: Ask with demonstration and answer yes if any one of above example is positive</b>					
	ii) * Does your child have <b>inappropriate</b> fascination with movement? <i>E.g. spinning wheels, opening and closing of doors, electric fan, running water and any other revolving object etc.</i> <input type="checkbox"/>	Child's <b>inappropriate</b> fascination with objects in motion <input type="checkbox"/>	Yes	No	Unsure
<b>A3d</b>	Does your child prefer to play with a particular <b>part</b> of a toy/object rather than the whole toy/object? <i>E.g. wheels of a toy rather than the whole toy</i> <input type="checkbox"/>	* Quality of child's play with different toys and objects <input type="checkbox"/>	Yes	No	Unsure

**SECTION B**

**Complete this section (1-5) based on responses from section A and further history taking (6-12)**

<b>1. No. of criteria fulfilled in A1 of the section A (Social Interaction)</b> <b>0:</b> Less than two <b>1:</b> Two or more	<input type="checkbox"/>
<b>2. No. of criteria fulfilled in A2 of the section A (Communication)</b> <b>0:</b> Nil <b>1:</b> One or more	<input type="checkbox"/>
<b>3. No. of criteria fulfilled in A3 of the section A (Restricted Interests)</b> <b>0:</b> Nil <b>1:</b> One or more	<input type="checkbox"/>
<b>4. Interpretation of questionnaire (1 to 3)</b> <b>0:</b> No ASD ( If response to 2 or more of 1 to 3 is “0”) <b>1:</b> ASD present (If response to 1 is “1” <b>and</b> response to either or both of 2 and 3 is “1”)	<input type="checkbox"/>
<b>5. Total number of criteria fulfilled in A1, A2 and A3 together</b> <b>0:</b> Less than Six <b>1:</b> Six or more	<input type="checkbox"/>
<b>6. Does / did your child have any of any of the following?</b> <b>0:</b> No <b>1:</b> Yes	
A. Significant delay in development of language of the child? (Not spoken single words by 2 years and communicative phrases by 3 years)	
	<input type="checkbox"/>
B. Difficulty in using language in daily activities or during interaction with other people?	
	<input type="checkbox"/>
C. Started participating in varieties of pretend play at a later age/Not started pretend play?	
<b>D. <u>ANY</u> of the following (mark ‘1’ if any one of the following is ‘yes’)</b> (Tick (✓) the problems present in the child)	
- To be separate and indifferent from other children-	<input type="checkbox"/>
- No/few friends	<input type="checkbox"/>
- Difficulty in school (due to behavior or studies)	<input type="checkbox"/>
- Less understanding regarding societal norms	<input type="checkbox"/>
<b>7. Did your child have these symptoms before three years</b>	
<b>0:</b> No <b>1:</b> Yes/Do not know/ Not sure	<input type="checkbox"/>
<b>8. Does the child fulfill <u>all</u> the following criteria for diagnosis of Rett’s Disorder?</b>	
<ul style="list-style-type: none"> <li>• Female Child</li> <li>• Loss of purposeful hand skills between 5-30 months age and development of stereotyped <b>hand wringing</b>, <b>hand washing</b> or <b>hand to mouthing</b> movements</li> <li>• Loss of social engagement early in course during 9-29 months (although often social interaction develops later)</li> <li>• Severely impaired expressive and receptive language development with severe psychomotor retardation</li> </ul>	
<b>0:</b> No <b>1:</b> Yes	<input type="checkbox"/>



<p><b>9. Does the child fulfill <u>all</u> the following criteria for diagnosis of Childhood Disintegrative Disorder?</b></p> <ul style="list-style-type: none"> <li>• Normal development till 2 years age, by the presence of age appropriate verbal and nonverbal communication, social relationships, play and adaptive behavior</li> <li>• After 2 years of age, loss of previously acquired milestones (before age 10 years) in <b>2 or more</b> of the following areas (Tick (✓) the areas in which milestones are lost)               <ul style="list-style-type: none"> <li>- Expressive/receptive language</li> <li>- Social skills/Adaptive behavior</li> <li>- Bowel or bladder control</li> <li>- Play skills</li> <li>- Motor skills</li> </ul> </li> <li>• Abnormalities of functioning in at least two of the following areas:               <ul style="list-style-type: none"> <li>- Qualitative impairment in social interaction</li> <li>- Qualitative impairment in communication</li> <li>- Restricted, repetitive and stereotyped patterns of behavior</li> </ul> </li> </ul> <p style="text-align: right; margin-right: 50px;"><input type="checkbox"/></p> <p><b>0: No 1: Yes</b></p>		
<p><b>10. There is no clinically significant delay in any of the following?</b></p> <ul style="list-style-type: none"> <li>• Language development (single words used by age 2 years, communicative phrase used by age 3 years)</li> <li>• Cognitive Development <b>OR</b> Development of age-appropriate self-help skills</li> <li>• Adaptive behavior (Other than in social interaction)</li> </ul> <p style="text-align: right; margin-right: 50px;"><input type="checkbox"/></p> <p><b>0: No 1: Yes</b></p>		
<p><b>11. Summary assessment of ASD</b></p> <p><b>0: No ASD</b> (Response to 4 is "0")</p> <p><b>1: Autism</b> (Response to ALL of 1 to 7 is "1" and 8,9 is "0")</p> <p><b>2: Asperger's Disorder</b> (Response to 4 is "1", 6D is "1" and 10 is "1")</p> <p><b>3: PDD-NOS</b> (Response to 4 is "1" and either 5 or 7 or both is "0")</p> <p><b>4: Rett's Disorder</b> (Response to 4 is "1" and 8 is "1")</p> <p><b>5: CDD</b> (Response to 4 is "1" and 9 is "1")</p> <p><b>9: Indeterminate</b> (Criteria not fulfilled, too many unsure responses, could not be tested in appropriate condition)</p> <p style="text-align: right; margin-right: 50px;"><input type="checkbox"/></p>		
<p><b>12. Can these symptoms be solely explained by Intellectual Disability?</b></p> <p style="text-align: right; margin-right: 50px;"><input type="checkbox"/></p> <p>0: No 1: Yes</p> <p><b>If yes, refer to TAG review</b></p>		
<p><b>13. Additional note and observation during the interview</b></p>		
Name of the Assessor	Signature of the Assessor	Date of assessment