## **Toddler Autism Symptom Inventory (TASI)**

Child's ID:	
Chronological age:	If premature, weeks gestation at birth:
Date of birth:	Date of interview:
Respondent's relationship to child:	

Name of person conducting interview:

The TASI is designed to make a judgment about the presence or absence of DSM-5 (American Psychiatric Association, 2013) autism symptoms based on caregiver report. These interview items are to be used to elicit diagnostic information from caregivers relevant to behaviors and skills in the toddler age group. This information should be combined with other sources of information (e.g., developmental history) and clinician observation to make final best clinical estimate judgments about symptoms of ASD for toddlers *between the ages of 12 months, 0 days and 36 months, 30 days*.

Each item on the TASI corresponds to a DSM-5 symptom (American Psychiatric Association, 2013). Items are organized into sections based on the DSM-5 diagnosis and ask about ways in which a toddler might display each symptom. There is a suggested minimum score for each DSM-5 ASD symptom. When the total TASI score is calculated, there is a cutoff score of 7 or higher to indicate elevated ASD likelihood. These scores should be combined with clinical judgment for diagnostic decisions. Some additional TASI items are not included in the scoring (e.g, items 4, 15, 22); these can be used for clinical purposes or other data analyses. Therefore, the clinician should obtain examples for appropriate items.

<u>General administration and scoring directions</u>: For each item, the clinician should ask the question to the caregiver, then select a score of 0 or 1 based on the options provided (0=typical development, 1=ASD indication). The clinician should obtain examples of child behavior for appropriate items. <u>If the caregiver responds with multiple options, try to determine which behavior is most *common* for the child, and score using that behavior. The clinician should refer to the TASI Scoring Manual for general and specific guidance on scoring the TASI. Interviewers should attempt to select the appropriate response based on parent descriptions of the child's behavior. It is recommended to refrain from asking the parent repeatedly to indicate never/rarely/sometimes/often, although it may be necessary to do so occasionally. In addition, some questions have suggested follow-up questions that are offered only for additional information and do not contribute to the score; these are indicated with an asterisk (\*).</u>

Indicate the caregiver's response by circling, checking, or underlining the selected response and the corresponding score (0 or 1). If there is an X in the score box instead of 0/1 then this question does not contribute to the scoring. After completing the TASI interview, the scorer should sum the scoring column on each page, filling in the numbered boxes at the bottom of each page. The values in these numbered boxes should then be transcribed to the single page scoring algorithm document.

For many items, the behavior is expected of any child with typical development approaching or past the first birthday (e.g., noticing and imitating other's obvious positive affect, making eye contact, responding to their name being called). For a child who does not show these behaviors, or shows them rarely, these should be coded with a (1). In a few cases, a more advanced developmental level is required in order to expect the behavior (e.g., pretend play, active play with another child, combining words into phrases). If the clinician's judgment is that the child is functioning overall at a developmental level that would allow the behavior (e.g., simple pretend play), then the absence of that behavior should be scored (1). But if the child's developmental cognitive and language level is estimated to be 6-9 months, then pretend play is not expected and would not

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warrant a score of (1). "N/A" or "consistent with developmental level" should be selected; these options are included for relevant items. If no such option is included, then judge the behavior against the child's chronological age.

The TASI interview should be used to elicit caregiver-report of the child's behavior *within the last month*. As this period is often one of swift developmental change, some behaviors may be recently emerging; the guidance from the TASI scoring manual should be followed when scoring emerging behaviors.

For questions regarding social behaviors, it is important to probe for both the consistency with which the child demonstrates each behavior across people and settings, and the amount of effort required on the part of the adult to elicit the behavior. If a communicative or social behavior is in the child's repertoire, but it is displayed rarely, and/or an adult must work harder than would be expected to get the child to demonstrate the behavior, then score it as "rarely". In the social communication domain, there are two exceptions to this rule. First, a caregiver may report that the child has mastered a task (e.g., used to be interested in peek-a-boo but is now engaged in more advanced social-communicative play). This is typical toddler behavior, so score as 0 (no symptomatic behavior present). Similarly, a child may consistently demonstrate a skill with familiar caregivers but does not want to display this skill to a stranger and refuse or act shy. Again, this is typical toddler behavior, therefore score as 0 (no symptomatic behavior present).

When listed options are presented on the form, the clinician should check off examples endorsed by caregivers as well as record any examples not included on the form. When caregivers provide an example of behavior that is not on the form, the clinician should use their judgment as to whether this behavior indicates the child is acquiring the skill as expected for his/her developmental level, or is displaying a symptom possibly indicative of autism.

It is not necessary to ask questions verbatim. More important is ensuring that the caregiver understands the question. If the behavior in question has already been discussed, record the answer and reconfirm only if you feel it is necessary. If the caregiver does not understand the intent of the question, give an example or rephrase the question. Refer to the accompanying scoring manual for scoring assistance and some examples.

In many cases, interviews like the TASI are conducted simultaneously as the child engages in other testing. Thus, the interviewer may observe behaviors that clearly contradict caregiver report. If this occurs, discuss this discrepancy with the caregiver, and use the caregiver's input after discussion to make a scoring determination. If there is still a discrepancy between caregiver report and observed behavior, score the item using the caregiver report, but note the discrepancy, which might be clinically useful.

As much as possible, clinicians should use the child's name rather than referring to him or her as "your child" and should use the gender appropriate pronoun.

Introductory Language QuestionsThe introductory language questions are not used in calculating the TASI total score or deciding on any DSM-5 ASD symptom, since language delay is no longer an ASD criterion. These questions, however, should give you a sense of how delayed or atypical the child's language development is, and can be used to select the level of language impairment in the DSM-5.i. Does your child use words to communicate? Yes: continueNo: skip to item vi. & vii.
<ul> <li>ii. How many different words (that are understandable to familiar adults) does your child use to communicate during a typical day? (If necessary, help caregivers by suggesting categories like people, foods, clothes, activities, and animals; make sure these are words the child says, not just appears to understand) <ul> <li>1-5 words</li> <li>6-30 words</li> <li>&gt;30 words</li> </ul> </li> </ul>
iii. When did he/she start using single words? older than 24 months younger than 24 months or N/A
iv. Does your child put together two-word combinations on a daily basis? No Yes or N/A
<ul> <li>v. How many different phrases (that are understandable to familiar adults) does your child use to communicate? ("mommy go," "night-night baby," "more bubbles;" whereas "more juice," "more ball," "more cookie" would NOT be counted as three separate phrases).</li> <li>1-5 phrases</li> <li>6-30 phrases</li> <li>&gt;30 phrases</li> </ul>
vi. Does your child ever mime or use gestures to communicate with you when he/she doesn't know the word? If so, can you think of an example?
vii. Clinician: Given the above responses and the child's developmental level, is there evidence of abnormalities in communication that are not compensated for through gesture or miming? Yes, abnormalities are present No, language development appears typical or appropriately compensated for

A1. Deficits in social-emotional reciprocity	
1. When you smile at your child, how often does he/she smile back?	0/1
Sometimes/Often Rarely/Never	
0 1	
2. When another familiar adult or caregiver smiles at your child, how often does he/she smile	0/1
back?	
Sometimes/Often Rarely/Never	
0 1	
3. If your child sees other people around him/her being happy (e.g., at a birthday party), how	0/1
often does he/she appear to notice and share those feelings (e.g., smiling, clapping, etc.)?	
Sometimes/Often Rarely/Never	
0 1	
*4. How is your child most likely to respond if he/she sees you or another familiar adult hurt	$\setminus$ /
or sad?	$\setminus$ /
Does not notice Covers his/her ears Laughs	$\setminus$ /
Looks (at caregiver) but does not respond or appear distressed	$\setminus$ /
	V
Cries Looks distressed Gets another adult for help	$\wedge$
Offers comfort (e.g., pats/hugs you, gets a band-aid, shares a comfort item)	
Comes over/approaches you Says "crying" or labels the distress	
Other:	
	/ \
5. How often does your child respond when you call his/her name?	0/1
Sometimes/Often Rarely/Never	
0 1	
$\downarrow$	
*How does your child usually respond?	
Looks towards you when you call his/her name	
Vocalizes when you call his/her name	
Both looks towards you and vocalizes when you call his/her name	
Other:	
	box 1

6. How often does your child approach other people to play or interact?	0/1
Sometimes/Often Rarely/Never	
0 1	
Does your child show you things?	
Sometimes/Often Rarely/Never	
$\downarrow$ $\downarrow$	$\wedge$
Proceed to questions 7 and 8 Score questions 7 and 8 as Rarely/Never (1)	
7. Does he/she show you things he/she has done or is doing (e.g., a picture or scribble he/she drev	v, 0/1
a puzzle he/she completed)? How often?	
Sometimes/Often Rarely/Never	
0 1	
8. Does your child try to get you to look at things that interest him/her (e.g., airplanes, trucks,	0/1
trains, cute animals), just for the purpose of sharing, not because he/she wants something or	
needs help? How often?	
Sometimes/Often Rarely/Never	
$\downarrow$ 1	
How does he/she typically do that?	
(Clinician should read and check each choice that the caregiver endorses as typical for the child. Circle	
WITH or WITHOUT eye contact (e.c.) as appropriate. Get examples as necessary to be sure caregiver	
interprets the item as intended. Eye contact in this context is when child checks to see if caregiver is lookin	g
at the right thing. Score lowest- if caregiver reports any 0-point behavior, score 0.)	
1: Reaches toward or touches objects (WITH/WITHOUT e.c.)	
0: Brings you an object to show (WITH/WITHOUT e.c.)	
Points to objects (WITH/WITHOUT e.c.)	
Holds up objects for you to see (WITH/WITHOUT e.c.) (e.g., a flower, a scribble, an interestin	q
toy)	5
Vocalizes to express his/her interest with clear intent (WITH/WITHOUT e.c.) (e.g., saying	
"bu-bu" as you blow bubbles)	
Uses words (WITH/WITHOUT e.c.) (e.g., "look!", "doggy!")	
Other:	

9. If child does not yet use words: How often	n does your child engage in back-and-forth calization to him/her) that includes at least two back	0/1
and forth turns?	calization to himpler) that includes at least two back	
Sometimes/Often	Rarely/Never	
0	1	
<i>If child uses words:</i> How often can you have child takes two back and forth turns, NOT r repeating what you say, or ignoring what you		
Sometimes/Often	Rarely/Never	
0	1	
10. Doos your shild onioy social games such	as peak a hear pat a sake. Bing around the	0 / 1
Rosie, etc.?	as peek-a-boo, pat-a-cake, Ring around the	0/1
Sometimes/Often	Rarely/Never	
$\downarrow$	1	
Does he/she actively do something to get you to play or continue the game?		
Yes	No	
0	1	
$\downarrow$		
*What does he/she do?		

A2: Deficits i	n nonverbal communication	
11. How often does your child look at you	when making a request?	0/1
Sometimes/Often	Rarely/Never	
0	1	
12. Does your child ever try to get you to lo	ook at something?	0/1
Sometimes/Often	Rarely/Never	
$\downarrow$	1	
When your child is trying to get you to lool	st something, does he/she look back at you to	
see if you are looking at the same thing?		
Sometimes/Often	Rarely/Never	
0	1	
13. How often does your child look at you	during physical play (e.g. roughhousing or tickling)?	0/1
Sometimes/Often	Rarely/Never	
0	1	
14. How often does your child look at you	during social play (e.g., singing a song, playing peek-a-	0/1
boo)?		
Sometimes/Often	Rarely/Never	
0	1	
-	nician should read options and ask caregiver to respond for	$\setminus$ /
each example. Check all that caregiver endorses. Ge		$\setminus$ /
Nods yes	No gestures	$\setminus$ /
Shakes head "no"		
Waves "hi" and "bye-bye"		Å
Claps hands		
Blows a kiss		
Points Other:		$/ \setminus$
	-	/ \
16. How often does your child use these ge Sometimes/Often	Rarely/Never	0/1
Sometimes/Orten	1	
↔ How often does your child look at you whil	L L using these gestures?	
Sometimes/Often	Rarely/Never	
0	1	
	k," how often does your child look toward the	0/1
object?	in, now often does your child look toward the	0,1
Sometimes/Often	Rarely/Never	
0	1	
-		

A3. Deficits in relationships	
18. How often does your child seem interested in other children?	0/1
Sometimes/Often Rarely/Never	
0 1	
child <u>usually</u> play? (Let caregiver respond, then clinician should evaluate relevant options. Check all that caregiver endorses, and select the score for the child's usual behavior. Get examples if necessary.) 1:Ignores other children	0/1
0:Child has limited opportunity to play with other children Caregiver has limited opportunity to observe child with other children Watches other children	
Plays near other children (wants to be near the children themselves, not just because the children have a preferred toy or are doing a preferred activity)Follows other childrenApproaches other children	
Other:	
20. When another child approaches your child to play, how does your child <u>usually</u> respond? (Let caregiver respond, then clinician should evaluate relevant options. Check all that caregiver endorses, and select the score for the child's usual behavior. Get examples if necessary.)	0/1
1:Ignores the childRuns to caregiver or other adult	
Pushes child awayMoves away from child	
<ul> <li>0: Child has limited opportunity to play with other children</li> <li> Caregiver has limited opportunity to observe child with other children</li> <li> Engages in play (verbal and physical)</li> <li> Engages in play (physical only)</li> <li>Other:</li> </ul>	

<ul> <li>21. How often does your child spontaneously imitate the actions of others without verbal or physical prompting if these are: (score 0 if child imitates any actions of parents, children, or other adults) Your actions?</li> <li>Sometimes/Often Rarely/Never</li> <li>0</li> <li>1</li> <li>Actions of siblings or other children?</li> <li>Sometimes/Often Rarely/Never</li> <li>0</li> <li>1</li> <li>Actions of other adults?</li> <li>Sometimes/Often Rarely/Never</li> <li>0</li> <li>1</li> <li>Actions of other adults?</li> <li>Sometimes/Often Rarely/Never</li> <li>0</li> <li>1</li> </ul>	0/1
drink out of an empty cup, pretending to fly a toy airplane)? Sometimes/Often I	
<ul> <li>How does your child <u>usually</u> do this?</li> <li>Pretends only when shown an example or otherwise prompted</li> <li>Some repetitive pretend play (i.e., small number of play scenes re-enacted over and over)</li> <li>Some spontaneous pretend play but only what's been specifically taught</li> <li>Pretend play just beginning, and/or consistent with developmental level</li> <li>Simple spontaneous and creative pretend play</li> </ul>	
Sophisticated spontaneous and creative pretend play Example(s) of play :	
23. If your child does pretend play, does he/she do this with other children, with adults, or only with him/herself?	0/1
1:Does not yet play pretend Mostly by him/herself	
<ul> <li>0:N/A; no pretend play, but consistent with developmental level</li> <li>Will actively engage in pretend with an adult</li> <li>Will actively engage in pretend with a sibling</li> <li>Will actively engage in pretend with another child (not a sibling)</li> </ul>	
Other:	

B1. Stereotyped/repetitive motor movements, vocalizations	
24. How often does your child play with his/her toys in a specific, inflexible or repetitive way	0/1
(e.g., lining up toys or objects in the same way each time, putting Legos together only in one specific pattern)?	
Sometimes/Often Rarely/Never	
1↓ 0	
Can your child be easily redirected from this kind of play?	
Yes No	
Example(s) :	
25. Does your child flap his/her arms and/or hands?	0/1
0:No 1:Yes, flaps at other times, such as when alone	
0:Yes, flaps only when excited	
26. How often does your child make unusual or repetitive movements with his/her hands or	0/1
fingers? (e.g., splaying out or stiffening fingers or twisting fingers in unusual ways, splaying out arms/hands,	
tensing; Demonstrate if respondent is uncertain what you are referencing.)	
Sometimes/Often Rarely/Never	
↓ 	
Does your child move his/her fingers, hands, and/or objects near his/her face or eyes in an	
unusual way? Examples:	
27 How often door your child rock back and forth?	0/1
27. How often does your child rock back and forth? Sometimes/Often Rarely/Never	0/1
$\downarrow$ 0	
When does he/she do this? Circle one:	
0:Mainly when tired or upset (to self-soothe)	
1:At other times. Describe:	
Appears unusual but can be redirected	
Appears unusual and can be hard to interrupt	
28. How often does your child engage in unusual movements with his/her body (e.g., walking	0/1
on his/her toes, jumping repeatedly, spinning, pacing, bouncing from foot to foot, tensing whole body, etc.)?	0,1
Sometimes/Often Rarely/Never	
$\downarrow$ 0	
0: Normal for developmental age	
1: Yes, appears unusual but can be redirected	
1: Yes, appears unusual and can be hard to interrupt	
, , , , , , , , , , , , , , , , , , ,	
Example:	

29 How often does your child	I make repeated vocalizations or unusual sounds that are not	0/1
-	repetitive sounds like "ticka ticka ticka"; not meaningful word	0/1
approximations)	repetitive sounds like ticka ticka ticka, not meaningful word	
Sometimes/Often	Rarely/Never	
J	Rarely/Never	
↓ 	U	
What is the purpose of these		
0: Mostly to interact or comn		
1: Mostly for the child's own	enjoyment	
30. How often does your child	repeat what you say (immediate echolalia; e.g., saying "You want a	0/1
•	vant a cookie" and saying "truck" immediately after hearing "Daddy drives a	
truck")? (If child has no words, score	e 0)	
Sometimes/Often	Rarely/Never	
$\downarrow$	0	
How often does it appear to l	pe primarily used in a communicative manner (e.g., repeating	
	ant juice?" only when desiring juice)?	
Sometimes/Often	Rarely/Never	
0	1	
		0/4
	l repeat phrases, conversations, or lines that he/she has heard	0/1
from shows, movies, songs or books, etc. (delayed echolalia)? (If child has no words, score 0)		
Sometimes/Often	Rarely/Never	
$\downarrow$	0	
Are they repeated in the same	e way (i.e., same intonation or accent) that your child heard them?	
Sometimes/Often	Rarely/Never	
1	0	

B2: Insistence on sameness	
32. Does your child become distressed if activities or conversations are not done the same	0/1
way each time (e.g., insists that a caregiver says a phrase in the same way every time, becomes distressed if	
caregiver takes alternate route home in the car, distressed by change in daycare routine)?	
Sometimes/Often Rarely/Never	
↓ 0	
0: Normal for developmental level	
1: Unusual for developmental level and/or mildly disruptive	
1: Significantly disruptive to child and/or family	
33. Does your child become distressed or upset if there are minor changes in his/her	0/1
immediate environment (e.g., getting new sheets for his/her bed, changing from shorts to long pants in	
autumn)?	
Sometimes/Often Rarely/Never	
↓ 0	
0: Normal for developmental level	
1: Unusual for developmental level and/or mildly disruptive	
1: Significantly disruptive to child and/or family	
	0/4
34. Does your child become distressed or upset if minor changes occur in his/her	0/1
environment that don't directly affect him/her (e.g., changing the color of your living room, a	
caregiver with a new hairstyle or new glasses)? Sometimes/Often Rarely/Never	
0: Normal for developmental level	
1: Unusual for developmental level and/or mildly disruptive	
1: Significantly disruptive to child and/or family	
35. Does your child try to impose his/her routines or rituals on others (e.g., moving a sibling's toy	0/1
cars so that they are in a specific pattern, requiring all who come into your house to remove hats)?	
Sometimes/Often Rarely/Never	
↓ 0	
0: Normal for developmental level	
1: Unusual for developmental level and/or mildly disruptive	
1: Significantly disruptive to child and/or family	

B3. Restricted, fixated interests	
36. Is there anything that your child is interested in that seems like all he/she wants to do? Yes No	0/1
$1 \downarrow 0$	
How does your child react if you attempt to distract him/her or remove the object?	
Mild interests, easily distractible, or not very distressed	
Strong interests, hard to distract, or very distressed	
Describe the interests:	
37. Does your child enjoy carrying around or playing with items that differ from most	0/1
children his/her age (e.g., toilets, hubcaps, lights, spinning objects, vacuum cleaners, string, tools such as	
pliers, keys, soup cans, hairbrushes, etc.)?	
Yes No	
1↓ 0	
How does your child react if you attempt to distract him/her or remove the object?	
Mild interests, easily distractible, or not very distressed	
Strong interests, hard to distract, or very distressed	
Describe the interests:	
	box 10

	our child Sensory Seeking	Hyper Consitivity	Hypo Sonsitivity
	Sensory Seeking	Hyper-Sensitivity	Hypo-Sensitivity
VISUAL	look out of the corners of his/her	dislike bright lights inside or outside	not seem to notice
	eyes		things he/she sees
	like to squint at things		
	look along straight lines or lines of		
	toys		
	get down on the floor to look at		
	toys at eye-levelstare at movie credits		
	seem unusually fixated on shiny or		
	moving objects like fans, water,		
	shadows, or bright lights		
	dangle shoelaces or string and		
	watch		
	spin toy car wheels and watch		
	play with eyes or hair on toy doll		
TACTILE	(repeatedly) touch things with	avoid touching things with a certain	not react to touch
	different textures, such as textured	texture, such as textured walls, smooth	reacts to painful
	walls, smooth objects, carpet, squishy	objects, carpet, squishy toys	stimuli less than would
	toys	dislike wearing certain clothing (how does	be expected
		the clothing feel?)	accepts bathwater
		dislike or pull away when being cuddled	that you might think is
		or held	too hot/cold
		dislike being groomed (e.g., bath-time, having face washed, fingernails cut, hair	
		brushed/cut	
AUDITORY	play toys with sounds over and	startle easily or cover his/her ears when	ignore or tune out
	over, seemingly to listen to a certain	hearing certain sounds (e.g., toilet flushing,	loud noises (e.g.
	sound(s)	vacuum, baby crying)	doesn't react to
		notice sounds before other children do	alarms, vacuum, loud
		(e.g., planes, trains, sirens from far away,	object crashing to
		dripping tap, buzzing sounds from a lamp)	floor)
	smell objects not meant to be		
SMELL & TASTE	smelled; smell people	texture:	<u> </u>
	stuffs food into his/her mouth	vomits or gags when sees/smells a	
		specific food	
		avoids people with a certain smell (e.g.,	
		perfume)	
		insist that food be a certain temperature	
		(e.g., always hot, always cold, always room	
		temperature)	
COLUMN SUM:	total seeking behaviors	: total hyper-sens. behaviors	: total hypo sens behaviors
	If sum >0, box 11 = 1 If sum = 0, box 11 = 0	If sum >0, box 12 = 1 If sum = 0, box 12 = 0	
	11  sum = 0,  box  11 = 0	11  Sull = 0,  BOX  12 = 0	If sum >0, box 13 = 1
			1  It cum = (1  boy  12 = 0)
			If sum = 0, box 13 = 0

## **B4: Sensory differences**

Regression Questions				
Has your child lost any skills that he/she had previously mastered?				
Yes No				
What skill(s) was lost. (Check all that apply.) Speech and language Gestures or nonverbal communication Eye contact or social interaction Cognitive skills (e.g., puzzle making) Fine motor skills Gross motor skills				
Other:				
Did the loss occur after an illness or other identifiable event? Yes No Describe:				
How old was the child at the time he/she lost skill(s)?				
How long had the child mastered the skill(s) before the loss? How long after the loss until he/she started to regain the skill(s)?				
If there was a loss of speech or language, how much did he/she have prior to losing skills?				
Words Example(s): Phrases Example(s): Sentences Example(s):				
Conclusion				
Is there anything that I didn't specifically ask about that you would like to share with us about your child? Perhaps there is something that he/she does that you, other family members, friends, or service providers have noticed and been puzzled or concerned about:				