

TASI Scoring Manual

Please email TASlnterview@gmail.com with any questions about the TASI.

This document is to be used in conjunction with the TASI interview form, which also has some general directions. The TASI is scored item by item; each item may be suggestive of a developmental problem (score = 1) or be consistent with typical development (score = 0). While in some cases the presence of a behavior (e.g., eye contact) is typical, in other cases the presence of a behavior (e.g., hand flapping) is atypical. The TASI is an interview form to be used with an adult who knows the child well, preferably the child's primary caregiver. Scoring the TASI requires the clinician to employ clinical judgment in interpreting the caregiver's responses and descriptions. Often, developmental evaluations are conducted so that the child participates in testing while the caregiver responds to interview questions. In such a case, the interviewer may notice discrepancies between what the caregiver reports and their own observations. While it is appropriate to refer to the child's observed behaviors (e.g., "I'm hearing him make a lot of different sounds") and engage in a discussion of these behaviors with the caregiver, which may result in a change of caregiver response, the TASI should be scored based on caregiver report combined with clinician judgment of the caregiver's descriptions of behaviors, not on the clinician's own observation.

Due to the importance of clinical judgement in administering and scoring the TASI interview, the interviewer should have significant training and experience in early typical and atypical child development, diagnosis of autism and other developmental disorders in young children, and experience in clinical interviewing.

The TASI assesses a wide range of child behaviors. Some of these are behaviors that are easy for caregivers to notice in everyday life (e.g., presence or absence of eye contact). Others may occur less frequently (e.g., hand flapping) or be harder to judge (e.g., pointing to request but not to share attention) For this reason, cutoffs for differentiating between "sometimes" and "rarely" depend a great deal on the behavior involved. Some general guidelines are:

- if the behavior occurs about as often as would be expected in a typical toddler in appropriate contexts, even if a toddler were distractible, shy, or somewhat oppositional, then score as sometimes/often.
- if the behavior occurs only in a few infrequent situations, or noticeably less often than would be expected even for a temperamental toddler, then score as rarely/never.

We thank Sherira Fernandes, Ph.D. and Sarah Dufek, Ph.D. for their thoughtful contributions to this scoring manual.

Introductory Language Questions (p. 3)

These questions are designed to assess whether the child's language is significantly delayed and whether the child shows a lack of communicative drive. If a caregiver reports that the child does not use words, it is important to assess if this is due primarily to a language delay or because the child lacks the typical interest in communicating.

i. Does your child use words to communicate?

ii. How many different words does your child use to communicate during a typical day?

iii. When did he/she start using single words?

iv. Does your child put together two-word combinations on a daily basis?

These should be flexible two-word phrases, such as “more juice” and “mama go”, not only overlearned phrases such as “oh no” or “bye bye”.

v. How many different phrases does your child use to communicate?

vi. Does your child ever mime or use gestures to communicate with you when he/she doesn’t know the word?

This question is directed at whether the child uses gestures including reaching and pointing to communicate his needs when he/she doesn’t know the word he/she needs. Gestures used to request or to show are to be coded here. Gestures including waving or blowing a kiss are coded in question 15.

Some caregivers may indicate here that the child does not use gestures and, later in the interview, endorse certain gestures. This is fine and item vi. should not be revised.

If the caregiver affirms that the child has gestures, the interviewer should ask about when those gestures are used and what they look like.

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?

This item reflects the clinician’s judgment as to whether the child appears to have a lack of communicative intent. Clear guidelines for indicating language delay are not provided here; it is essential that clinicians have a strong background in typical and atypical child development in order to make a clinical judgment regarding the child’s language.

1. When you smile at your child, how often does he/she smile back?

This question addresses whether the child smiles in response to their primary caregiver. If a secondary caregiver is being interviewed using the TASI, rephrase as “When your child’s mother/grandmother/father/etc. smiles at him/her, how often does he/she smile back?”

2. When another familiar adult or caregiver smiles at your child, how often does he/she smile back?

This question should help the clinician determine if the child smiles in response to more than one adult they are comfortable with. Smiling in response to strangers or unfamiliar adults should not be coded here.

Useful examples: “If your child’s grandmother/father/babysitter smiles at the child, how would your child respond?”

3. If your child sees other people around him/her being happy (e.g., at a birthday party), how often does he/she appear to notice and share those feelings (e.g., smiling, clapping, etc.)?

This behavior should be seen with more than just one person. If the child notices and shares a sibling’s feelings *only*, score as rarely/never (1).

Useful examples: “If you and your child were at a birthday party or family gathering, how would your child look and act – scared and apprehensive, or joyful? Would he know you were at a happy event?”

4. How is your child most likely to respond if he/she sees you or another familiar adult hurt or sad?

If a caregiver says they don’t know, ask them to picture a situation and consider what they think is the child’s most likely response.

Useful examples: “If you stubbed your toe and said “ouch,” how would your child respond?”

5. How often does your child respond when you call his/her name?

It is important to assess whether the child responds *even* when playing with preferred toys. It is typical for children not to respond to their name when playing with their favorite toys, but it is atypical for a child to be entirely impossible to engage. If this is the case, assess how frequently the child is “too absorbed” in an activity to respond to his/her name being called. If it is with a majority of activities, then score as rarely/never (1). If the child is able to respond to his/her name in all but one or two highly preferred activities, but then does respond after their name is called several times, then score as sometimes/often (0). If the child usually responds to hearing his/her name called once or twice, score as sometimes/often (0). If the caregiver must usually call the child’s name multiple times to catch his/her attention, no matter what he/she is doing, score as rarely/never (1).

6. How often does your child approach other people to play or interact?

This question is to determine if the child seeks out people to engage with. If the child only approaches others to give them objects because he/she needs help with them, or to get rid of the object, but does not seek to play or interact with the other person, this item should be scored as rarely/never (1).

7. How often does he/she show you things he/she has done or is doing (e.g., a picture or scribble he/she drew, a puzzle he/she completed)?

This item is targeted to whether the child shows the caregiver things she has done or is proud of, not just something she finds interesting (code this in question 8). If the child hands things to the caregiver, but these are not things the child is proud of, or it seems in fact as though the child is just trying to get rid of them or needs help with them, score 1.

Useful examples: “If your child stacks some blocks or completes a puzzle, will he do something to show you what he has done?”

8. How often does your child try to get you to look at things that interest him/her (e.g., airplanes, trucks, trains, cute animals), just for the purpose of sharing, not because he/she wants something or needs help?

This item is scored based on whether the child directs an adult’s attention to share their interest in a preferred item, object, or activity (even if it is a special interest). Determine what a child usually does when they see something they’re particularly interested in.

Useful examples: “If your child saw a fire truck or something he/she was really excited about, but was not requesting something, what would he/she do? Would he/she do anything to show you?”

9. If child does not yet use words: How often does your child engage in back-and-forth babbling (e.g., babbling back when you direct a vocalization to him/her)?

If child uses words: How often can you have a short conversation with your child? That is, the child takes two back and forth turns, NOT repetitively asking the same question, only repeating what you say, or ignoring what you say?

It is important to first clarify that this question is applicable regardless of the child’s language level. If a child is nonverbal but babbles, then describe, or even act out, for the caregiver exactly what a back-and-forth babbling conversation may look like. A back-and-forth conversation should include at least two turns by the child.

Useful examples: “I know you said that CHILD doesn’t use words, but he/she does make some sounds. Do you ever have ‘conversations’ with him/her, where you say something, and then he/she responds with babbling, and you respond, and he/she replies?”

10. Does your child enjoy social games such as peek-a-boo, pat-a-cake, Ring around the Rosie, etc.?

First, ask the caregiver if the child enjoys any social games or social routines, and identify a preferred activity, if one exists. Then, ask the caregiver whether the child does anything to continue or initiate the social game. A score of Yes (0) indicates that the child employs an active strategy to request that the activity continue, which may include vocalizations, eye contact, gestures, or movements (i.e., the child hides his face to request that peek-a-boo continue). If a child simply becomes fussy in a way that is undirected, score 1.

11. How often does your child look at you when making a request?

Useful examples: "What if your child is requesting something, by pointing, vocalizing, reaching, etc., and he does not get what he wants right away, does he look at you or make eye contact with you, while continuing to request?"

12. When your child is trying to get you to look at something, does he/she look back at you to see if you are looking at the same thing?

Useful examples: "When your child is drawing your attention to something interesting (whether he/she wants help or not), does he/she look back to see if you are looking at the thing he/she is indicating?"

13. How often does your child look at you during physical play (e.g. roughhousing or tickling)?

It is important to differentiate the child's level of eye contact during physical vs. social play. The interviewer should determine some examples of physical and social play that the child engages in and ask the caregiver how often the child looks at them during each.

14. How often does your child look at you during social play (e.g., singing a song, playing peek-a-boo)?

It is important to differentiate the child's level of eye contact during physical vs. social play. The interviewer should determine some examples of physical and social play that the child engages in and ask the caregiver how often the child looks at them during each.

15. What gestures does your child use? (Examiner should read options and ask caregiver to respond for each example. Check all that caregiver endorses. Get examples if necessary.)

In order to score as asymptomatic (0), a child must demonstrate at least one gesture independently.

If the child only demonstrates a gesture immediately in response to another person's demonstration of the gesture (imitation), note this but do not modify the score.

For caregivers who report that their child points, it is important to determine whether the child points distally to an object that the child cannot touch. If the child only 'points' by actually touching the object or picture with one finger, score 1.

16. How often does your child use these gestures? (If child has no gestures, score 1)

How often does your child look at you while using these gestures?

If the child uses at least one gesture sometimes (at least once/day) with eye contact, score based on that gesture.

17. If you point at something and say, "Look," how often does your child look at the object?

It can be helpful to demonstrate this for caregivers. When the adult has the child's attention, points at something, and says 'look', if the child makes an attempt to visually find the object being pointed toward at least half the time, score as sometimes/often (0). If the child does not make an attempt to find the object half the time, or is very inefficient in doing this (looks only vaguely in the right direction but is not generally accurate in finding the object) score rarely/never (1).

18. How often does your child seem interested in other children?

This item aims to determine if the child shows interest in other children, beyond simply interest in the toy held by another child or another child's activity. In order to score sometimes/often (0), the child should show interest in children who are not siblings. If a child only shows interest in a sibling, score as rarely/never (1).

19. When you are at the playground or the park and other children are around, how does your child usually play? (Let caregiver respond, then examiner should evaluate relevant options. Check all that caregiver endorses, and select the score for the child's usual behavior. Get examples if necessary.)

If the child's usual behavior is to ignore, avoid, or move away from other children, score as ignoring the child (1), even if he will infrequently engage in a more typical behavior.

If the child will only play with or approach children that he/she knows, but will not do so with strangers, score based on what the child does with familiar children.

20. When another child approaches your child to play, how does your child usually respond?

If child only watches but does not respond to a child who has approached him or her to play, code this as ignoring the child (1).

21. How often does your child spontaneously imitate the actions of others without verbal or physical prompting if these are: (score lowest, that is, most typical)

If the child copies anyone, score as 0.

If a caregiver notes that the child copies a single non-communicative, somewhat atypical action (like tapping his/her chin), then query for additional copied actions. If none are found, score as rarely/never (1).

Useful examples: "Does your child ever copy what you're doing? For example, has he/she ever copied you when you're sweeping, or brushing your hair, or washing your hands with soap?"

"Is there anything that you see your child do, when you think 'he/she learned that from watching me'?"

22. How often does your child engage in pretend play (e.g., pretending to feed a doll, pretending to drink out of an empty cup, pretending to fly a toy airplane)?

Ask about pretend play that is relevant for the child's developmental level/age – pretending to eat non-food items or toy foods, pretending to pet a toy animal, pretending to fly a toy plane. Asking about more advanced pretend play, such as role play (pretending to be a superhero, a doctor, a parent) or expanding the pretend into a sequence of actions (pat the baby, put it to bed, cover it up) is less appropriate for this age range.

If pretend play would not be expected due to the child's developmental or cognitive level, score as Pretend play just beginning, and/or consistent with developmental level (0).

23. If your child does make-believe play, does he/she do this with other children, with adults, or only with him/herself?

If the child does not engage in pretend play, but has a developmental or cognitive level that suggests that pretend play would be expected, then score as Does not yet play pretend (1).

If the child does not yet demonstrate pretend play but this is consistent with developmental level, score as N/A; no pretend play, but consistent with developmental level (0).

24. How often does your child play with his/her toys in a specific, inflexible or repetitive way (e.g., lining up toys or objects in the same way each time, putting Legos together only in one specific pattern)?

This question may require the clinician to make a judgment as to the child's behaviors. For example, if a caregiver states "child really enjoys cleaning up – he/she puts things away in a cabinet and then stands and opens and closes the door," the clinician may query further to determine whether the child's behaviors are often repetitive.

Whether the child can be easily redirected from this kind of play should only be asked if the child sometimes/often (1) engages in these behaviors. This further question may be clinically useful but does not affect scoring; a score of 1 should be assigned if specific, inflexible, or repetitive play is observed sometimes/often, whether or not the child can be easily redirected.

25. Does your child flap his/her arms and/or hands?

If flapping occurs only when the child is having difficulty with a motor response, such as trying to make a sign or put a piece in a puzzle or shape sorter, do not include here.

Caregivers may have difficulty determining if the child is flapping his/her arms out of excitement (either happy or scared/upset). Differentiating between a 0 and 1 requires that the examiner assess whether the child flaps his/her arms only when excited, which is common in toddlers. If the child flaps when alone, or when there no obvious exciting stimulus, this should be scored as sometimes/often (1).

Useful examples: "It sounds like CHILD flaps his/her hands/arms when watching TV. Does he/she do this only when a really exciting scene is playing, or does he/she flap more often – every time the TV turns on, for example, or for no obvious reason?"

26. How often does your child make unusual or repetitive movements with his/her hands or 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.)

Whether the child moves their fingers, hands, and/or objects near his/her face or eyes should only be asked if the child sometimes/often (1) engages in these behaviors. This further question does not affect scoring.

27. How often does your child rock back and forth?

Rocking forward and backwards or side to side (as well as when sitting or when standing) are all scored here. It can be helpful for the interviewer to demonstrate this for the caregiver. Do not include appropriate rocking, such as rocking on a rocking horse or rocking chair, here. Many typical toddlers rock while sitting and sucking thumb or pacifier, when tired, or in an attempt to calm themselves, or when watching an interesting program. If the child is rocking and taking glances at a caregiver because he knows that the caregiver does not want him to rock, this is communicative and typical. More unusual rocking appears more excited, is often accompanied by hand flapping or other unusual hand movements, may look enjoyable, and may occur when the child is alone.

Some clinical judgment may be required to decide if this is within the realm of typical toddler behavior (0) or appears unusual and occurs more than once per day (1).

Whether the behaviors appear unusual and how easily the child can be redirected from this kind of play should only be asked if the child engages in rocking at other times (1; not just when tired or upset). This further question does not affect scoring; a score of 1 should be assigned if rocking is observed sometimes/often, whether or not the child can be easily redirected.

28. How often does your child engage in unusual movements with his/her body (e.g., walking on his/her toes, jumping repeatedly, spinning, pacing, bouncing from foot to foot, tensing whole body, etc.)?

Some caregivers will have difficulty determining if their child's behavior is unusual or not – in these cases the clinician should make the judgment. The clinician is encouraged to ask the caregiver to describe or act out the behavior in question.

It can be helpful to query more about what the child is experiencing – for example, “when he/she spins and falls down, does he/she look at you to share his/her enjoyment and laugh?” This would be a more typical interaction than a child who spins alone and does not share enjoyment.

29. How often does your child make repeated vocalizations or unusual sounds that are not real words? (e.g., screeching and repetitive sounds like ticka ticka ticka; not meaningful word approximations)

These vocalizations should appear self-stimulatory that is, an activity that the child appears to enjoy for its own sake. Repetition of sounds or a song that is recognizable but without intelligible words may fall under items 30 or 31 but should not be coded here.

If the caregiver reports that these vocalizations are sometimes in a communicative manner and other times in a self-stimulatory manner, score as sometimes/often (1).

30. How often does your child repeat what you say (immediate echolalia; e.g., saying “You want a cookie” after being asked “Do you want a cookie” and saying “truck” immediately after hearing “Daddy drives a truck”)? (If child has no words, score 0)

If child repeats appropriately, like saying “wow” after a caregiver has said “wow” to share enjoyment, or repeats a word he/she does not understand, score as rarely/never (0).

Useful examples: “For example, does your child often repeat the very last word or phrase that you said?” “For example, if you were to ask your child ‘do you want a cookie or a carrot?’ and you knew he/she really wanted a cookie, what would he/she say?”

31. How often does your child repeat phrases, conversations, or lines that he/she has heard from shows, movies, songs or books, etc. (delayed echolalia)? (If child has no words, score 0)

Are they repeated in the exact same way (i.e., same intonation or accent) that your child heard them?

Delayed echolalia. Code here if the child is repeating phrases or songs from another source, even if not a complete phrase or if it is repeated incorrectly. The clinician is encouraged to ask the caregiver for the source of the phrase in order to differentiate delayed echolalia from repeated vocalizations (item 29).

It is also important to clarify the difference between questions 30 and 31 – is the repetition immediate or delayed? If delayed, in order to be atypical it must be repeated in the exact same manner, as far as the child is able. If children exclusively repeat previously-heard phrases in the context of age-appropriate pretend play re-enactments of scenes seen on TV, score 0.

32. Does your child become distressed if activities or conversations are not done the same way each time?

Notes: This question is directed towards determining if the child is distressed by a change in routine. For families who say that there is no daily routine, ask about if there is a usual mealtime routine where the child has a particular place to sit, or uses a particular bowl/cup/spoon or has a particular bedtime routine. Typical toddlers may insist on a mealtime or bedtime routine, but can usually tolerate minor changes.

33. Does your child become distressed or upset if there are minor changes in his/her immediate environment?

This behavior is relatively infrequent in this age range, whether development is atypical or not.

34. Does your child become distressed or upset if minor changes occur in his/her environment that don't directly affect him/her?

This behavior is relatively infrequent in this age range, whether development is atypical or not.

35. Does your child try to impose his/her routines or rituals on others?

Can be rephrased as "Are there any rituals or routines that he/she does that he/she wants other people to do in the same way?"

If child dislikes change in daily routine and actively opposes changes, code in item 32.

If giving examples to a caregiver, it is important to differentiate insistence on routine from simply denying the child what she wants in the moment.

If the child has a play date and he/she gets upset when the visitor tries to do something different with his/her toys, he/she is trying to impose the 'right way' on other children.

Be sure to differentiate between the child's insistence on fixed routines from the child not wanting to transition away from a preferred activity or treat.

36. Is there anything that your child is interested in that seems like all he/she wants to do?

If the child's primary interest is in the TV, only code as sometimes/often (1) if the child only wants to watch a specific program or movie.

Whether the child can be easily redirected from this kind of play should only be asked if the child has a strong interest (1). This further question does not affect scoring; a score of 1 should be assigned if a strong interest is observed sometimes/often, whether or not the child can be easily redirected.

37. Does your child enjoy carrying around or playing with items that differ from most children his/her age (e.g., toilets, hubcaps, lights, spinning objects, vacuum cleaners, string, tools such as pliers, soup cans, hairbrushes, etc.)?

This item does not consider how long the child plays with the object, only the atypicality of the focus of interest. Children who tend to have more interest in items that are clearly not a toy rather than toys, should be scored sometimes/often (1).

This item requires clinician judgment as to what is an atypical item of interest. Consideration of the appropriateness of the toy for the child's age, as well as the type of interest that a child may have in it should be considered; if the child is trying to figure out how it works, this should not be scored as atypical. The child's environment should be considered here – a child who often carries around the water bottle that caregivers prompt him to carry into daycare each morning should not be considered atypical for this.

Many children have stuffed animals that they sleep with or carry around – do not include this here.

Whether the child can be easily redirected from this kind of play should only be asked if the child has a strong atypical interest (1). This further question does not affect scoring.

Sensory table:

It is appropriate for clinicians to query all sensory differences; proceeding by row or by column, based on the child's reported sensory symptoms. It is also appropriate to integrate what the clinician has learned about the child and ask child-specific questions. Any behaviors that are clearly sensory seeking, or indicate hypo-, or hyper-sensitivity should be checked off or written in; one example of each of these is sufficient to score 1 for that type of behavior. This should exclude toys or objects that are designed for this behavior. For example, a scratch and sniff book is meant to be smelled; to be scored as sensory seeking in the smell/taste domain, the child should tend to use smell as a way of engaging with multiple objects or people. Similarly, a sparkly toy is meant to be watched; to be scored as visually sensory seeking, the child should look at at least several different objects in an unusual way (staring, looking at anything with straight lines, looking at objects out of the corner of his/her eye). In addition, hyper-responsiveness should be judged against stimuli that are not

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usually aversive. If a child startles, cries, or covers ears in response to a fire alarm or other sounds that most people find aversive, that would not be sufficient to score auditory hyper-responsiveness. With regard to hypo-responsiveness, typical children have a range of stimuli that they may not respond to, especially if they are otherwise engaged. To score a 1, the caregiver should have noticed that the child shows little or no apparent response to stimuli that would be expected to elicit a reaction, such as bath water that is too hot or a bruise or other minor but painful stimulus.

Frequently, clinicians begin by referring to an already-discussed sensory behavior and proceeding to other behaviors in the same sensory domain or same sensory pattern (e.g., “You said that CHILD likes to look at things out of the corner of his/her eyes. Does he/she ever look at things along a straight line? Does he/she squint when he/she looks at things? Does he/she seek out other sensations, like things he/she can touch or specific sounds?”)

In order to determine the value for boxes 11-13, each column should be summed. If the column sum is greater than 0, then a 1 should be placed in the corresponding box. For example, if the sum for the sensory seeking column is 3, then a 1 should be placed in box 11. A score of 1 indicates that atypical sensory behavior is present; the actual sum of each column should not be interpreted literally, since, for example, one very severe and persistent visual seeking behavior may be as maladaptive as multiple milder behaviors. In addition, the list of behaviors on the sensory table is not exhaustive and the caregiver may not report all of the sensory issues that the child has. Going through the entire list on the table and eliciting reports of other sensory issues may be useful for clinical purposes or collecting more comprehensive data; however, if the main goal is to determine whether sensory issues are present in the interest of getting a total TASI score or of going through DSM-5 symptoms, the interviewer may want to cut the questioning short after one clear example in a column is elicited.