

Supplemental Materials

Text S1: Stories with mental state words in the experimental condition

1. Dog and Rabbit

Target words: want, feel, think

Dog and Rabbit are good friends. Today is Rabbit's birthday, and Dog knows Rabbit has wanted a skirt for a long time. So, Dog got up early to go shopping and bought a skirt for Rabbit. To surprise Rabbit, Dog packed it into a box. Then, he went into Rabbit's home with this gift: "Dear Rabbit, today is your birthday. Happy Birthday! I have a gift for you, have a look!" Dog put the big box in front of Rabbit, and Rabbit was very happy. "Rabbit, guess what is inside in the box?" "I feel it may be a very delicious carrot." Dog shook his head and said: "Guess again. Do you remember the last time we went to a shopping mall?" Rabbit giggled and said: "I know, it is my favorite skirt. I thought you must have forgotten about it. You are so nice, Dog. Thank you for giving me such a precious gift." Then, Rabbit wore the skirt, sung and danced with Dog. They were very happy.

Want "Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize."

"According to the previous story, Dog knows that Rabbit has wanted a skirt for a long time. There is the word 'want'. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?"

"Now, let me go first. 'I want a very beautiful doll.' OK, it is your turn."

Feel "You did a very good job. Now, let's play with another word. When Dog asked Rabbit to guess what was in the box, Rabbit said: 'I feel it may be a very delicious carrot.' There is the word 'feel'. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?"

"Now, let me go first. 'I feel it is a nice day.' OK, it is your turn."

Think "You did a very good job. Now let's play with the last word. Rabbit said to Dog in the previous story: 'I thought you must have forgotten about it.' There is the word 'think'. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?"

"Now, let me go first. 'I got up late today, I think it is the weekend.' OK, it is your turn."

2. Butterfly looks for a friend

Target words: want, decide, would like

Today, Butterfly dressed up very beautifully, and she decided to look for a friend. She flew and flew, first she met Moth: “Dear Moth, I want to become friends with you, is that fine?” Moth said: “Fine! But I should clean up now. It may take 10 minutes. Can you help me to clean up together?” Butterfly thought for a while: “I dressed up so beautifully. Cleaning will make my dress very dirty.” So, Butterfly said: “I do not have time now. I have to look for friends.” After a while, she met Ant: “Dear Ant, would you like to be my friend?” Ant said: “OK. But I need to move things now. Can you help me?” Butterfly thought: “Moving will make me exhausted.” So, Butterfly said: “No, I have no time now. I have to look for friends.” It became nighttime and Butterfly still could not find a friend. She stopped at the tree and cried very sadly. The tree heard and comforted her: “Being good friends means helping each other. Only by doing this can you show everyone that you are a valued friend. If you cannot earn your friends’ trust, they will think you are not a qualified friend.”

Decide “Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize.”

“According to the previous story, Butterfly dressed up very beautifully, and she decided to look for a friend. There is the word ‘decide’. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I decide to go to sleep and get up as early as possible, to be a good child.’ OK, it is your turn.”

Want “You did a very good job. Now let’s play with another word. When Butterfly met with Moth, she said: ‘Dear Moth, I want to become friends with you, is that fine’. There is the word ‘want’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I want to be the most beautiful princess in the world.’ OK, it is your turn.”

Would like “You did a very good job. Now let’s play with the last word. Butterfly said to Ant in the previous story: ‘Would you like to be my friend?’ There are the words ‘would like’. Now let us use these words to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘In order to take care of my teeth, I would like to brush my teeth every day, and not eat too much sweet food.’ OK, it is your turn.”

3. Bee and Earthworm

Target words: know, must, sad

A long time ago, Earthworm had a pair of wings, and he was good friends with Bee. Bee worked very hard and flew for honey everyday. One day, he invited Earthworm over to taste the honey. Earthworm finished tasting and went home to sleep. While he was lying on the bed, he began missing the delicious honey. He became very greedy. So, he sneaked into Bee's home and stole some honey. Bee found the amount of honey getting smaller, so he asked Earthworm whether he knew who stole his honey. Earthworm thought: "I should not let Bee know it is me." So he told Bee: "I did not see." Bee thought there must be a thief sneaking into his home. So, he decided to find out who the thief is. The next day, Bee did not go out to find honey, and he hid behind the house. A while later, Earthworm sneaked into his house. Bee saw that his best friend was the thief who stole the honey. He was so angry and sad. Earthworm realized that he was found out by Bee, and was very embarrassed. So he drilled into the ground and never came out.

Know "Next we will play a game together according to the previous story. Let me see how well you do. If you do a good job, I will give you a sticker as a prize."

"According to the previous story, Bee found the amount of honey getting smaller, so he asked Earthworm whether he knew who stole his honey. There is the word 'know'. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?"

"Now, let me go first. 'I learned a lot in kindergarten, and I know the earth is round.' OK, it is your turn."

Must "You did a very good job. Now let's play with another word. Bee thought there must be a thief sneaking into his home. There is the word 'must'. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?"

"Now, let me go first. 'You must be the best baby in the class.' OK, it is your turn."

Sad "You did a very good job. Now let's play with the last word. Bee saw that his best friend was the thief who stole the honey. He was so angry and sad. There is the word 'sad'. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?"

"Now, let me go first. 'I lost my favorite doll yesterday. I am so sad.' OK, it is your turn."

4. The naughty Baby Kangaroo

Target words: angry, might, sad

Baby Kangaroo was nearly four months old. She probed her head out of her Mom's pocket, and wanted to walk around the outside. She took the chance and jumped out. She walked and walked, and became very hungry. Then, she met with Hedgehog, and thought it was something she could eat. She extended her tongue and licked: "Oops! So painful." The thorn of Hedgehog stabbed into the tongue of Baby Kangaroo. So, she was very angry. She had to keep on walking, and decided to look for something else to eat. A crab

went by, and Baby Kangaroo thought: “This might be very tasty food.” As she was getting ready to bite, the crab suddenly extended his clamps and clipped her nose: “Muuumuu, painful! ” The nose of Baby Kangaroo was swelling, and she sat on the ground and cried sadly: “Mom, where are you? I am so hungry!” She didn’t know that her Mom was running around crazy looking for her. Hearing Baby’s crying, Mom ran to her and put her in her pocket. From then on, Baby Kangaroo did not dare to run around.

Angry “Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize.”

“According to the previous story, the thorn of Hedgehog stabbed into the tongue of Baby Kangaroo. So, she was very angry. There is the word ‘angry’. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘My neighbor broke my flower vase. I was so angry about that.’ OK, it is your turn.”

Might “You did a very good job. Now let’s play with another word. A crab went by, and Baby Kangaroo thought: ‘This might be very tasty food.’ There is the word ‘might’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘My grandma moved to very far away. I might rarely see in the future.’ OK, it is your turn.”

Sad “You did a very good job. Now let’s play with the last word. The nose of Baby Kangaroo was swelling, and she sat on the ground and cried sadly. There is the word ‘sad’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘My kitty was sick yesterday. I am so sad.’ OK, it is your turn.”

5. Lazy Kitty

Target words: afraid, happy, remember

A long time ago, there was a lazy Kitty. She didn’t like activities. She lied down after meals, and slept all day long, so she became fatter and fatter. Mom told the Kitty: “Kitty, get up! Catch rats with mommy.” Kitty opened her eyes and said: “I am too tired. I don’t want to go.” Mom went out very angrily. A rat sneaked into Kitty’s house, and he wanted to steal the rice in the corner of the wall. But rice was next to Kitty. At first, the rat was afraid, and walked into the corner very carefully. But, he didn’t know that Kitty was too fat to stand up. After he saw that Kitty didn’t catch him, he became bolder and bolder. The rat was very happy and said: “You are such a fat kitty, too fat to get up, useless!” At this time, Kitty was too nervous to cry, and she remembered the words her mom told her. But she had no way to stop the rat stealing all the rice away.

Afraid “Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize.”

“According to the previous story, at first, the rat was afraid, and then he walked into the corner very carefully. There is the word ‘afraid’. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I don’t like rain because I am very afraid of thunder.’ OK, it is your turn.”

Happy “You did a very good job. Now let’s play with another word. After the rat saw that Kitty didn’t catch him, he was very happy. There is the word ‘happy’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘My dad will take me to the park this weekend. I am very happy.’ OK, it is your turn.”

Remember “You did a very good job. Now let’s play with the last word. Kitty cried and remembered the words her mom told her. There is the word ‘remember’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘When watching movies, I always remember my best friend who is out of town. She always went with me to watch movies.’ OK, it is your turn.”

6. Bear has his tooth pulled out

Target words: like, pleased, love.

A long time ago, there was a very adorable chubby bear. But he had a weakness, he didn’t like brushing his teeth. One day, Mom Bear went out, and Baby Bear was very pleased because no one was watching him, and he could eat whatever he liked. So, Baby Bear searched every corner in the house, and he ate a lot of candies and honey. Baby Bear was very happy at first, but then he suddenly burst out: “Oops, my teeth are in so much pain!” At this time, Doctor Rabbit was walking by Baby Bear’s house and heard his voice. She went in and asked Baby Bear what had happened. Doctor Rabbit checked Baby Bear’s teeth and shook her head: “You must like eating very sweet food and do not love brushing your teeth. I am afraid I have to pull one of your teeth out.” Baby Bear was so scared and thought: “If I had brushed my teeth everyday, I wouldn’t have to suffer this pain.” From then on, Baby Bear did not like eating sweet food anymore, and brushed his teeth every morning and evening. His teeth became very clear and white, and were not painful anymore.

Like “Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize.”

“According to the previous story, Baby Bear didn’t like brushing his teeth. There is the word ‘like’. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I like coming to the kindergarten.’ OK, it is your turn.”

Pleased “You did a very good job. Now let’s play with another word. Mom Bear went out, and Baby Bear was very pleased. There is the word ‘pleased’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I have a very beautiful doll. Others don’t have one, I am very pleased.’ OK, it is your turn.”

Love “You did a very good job. Now let’s play with the last word. Doctor Rabbit checked Bear’s teeth and thought that he didn’t love like brushing his teeth. There is the word ‘love’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I love my country.’ OK, it is your turn.”

Text S2: Stories without mental state words in the control condition

1. Rabbit learns to run

Target words: learn, bump, back

Rabbit Huihui learned running with Mr. Ma. Mr. Ma illustrated the rules while running with Huihui. They ran through a forest and a hill. After a while, Huihui was so exhausted. It would have been so good that if he could stop and rest for a while. Huihui became much slower, and he bumped into a tree on the ground carelessly. This was a heavy bump, and his new pants tore. Huihui was so hurt and he cried out. Mr. Ma heard the crying and ran back: "Huihui, you should be persistent and then you can win. You can't give up if you meet a small problem." After these words, Huihui got up from the ground. The bird on the tree said to him: "Huihui, come on! You will win." The fish in the river jumped out and said: "Huihui, you are the best!" Huihui nodded his head and kept on running. At last, Rabbit Huihui persisted and won the Trophy in the forest sports game.

Learn "Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize."

"According to the previous story, Huihui learned long-distance running with Mr. Ma. There is the word 'learn'. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?"

"Now, let me go first. 'My brother is very good at learning. He is my role-model.' OK, it is your turn."

Bump "You did a very good job. Now let's play with another word. Huihui bumped into a tree on the ground carelessly. There is the word 'bump'. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?"

"Now, let me go first. 'I bumped a stone and fell down on the ground yesterday.' OK, it is your turn."

Back "You did a very good job. Now let's play with the last word. Mr. Ma heard the crying and ran back. There is the word 'back'. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?"

"Now, let me go first. 'I wish my uncle can be back home early, he will bring me a lot of gifts.' OK, it is your turn."

2. Snow flake

Target words: cover, shake, walk.

White snow flew over the sky. After a little while, the trees, roofs, and ground were all covered in white. A dog ran out of the house shaking his tail: “Woof-woof, there is sugar falling from the sky. Go out and take a look.” A kitty ran out of the house and said: “Mew-mew, there is salt falling from the sky. Go out and take a look.” A hen heard, walked out and said: “This is not sweet nor salty. It is very cold when you put it in your mouth, it is not sugar or salt.” At this time, a girl went out of the house, she giggled and said to dog, kitty and chick: “This is a snow flake. It is so thick. Let’s make a snow man together.” The animals and the girl first made balls of snow, and then rolled them on the ground. Their balls became bigger and bigger when rolling, and then made up the head and body of a snowman. They placed a carrot in the snowman’s head as a nose, and two black beans as eyes. A beautiful snowman was born.

Cover “Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize.”

“According to the previous story, after a little while, the trees, roof, and ground were covered in white. There is the word ‘cover’. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘My mom will cover me with a very thick comforter every night, in case I get sick.’ OK, it is your turn.”

Shake “You did a very good job. Now let’s play with another word. A dog ran out of the house shaking his tail. There is the word ‘shake’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I shook the juice container, it was so much fun.’ OK, it is your turn.”

Walk “You did a very good job. Now let’s play with the last word. In the story, a hen heard, and walked out. There is the word ‘walk’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘My father walks very fast, I can’t catch up with him every time.’ OK, it is your turn.”

3. Pig and boot

Target words: play, touch, give

In the morning, Pig went to play in the forest. Suddenly, Pig saw something red and touched it very smoothly and thought: “What is this? It feels like a feather bag, who dropped it?” Pig held it and yelled: “Who lost a bag?” A bird on the tree heard and told Pig: “Pig, it is not bag. It is a beautiful red hat.” Pig wore it on his head, and yelled: “Who lost a hat?” A fox saw it and said: “Pig, it is not hat. It is a nice bottle.” So, Pig picked a lot beautiful flowers and placed them in the bottle. “Who lost a bottle?” Then, there came a little dog: “No one lost it, and no one needs it back, you can give it to the Bear. He is sick.” Pig and Dog came to Bear’s house, and gave the bottle with the flowers to Bear. Bear took a look and jumped out: “Uha, it is not a bottle, it is my red boot.” Bear recovered soon. The three friends were very happy, and celebrated the red boot finding its owner.

Play “Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize.”

“According to the previous story, in the morning, Pig went to play in the forest. There is the word ‘play’. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘It is so good to be in kindergarten. I can play with so many friends.’ OK, it is your turn.”

Touch “You did a very good job. Now let’s play with another word. Pig found something red and touched it very smoothly. There is the word ‘touch’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I touched my dress and it feels very soft.’ OK, it is your turn.”

Held “You did a very good job. Now let’s play with the last word. In the story, Pig held a red boot on his hands.” There is the word ‘held’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I held a sticker in my hands.’ OK, it is your turn.”

4. A red hen

Target words: find, help, care.

A red hen found some wheat seed, and prepared to make bread. Then she asked her friends, Duck, Kitty and Pig for help to plant the seeds, but they refused. Little Hen had to plant all the seeds by herself. She watered and fertilized the wheat seeds everyday. She cared for them very well. As time flew, these seeds turned into mature wheat. Little Hen asked her friends to help her harvest the wheat, but they turned her down again! She had to harvest the wheat by herself everyday. Then, she grounded the wheat and made very delicious bread. Little hen asked: “Who will help me to eat this bread?” All her friend came to her

house: “Me, me!” But little hen told them: “None of you are qualified to eat these delicious bread. Good friends should help each other.” She began to eat the bread by herself. Duck, Kitty and Pig felt very guilty.

Find “Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize.”

“According to the previous story, a red hen found some wheat seed, and prepared to make bread. There is the word ‘find’. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I can’t find my doll this morning.’ OK, it is your turn.”

Help “You did a very good job. Now let’s play with another word. Little hen asked her friends for help to plant these seeds. There is the word ‘help’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘We should be good kids. We must help our parents, teachers and peers.’ OK, it is your turn.”

Care “You did a very good job. Now let’s play with the last word. In the story, little red hen cared for the wheat seeds very well. There is the word ‘care’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I was sick for some days. My mom took care of me every day.’ OK, it is your turn.”

5. Careless Dog

Target words: run, wear, ride

Dog Guaiguai usually stayed on campus. One day, Guaiguai’s Mom was sick. He ran back home to take a look at Mom. On the way back home, Guaiguai found that he was not wearing the same shoes on both feet, so he went back to school to change them. Just after changing his shoes, Guaiguai had another problem. He looked down at his shoes, and his shoes were on opposite feet. So, he had to change these shoes. By now, it was getting late. Dog Guaiguai would not have enough time if he chose to walk. Guaiguai thought: “It is better to ride a bike.” However, he found that his key was missing from his pocket. He had to go back to find the key. After he found the key, it was very late by the time he arrived home. Guaiguai hugged Mom when he got back home: “Mom, I have brought you favorite bones.” However, Guaiguai found that he forgot this most important thing. Dog Guaiguai should be called “careless Dog”.

Run “Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize.”

“According to the previous story, One day, Guaiguai’s Mon was sick. He ran back home to take a look at Mom. There is the word ‘ran’. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I ran very fast, and I am the best one in my class.’ OK, it is your turn.”

Wear “You did a very good job. Now let’s play with another word. On the way back home, Guaiguai found that the shoes he wore were not the same pair. There is the word ‘wear’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘Smart kids can wear clothes by themselves.’ OK, it is your turn.”

Ride “You did a very good job. Now let’s play with the last word. In the story, Guaiguai thought: ‘It is better to ride a bike.’ There is the word ‘ride’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘My father can ride a motorbike. It is really cool.’ OK, it is your turn.”

6. A sunny day

Target words: move, stretch, disturb

It was rainy for several days. The sun finally came out. Little lion woke up: “What beautiful sunshine!” He moved his chubby bum to protect the small mushroom, which had just come out of the ground. “It is a nice day. What should I do?” A group of ants walked through. They were moving a fruit, which was dropped by the rain. There was a puddle blocking the way. Lion stretched out his hand, and let the ants walk through. “I can pick up some fruits for the monkeys on this sunny day.” However, the birds jumped up and down on the tree, sung songs and looked for friends. “It is better not to disturb them. So, should I play with Rabbit, or visit Mr. Hedgehog and listen to his lovely stories?” The sun shined and made Lion feel very warm. He looked at the green leaves, and enjoyed the beautiful and peaceful scene. Everything was so nice. Little Lion had a very sweet dream.

Move “Next we will play a game together according to the previous story. Let me see how well you do. If you perform well, I will give you a sticker as a prize.”

“According to the previous story, a group of ants walked through, they were moving a fruit. There is the word ‘move’. Let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘I am very strong, and I can move a very heavy box.’ OK, it is your turn.”

Stretch “You did a very good job. Now let’s play with another word. Lion stretched out his hand, and let the ants walk through. There is the word ‘stretch’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘When friends met some difficulties, we need to stretch our hands to help them.’ OK, it is your turn.”

Disturb “You did a very good job. Now let’s play with the last word. In the story, Lion saw the birds jump up and down on the tree, sing songs and look for friends. He said: “ It is better not to disturb them.” There is the word ‘disturb’. Now let us use this word to make a sentence. We will see who can make more and better sentences. OK?”

“Now, let me go first. ‘When I am sleeping, I don’t like being disturbed by others.’ OK, it is your turn.”