

## ECDC RESEARCH RESULTS

January 2021



All of us at the ECDC would sincerely like to thank you for participating in our studies during 2020. It has been a challenging year for all and we greatly appreciate how you have helped increase our knowledge about children's development, and also assisted our students in obtaining their degrees at both the postgraduate and undergraduate levels. We hope you will enjoy reading about our recent research results. To find out more about us, visit our website [ecdc.psychology.uq.edu.au](http://ecdc.psychology.uq.edu.au)

### *Evaluating 4 to 12-year olds perception of moral wrongdoings of good and bad children*

This study investigates what children think of others when they misbehave. Research in adults has shown that people are more forgiving of a moral wrongdoing when it is performed by someone who is generally well-behaved.

My previous work has demonstrated that by age 6 children are making similar judgements, thinking that moral errors performed by bad children are worse than those performed by good children. However, it is unclear why this occurs. Is the previous good behaviour causing them to reinterpret the moral wrongdoing as less severe? Or do they just see it as more 'okay' for good children to misbehave?

The current study explores this by telling 4 to 12-year-olds stories about normally good, bad, and okay children misbehaving. In some cases, the intention behind these behaviours is blatantly wrong (e.g., taking someone else's property on purpose). In others, the intention is ambiguous (e.g., breaking someone's toy by accident).

We are interested in whether knowing about someone's previous behaviour affect's children's interpretation of the ambiguous behaviour, and therefore their evaluation of it.



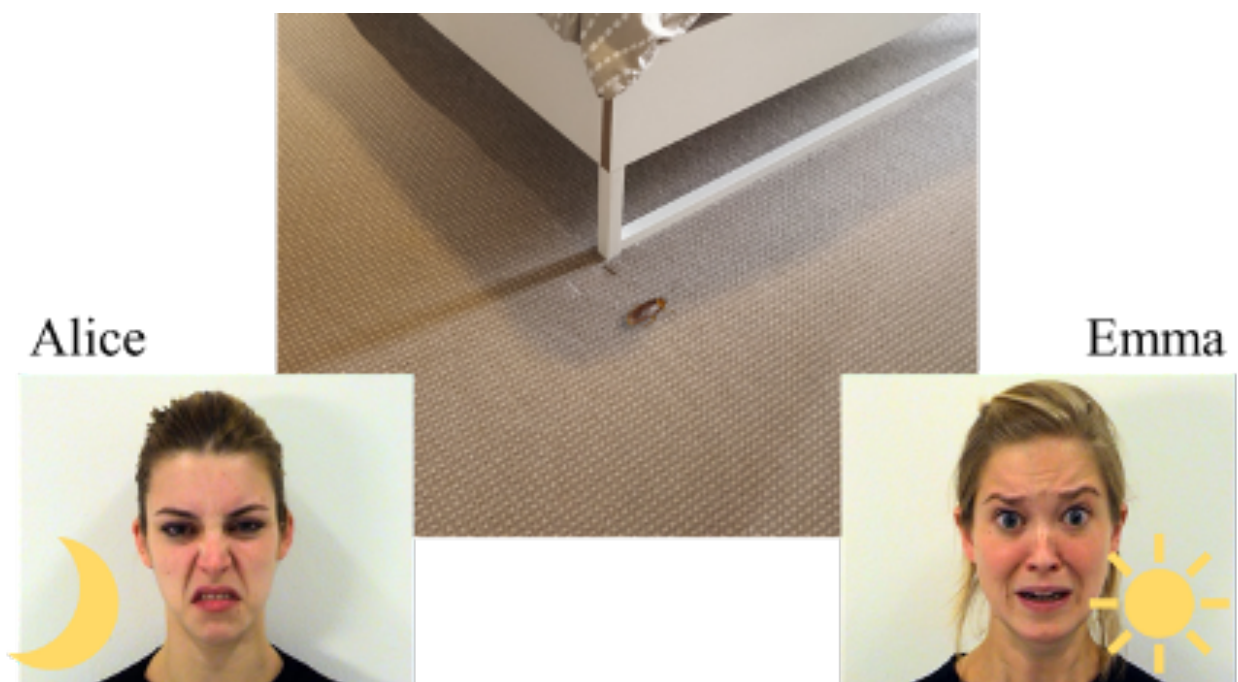
This study is still in progress, if you are interested in participating you can contact Sophie Cameron on [sophie.cameron@uqconnect.edu.au](mailto:sophie.cameron@uqconnect.edu.au)

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## *Do 4 to 9-year-olds learn about emotional responses from members of the same group?*

If you walked into a room and saw a cockroach on the floor, would you pull a disgusted face or a scared one? If there was someone else with you, might the expression you make depend on what they do? In situations where there are multiple plausible emotional responses, our tendency to choose one over the other could be influenced by our earlier years.

Research has given us reason to believe that children develop their emotional knowledge through social learning, such as by observation or experiencing events and their consequences. As such, we believe that they may look to adults as a major source of information, especially those who have characteristics in common with them. Children demonstrate favouritism for individuals in the same group as them (in-group members) over those who are not (out-group members). For example, a child might prefer to follow information provided by someone of the same sports team, over someone who is not.



Considering both these concepts, we proposed that this bias towards in-group members is present when children learn about emotion and explored this theory in our study. Children aged 4 to 9- years participated in our study via Zoom. They were assigned to one of two groups and listened to stories about scenarios in which two emotional expressions were plausible responses.

These expressions were demonstrated to them by two adults, one belonging to the same group as the child and the other to a different group. We then asked them to choose one expression. After that, we told them the same stories again, and this time we had them make their own expressions in response.

We found that children were showing strong general preferences for their in-group and thought that the in-group adult was smarter and knew more about people's feelings. However, their choice of which expression was appropriate for each story was not biased by the in-group option. We also conclude that children are yet to be able to make facial expressions that are easily recognisable by adults.

We will be continuing this study this time in-person, within the ECDC labs and the Queensland Science Centre. We are interested in whether interacting with children in-person would yield a different pattern of results. Many thanks to you and your children for participating, and we look forward to sharing more of our findings with you soon!

## Does maternal book reading/made-up storytelling influence 2 to 4-year-olds social thinking abilities?

During early childhood, children begin to learn how others think, feel, and act. Children who do this well are more socially skilled and accepted by their peers.

Studies have previously discovered that the frequency of shared book reading can positively influence aspects of children's social thinking abilities. For example, being able to recognise that someone, other than the child, may have false beliefs about a situation, when the child knows their personal belief is true.

However, previous studies have not looked at the influence of shared book reading/made-up storytelling, on children's social thinking abilities more generally. Therefore, we evaluated the influence of shared book reading/made-up storytelling on children's social thinking skills, in children between the ages of 2 years 6 months and 4 years 11 months.

In this study, we asked mothers to complete a questionnaire relating to how they read books to their children at home. Also, children completed two further tasks.

The first task examined children's vocabulary knowledge. In this task, children looked at pictures and were instructed to name them.

The second task evaluated children's social thinking skills. This task involved a structured play-based interaction using pictures and toys. This task explores children's understanding of others' perspectives, likes, beliefs, and knowledge.

We found that the frequency and style of maternal shared book reading did not influence children's social thinking abilities. However, we did find that the frequency of made-up storytelling influenced child social thinking ability. In other words, when mothers and their children make up stories together, children develop better social thinking. We do not yet know what aspects of made-up storytelling are important for children's knowledge of how others think, feel and act.





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## How do 4 to 9-year-olds experience regret and relief?

Every day we make decisions and sometimes we imagine an alternative where we could have made a better or worse choice. This can lead us to experience the emotions of regret and relief, which can help us make better decisions in the future.



In this online study, children were presented with two boxes and ten coins. They had to choose one of the boxes, which would result in either losing 5 coins (if the inside of the box was red) or keeping all 10 coins (if the inside of the box was green). We then asked children how their choice made them feel. Afterwards, we showed children the inside of the other box, which contained either a better, worse, or same outcome compared to the box they had chosen. The children were then asked one more time how they felt about the box they had chosen – did it make them feel happier (relief), sadder (regret) or the same?

We found that children aged 4 to 9 years experienced genuine relief in this task but did not experience regret. This is the opposite pattern to previous studies that have involved *gaining* rewards instead of *losing* them. We suggest that children aged 4 to 9 years can experience both regret and relief but certain situations are more likely to prompt regret and others are more likely to prompt relief.

## What is the comparison between 7 to 10-year-olds and adults' trait judgements on masculine facial features?

Masculine facial features, such as beardedness and larger jaw size, have a strong influence on adults' initial impressions of masculinity. However, less was known about children's impressions.

We aimed to understand children's impressions of men with beards by presenting images of bearded and clean-shaven faces between the ages of 7 to 10-years-old and adults. Children were shown faces which were altered to have enhanced (i.e. large jaw size) or diminished jaw shape (i.e. small jaw size). Beard or no beard, children and adults were asked to make judgements of dominance, trustworthiness, and competence.

Our findings provided evidence that children judge faces with more masculine features as more dominant. Our findings also suggest that masculine facial features play no role in forming impressions of competence. However, children's judgements of trustworthiness do not appear to be influenced by facial masculinity.

Our research provides avenues for future studies that may broaden the knowledge and understanding of the developmental trajectory of children's judgements of trustworthiness and dominance of masculine facial features.



## School-aged children diagnosed with ASD have unique experiences in organised activities



Participation in Organised Extracurricular Social Activities (OESA) can provide fun opportunities and positive outcomes for children. However, it is unclear if school-aged children diagnosed with autism spectrum disorder (ASD) differed in their participation and experience for such activities from those children who are typically developing.

Our study aimed to investigate if participation and experience in OESAs differed between children with and without ASD aged 4 to 12 years. Parents completed a questionnaire regarding the activities their child participated in or had withdrawn from, as well as those activities they had considered enrolling in. The questionnaire also examined the environmental and social components of participation.

Parents of children diagnosed with ASD reported significantly less participation in OESAs than those of typically developing children. Ability, behaviour, and social components of the program were less facilitative, or presented as barriers for children with ASD. Our study provides knowledge regarding OESA participation differences for Australian children with ASD and offers important insights into why this may be the case. It also underscores a need for OESAs, programs, policies, training, and interventions that target inclusion, accessibility, and positive participation experiences for children diagnosed with ASD.

## How does mother talk shape 2.5 to 4-year-olds social learning across different cultures?

During early childhood children begin to learn how others think, feel and act. This is called theory of mind. Children who do this well are more socially skilled and accepted by their peers.

In this study we are interested in understanding how mothers' talk helps children from 2.5 to 5-years learn about others. We are also exploring similarities and differences in mothers' talk cross-culturally, where the exact same research session has been conducted in China. This study is a collaboration between researchers from the ECDC at The University of Queensland, and researchers from The University of Otago, New Zealand

During the research session, each mother and child sit together and talk about 15 pictures of people in different scenarios. Children also complete a 10 minute assessment of vocabulary understanding and 15 minutes of play-based social thinking activities. This study is still underway. If you would like to participate in this research please contact Dr Aisling Mulvihill on [a.mulvihill@uq.edu.au](mailto:a.mulvihill@uq.edu.au).



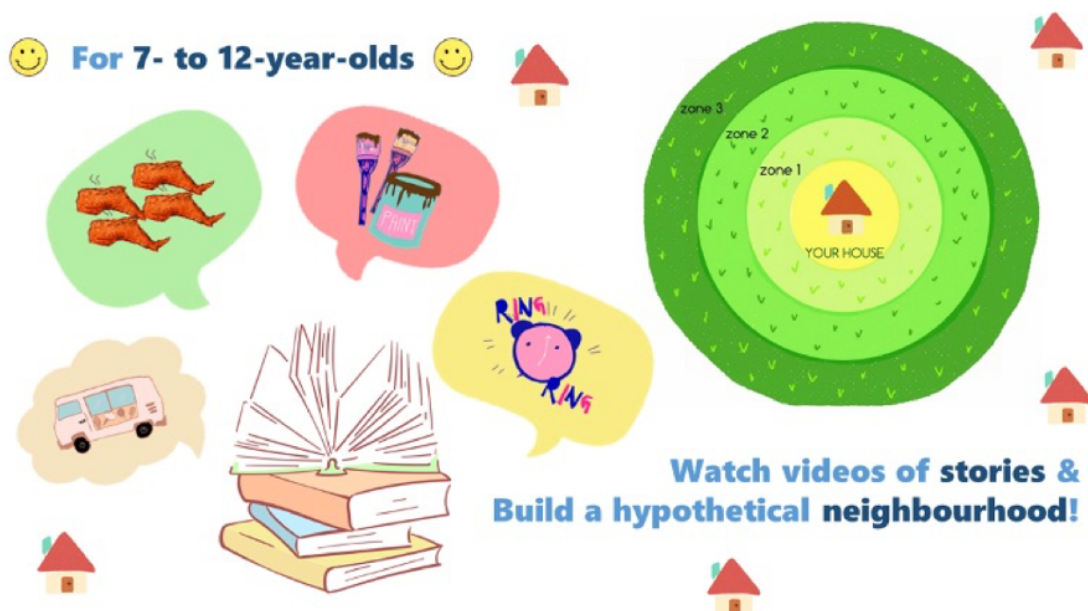
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## 7- to 12-year-olds' perspective taking based on the way people speak

From the first year of life, infants display the ability to distinguish between those who speak with their native accent (i.e., predominant accent in their community) versus those who speak with a foreign accent. Furthermore, by the pre-school years, children begin to make inferences about people's geographical and cultural background based on accents—for example, children infer that people who share their native accent likely share their home country as well as their cultural practices (e.g., food preferences).

The current study aimed to investigate if these perceptions that children have about people based on the way they speak influence how well they can take the perspective of those people.

During this study, children listened to a series of brief stories and were asked questions about what the characters were thinking or doing in each story—this was our measure of children's ability to take other people's perspectives. For half of the children, the characters spoke in their native accent (i.e., Australian-accented English). For the other half of the children, the characters spoke in a foreign accent (British-accented or Singaporean-accented English).



We predicted that children would be better at taking the perspective of the characters who spoke like them compared to characters who spoke with a foreign accent. Additionally, children were asked a series of questions that tapped into their perceptions of the characters (e.g., "How much do you think you are the same as these people?" "How much do you think people like this are from the same country as you?"). We wanted to see how these accent-based perceptions linked to how well children were able to take the perspective of the story characters.

Data collection is still in progress for this study. Preliminary results suggest that children who heard characters speaking in foreign accents were able to guess that the characters may be from somewhere other than Australia. Children's belief about how similar the characters were to themselves, did not appear to be linked to the ability to understand the characters thoughts, feelings and actions.



We currently have studies in progress involving children aged from newborn to 12 years. If your child/ren falls into any of these ages, we would love to have you participate in our studies again. If you have friends with children who might like to get involved, we would be delighted for them to become involved in our research. To contact us, please email [ecdc@psy.uq.edu.au](mailto:ecdc@psy.uq.edu.au) or register your interest on our website below or click [here](#)



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## *How are parents managing work and home life during the COVID-19 pandemic?*

As a working parent with school aged children it can be difficult to balance work and family life. The current global pandemic has introduced new challenges for working families, potentially blurring the boundaries between work and home.

The purpose of this study is to examine how working parents managed energy levels, recovery time, and boundaries between work and home-life in the current COVID-19 climate. An important daily activity for all working parents is recovery from their workday. This time can be used to detach from work, gain good quality sleep, or participate in an activity such as exercise. Fitting in this recovery time can be more difficult for working parents due to their family responsibilities at home.



Working parents also typically prefer to maintain firm boundaries between their work and family lives, resulting in lower work-family conflict, and a higher likelihood of recovery. However, due to current lockdowns and restrictions, an increased number of employees are working from home, which may, or may not, create a higher need for recovery time and weaken boundaries for parents. Working parents of children aged between 5 to 12-years from Australia, the US, and the UK are participating in a 3-wave, online survey. We are aiming to recruit 300 parents and hope to share the results of this research very soon.



A big thank you to those parents who have already joined us in this research. We are still collecting data for this study; if you would like to participate, please follow the link: <https://survey.app.uq.edu.au/How-are-you-managing-work-and-home-life-during-the-COVID19-pandemic>

## *Are 1 to 3-year-olds better at learning simple actions from humans or from robots?*

Recent PhD graduate Kristyn Sommer, alongside other members of the ECDC, recently published a new study on children's imitation of robots in collaboration with the University of California, San Diego.

Kristyn and the robot team introduced a fully mechanical robot into the nursery and toddler room at an early childhood centre where children from 1- to 3-years were able to play, cuddle and chat with the robot, affectionately known as RUBI. RUBI could sing, dance, play games and pass toys back and forth with the children. Children were then given the opportunity to learn a new game with RUBI. RUBI would show children how to complete two tasks: building a rattle and switching a light on in a puzzle box. Children were then asked what they could do with the same tasks.

It was found that children could copy RUBI, although they copied RUBI less well than they could copy a human. It was also found that children who engaged more with RUBI during playtime also copied RUBI with greater accuracy than children who engaged less during play time. This study highlights that although young children can learn simple actions from a robot, they learn better from humans and that engagement with the robot matters when learning new tasks.

