**Supplemental Materials**

**The Children’s Social Understanding Scale: Construction and Validation of a Parent-Report Measure for Assessing Individual Differences in Children’s Theories of Mind**

**By D. Tahiroglub et al., 2014, *Developmental Psychology***

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Table S1

*Test–Retest Reliability in Study 1 and Internal Consistencies (*αs*) of Scales in Studies 1, 2, and 3*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scale | No. of items | Study 1  | Study 2 validation sample(*N* = 94) | Study 3 validation sample (*N* = 123) |
| Test–retest sample(*N*= 31)Test–retest reliability | Scale construction sample(*N* = 465) |
| Internal consistency | Mean item-total correlation | Internal consistency | Mean item-total correlation | Internal consistency | Mean item-total correlation |
| Belief | 7 | .68 | .83 | .58 | .62 | .36 | .74 | .46 |
| Knowledge | 7 | .74 | .80 | .55 | .66 | .38 | .64 | .38 |
| Perception | 7 | .70 | .62 | .34 | .51 | .26 | .57 | .29 |
| Desire | 7 | .79 | .74 | .45 | .64 | .36 | .72 | .43 |
| Intention | 7 | .62 | .75 | .47 | .60 | .32 | .63 | .36 |
| Emotion | 7 | .68 | .71 | .43 | .63 | .36 | .66 | .37 |
| Full scale | 42 | .88 | .94 | .51 | .90 | .41 | .91 | .43 |
| Short scale | 18 | .88 | .89 | .53 | .84 | .44 | .81 | .41 |

*Note.* Item-total correlations were corrected by removing the item under consideration from the total.

Table S2

*Means (and Standard Deviations) of Scales in Studies 1, 2, and 3*

|  |  |  |  |
| --- | --- | --- | --- |
| Scale | Study 1Scale construction sample(*N* = 465) | Study 2Validation sample(*N* = 94) | Study 3Validation sample(*N* = 123) |
| Belief | 2.87 (0.67) | 3.05 (0.47) | 3.35 (0.46) |
| Knowledge | 3.09 (0.60) | 3.26 (0.44) | 3.45 (0.35) |
| Perception | 3.07 (0.48) | 3.07 (0.42) | 3.13 (0.41) |
| Desire | 3.15 (0.46) | 3.21 (0.39) | 3.36 (0.37) |
| Intention | 3.13 (0.52) | 3.30 (0.37) | 3.33 (0.39) |
| Emotion | 3.16 (0.45) | 3.20 (0.41) | 3.39 (0.39) |
| Full scale | 3.08 (0.45) | 3.18 (0.34) | 3.34 (0.32) |
| Short scale | 2.95 (0.52) | 3.07 (0.41) | 3.23 (0.35) |

*Note.* Mean subscale and scale scores were computed by averaging over items.

Table S3

*Raw and Age-Controlled Scale-Task–Correlations in Study 1 Scale Construction Sample*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scale | False belief | Knowledge access | Level 2 perspective taking | ToM composite |
| Belief | .23\* (.05) | .27\* (.08) | .18 (−.04) | .30\*\* (.04) |
| Knowledge | .32\*\* (.18) | .37\*\* (.24\*) | .18 (.00) | .38\*\* (.21+) |
| Perception | .18 (.09) | .12 (.02) | .13 (.03) | .20† (.07) |
| Desire | .20†(.12) | .19† (.10) | .05 (−.06) | .19† (.07) |
| Intention | .16 (.09) | .14 (.06) | .04 (−.06) | .15 (.05) |
| Emotion | .19† (.04) | .29\*\* (.15) | .15 (−.02) | .27\* (.07) |
| Full scale  | .26\* (.12) | .28\* (.13) | .15 (−.03) | .31\*\* (.11) |
| Short scale  | .32\*\* (.17) | .35\*\* (.20+) | .17 (−.03) | .37\*\* (.17) |

*Note.* Partial correlations controlling for age are shown in parentheses. *N* = 81*.* ToM = theory of mind.

†*p* < .10. \**p* < .05. \*\**p* < .01 (2-tailed).

 Table S4

*Raw and Age-Controlled Scale–Task Correlations in Validation Sample From Study 2*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scale | False belief | Level 2 perspective taking | Appearance–reality  | ToM composite |
| Belief | .23*\** (.15) | .34\*\* (.31\*\*) | .18† (.13) | .34\*\* (.27\*\*) |
| Knowledge | .39\*\* (.32\*\*) | .36\*\* (.32\*\*) | .23\* (.17) | .43\*\* (.37\*\*) |
| Perception | .24\* (.20†) | .15 (.12) | .12 (.09) | .22\* (.18+) |
| Desire | .37\*\* (.32\*\*) | .26\* (.22\*) | .23\* (.17†) | .37\*\* (.32\*\*) |
| Intention | .35\*\* (.28\*\*) | .27\*\* (.23\*) | .26\* (.21\*) | .38\*\* (.32\*\*) |
| Emotion | .29\*\* (.20†) | .29\*\* (.24\*) | .06 (−.02) | .28\*\* (.19+) |
| Full scale (42 items) | .38\*\* (.30\*\*) | .35\*\* (.30\*\*) | .22\* (.15) | .42\*\* (.35\*\*) |
| Short scale (18 items) | .42\*\* (.35\*\*) | .38\*\* (.34\*\*) | .28\* (.22\*) | .47\*\* (.41\*\*) |

*Note.* Partial correlations controlling for age are shown in parentheses. *N* = 94. ToM = theory of mind.

\*\**p* < .01; \**p* < .05; +*p* < .10 (2-tailed).

Table S5

*Raw and Age-Controlled Scale-Task Correlations in Validation Sample from Study 3*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Scale | Backwards digit span | Prospective memory | Planning | Restricted-view ToM  |
| Belief | .26\*\* (.10) | .11 (.03) | .07 (−.11) | .38\*\* (.27\*) |
| Knowledge | .24\*\* (.07) | .05 (−.03) | .26\*\* (.15) | .37\*\* (.25\*\*) |
| Perception | .49\*\* (.38\*\*) | .23\* (.15+) | .31\*\* (.17+) | .37\*\* (.24\*) |
| Desire | .19\* (.13) | .09 (.06) | .07 (.00) | .34\*\* (.33\*\*) |
| Intention | .19\* (.12) | .07 (.04) | .01 (−.06) | .33\*\* (.29\*\*) |
| Emotion | .19\* (.06) | .16† (.12) | .14 (.05) | .28\*\* (.19†) |
| Full scale (42 items) | .33\*\* (.19\*) | .15† (.08) | .17† (.04) | .43\*\* (.34\*\*) |
| Short scale (18 items) | .34\*\* (.19\*) | .18† (.10) | .16† (.01) | .43\*\* (.32\*\*) |

*Note.* Partial correlations controlling for age are shown in parentheses. *N* = 123 (except for the restricted-view task, in which *N* = 92). ToM = theory of mind.

†*p* < .10. \**p* < .05. \*\**p* < .01 (2-tailed).

Appendix S1

*Staff use: Subj. No. \_\_\_\_\_\_*

|  |
| --- |
| **Children’s Social Understanding Scale (Long Form)** |

**Today’s Date** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Sex of Child** M F (Please circle one)

**Child’s Date of Birth** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Age of Child** \_\_\_\_\_\_\_Yrs/ \_\_\_\_\_\_\_Mos

 Month Day Year (Years) (Months)

**Your Relationship to Child Number of Siblings \_\_\_\_\_\_\_**

**Mother \_\_\_\_\_ Father \_\_\_\_\_ Ages of Siblings \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Other:** (please indicate relationship) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Instructions: Please read carefully before beginning:**

On the following pages you will see statements that describe children’s everyday behaviors and thinking. We would like you to tell us how well each statement describes your child’s behavior and/or thinking. There are no “correct” answers. The skills and behaviors described in the statements develop gradually, and children differ widely in their behavior and ways of thinking. It is these differences we hope to learn about.

Please read each statement and decide whether it’s a “True” or “Untrue” description of your child’s thinking and behavior. Use the following scale to indicate how well a statement describes your child:

 Circle # If the statement is:

1. Definitely Untrue
2. Somewhat Untrue
3. Somewhat True
4. Definitely True

Please do your best to respond to all of the items. However, if you cannot answer an item because you have no idea whether your child thinks or behaves in that way, then circle “Don’t Know” (DK).

**Please be sure to respond by circling a number or “Don’t Know” for every item.**

Thank you for helping us learn more about children’s development!

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **My Child…** | **Definitely Untrue** |  **Somewhat Untrue** |  **Somewhat True** | **Definitely True** | **Don’t****Know** |
| 1 | Talks about differences in what people like or want (e.g., “You like coffee but I like juice”). | 1 | 2 | 3 | 4 | DK |
| 2 | Tries to understand the emotions of other people (e.g., wants to know why you are crying). | 1 | 2 | 3 | 4 | DK |
| 3 | Uses words that express uncertainty (e.g., “We might go to the park”; “Maybe my shoes are outside”). | 1 | 2 | 3 | 4 | DK |
| 4 | Understands when s/he is being teased or made fun of. | 1 | 2 | 3 | 4 | DK |
| 5 | Thinks you can still see an object even if you are looking in the opposite direction. | 1 | 2 | 3 | 4 | DK |
| 6 | Is good at playing tricks on others (e.g., acts as if the cookie jar is empty when really it is full). | 1 | 2 | 3 | 4 | DK |
| 7 | Realizes that experts are more knowledgeable than others in their specialty (e.g., understands that doctors know more than others about treating illness). | 1 | 2 | 3 | 4 | DK |
| 8 | Talks about how people feel (e.g., “I’m happy”; “She’s angry”).  | 1 | 2 | 3 | 4 | DK |
| 9 | Talks about what people like or want (e.g., “He likes cookies”; “She wants to go home”). | 1 | 2 | 3 | 4 | DK |
| 10 | Understands that wishes do not always come true. | 1 | 2 | 3 | 4 | DK |
| 11 | Can tell you how s/he found out about things (e.g., “Sally told me about it”; “I saw it happen at the park”; “I heard it on the radio”). | 1 | 2 | 3 | 4 | DK |
| 12 | Has trouble figuring out whether you are being serious or just joking. | 1 | 2 | 3 | 4 | DK |
| 13 | Recognizes that if a person wants something, that person will probably try to get it. | 1 | 2 | 3 | 4 | DK |
| 14 | Is good at playing “hide and seek” (e.g., is hard to find, does not make give-away noises). | 1 | 2 | 3 | 4 | DK |
| 15 | Talks about what people see or hear (e.g., “I see a duck”; “She hears a train coming”). | 1 | 2 | 3 | 4 | DK |
| 16 | Talks about what people think or believe (e.g., “I think it’s raining”; “He thinks it’s bedtime”). | 1 | 2 | 3 | 4 | DK |
|  | **My Child…** | **Definitely Untrue** | **Somewhat Untrue** |  **Somewhat True** | **Definitely True** | **Don’t****Know** |
| 17 | Talks about differences between her/his beliefs and someone else’s (e.g., “You think it’s a shark but I think it’s a dolphin”). | 1 | 2 | 3 | 4 | DK |
| 18 | Talks about how her/his beliefs have changed over time (e.g., “I used to think that drinking from a cup is hard, now I think it’s easy”). | 1 | 2 | 3 | 4 | DK |
| 19 | Talks about people’s mistaken beliefs (e.g., “He thought it was a dog but it was really a cat”; “I thought mommy was coming but it was really daddy”). | 1 | 2 | 3 | 4 | DK |
| 20 | Realizes that if s/he does something bad, others may get mad. | 1 | 2 | 3 | 4 | DK |
| 21 | Understands that hurting others on purpose is worse than hurting others accidentally. | 1 | 2 | 3 | 4 | DK |
| 22 | Talks about people’s intentions (e.g., “He did it on purpose”; “I didn’t mean to spill it”; “She’s trying to catch the kitten”). | 1 | 2 | 3 | 4 | DK |
| 23 | Understands that just because you want something it does not mean you really need it. | 1 | 2 | 3 | 4 | DK |
| 24 | When given an undesirable gift, pretends to like it so as not to hurt the other person’s feelings. | 1 | 2 | 3 | 4 | DK |
| 25 | When talking on the phone, behaves as if the listener can actually see her/him (e.g., assumes that the listener knows what s/he is wearing). | 1 | 2 | 3 | 4 | DK |
| 26 | Understands the difference between doing something intentionally and doing it by mistake (e.g., someone deliberately taking a toy vs. taking it by mistake). | 1 | 2 | 3 | 4 | DK |
| 27 | Understands that different people can have different feelings about the same thing (e.g., one child likes a dog but another child is scared of it). | 1 | 2 | 3 | 4 | DK |
| 28 | Talks about teaching and learning (e.g., says “My dad taught me how to play that game”; “I learned that song at daycare”). | 1 | 2 | 3 | 4 | DK |
| 29 | Understands that people can perform the same action for different reasons (e.g., throwing a ball could be done with the intention of playing a game vs. with the intention of hurting someone). | 1 | 2 | 3 | 4 | DK |
|  | **My Child…** | **Definitely Untrue** |  **Somewhat Untrue** |  **Somewhat True** | **Definitely True** | **Don’t****Know** |
| 30 | Takes into account what others want (e.g., takes turns, shares toys, compromises with other children regarding which game to play).  | 1 | 2 | 3 | 4 | DK |
| 31 | Tries to persuade others that their point of view is incorrect. | 1 | 2 | 3 | 4 | DK |
| 32 | Talks about the difference between the way things look and how they really are (e.g., “It looks like a snake but it’s really a lizard”). | 1 | 2 | 3 | 4 | DK |
| 33 | Talks about conflicting emotions (e.g., “I am happy to go on vacation, but I am sad about leaving friends behind”). | 1 | 2 | 3 | 4 | DK |
| 34 | Is good at directing people’s attention (e.g., points at things to get others to look at them). | 1 | 2 | 3 | 4 | DK |
| 35 | Tells lies that are really easy to discover (e.g., says that s/he did not eat a cookie when there’s chocolate all over her/his face). | 1 | 2 | 3 | 4 | DK |
| 36 | Talks about the difference between intentions and outcomes (e.g., “He tried to open the door but it was locked”). | 1 | 2 | 3 | 4 | DK |
| 37 | Is good at explaining things to younger children. | 1 | 2 | 3 | 4 | DK |
| 38 | Understands that telling lies can mislead other people. | 1 | 2 | 3 | 4 | DK |
| 39 | Thinks that s/he cannot be seen if her/his eyes are closed. | 1 | 2 | 3 | 4 | DK |
| 40 | Talks about the difference between what people want and what they actually get (e.g., “She wanted a puppy but she got a kitten”). | 1 | 2 | 3 | 4 | DK |
| 41 | Has difficulty figuring out how you feel from your tone of voice or facial expressions of emotions (e.g., has trouble telling the difference between an angry and a sad voice/face). | 1 | 2 | 3 | 4 | DK |
| 42 | Talks about what people know or don’t know (e.g., “I know who it is”; “He doesn’t know where his ball is”). | 1 | 2 | 3 | 4 | DK |

Please check that you have answered all questions!

THANK YOU!!!