A Comparison of Emotion Recognition Skills Between Parents and Children

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Abstract

Emotion recognition skills encompass the ability to identify emotions in others, including interpreting tone of voice, gestures, and non-verbal cues. The first hypothesis was that there would be a significant positive relationship in emotion recognition skills between parents and children. The second hypothesis was that fear, sadness, happiness, and anger skills would be significantly heritable. As the researcher, I studied 142 children aged 7-10, using twin and parent participants to examine the heritability of child emotional recognition skills. In conducting the research, I delve into the genetic contributions and correlations by utilizing statistical techniques such as the intraclass correlation coefficient (ICC), Falconer's estimate of heritability, and Fisher's r-to-z transformation, which assessed the heritability of the four emotions mentioned previously. In addition, I also used the Pearson correlation, which explains the linear relationship between variables. The analyses showed a relationship between parents' emotion recognition errors and their children's errors. The results show that fear had the highest heritability. This research is important because it shows how emotion recognition and expression impact children.

Introduction

- Inaccurate Emotion Expression (EE) skills, where children unintentionally display angry or fearful expressions (EE biases) when they do not feel those emotions, may increase the likelihood of bullying. Conversely, children who fail to express genuine anger or fear (EE misses) may be less susceptible to victimization (DiLalla & John, 2020).
- As stated in (DiLalla & John, 2013) children's perception of impairment bias had a bigger role in explaining differential peer victimization reporting than parent emotion bias.
- A study done by (Coleman & Lester, et al 2017). did not find specific genetic variants significantly associated with emotion recognition but indicated the presence of small genetic effects, and it explored potential shared genetic links between emotion recognition and mental health disorders
- Overall, emotion recognition skills and identifying emotions are areas that require further in-depth research (Dunsmore et al., 2009).

H1: The first hypothesis was that there would be a significant positive relationship in emotion recognition skills between parents and children.

H2: Secondly, happiness, sadness, fear, and anger were hypothesized to be significantly heritable.

Methods

Participants: For this study, 61 parents were tested on emotion recognition. 71 pairs of twins 55 boys and 87 girls were given emotional recognition tasks as well. On average, the children were 8.2 years.

Procedures: During the research procedure, parents and their children were invited to the lab where they analyzed pictures depicting various emotions, such as anger, fear, sadness, and happiness.

Measures: The Diagnostic Analysis of Nonverbal Accuracy (DANVA) was used to collect the data from twins. The DANVA test is a series of questions and expressive photos shown to children. This tests the accuracy of their ability to correctly identify each emotion.

Methods Cont.

- **Emotion biases** occur when someone says that an emotion is being portrayed when it is not.

- **Emotion misses** occur when a particular emotion is not chosen, when in fact, it is the emotion being displayed.

Table 1
Correlations Between Parent and Child ER Biases

Child biases	Angry	Fearful	Sad	Happy
	Parent biases			
Angry	.65**	.55**	-.16	.08
Fearful	.29+	.23+	-.11	.10
Sad	.21	.21	.10	.14
Happy	-.22	-.19	-.21	-.00

*p< .05, **p<.001, +p<.07

Table 2
Correlations Between Parent and Child ER Misses

Child misses	Angry	Fearful	Sad	Happy
	Parent misses			
Angry	.24+	.22+	.04	.20+
Fearful	.23+	.23+	.07	.072
Sad	.21	.35**	.19	.13
Happy	-.09	.13	-.01	.05

*p< .05, **p<.001, +p<.07

Table 3
Intraclass Correlations by Zygosity: Child Emotion Biases

	rMZ	rDZ	h²
Fearful	.48**	-.08	.48*
Angry	-.14	.15	.00
Happy	.34*	-.04	.34
Sad	.47**	.20	.47

*p< .05, **p<.001, +p<.07

Table 4
Intraclass Correlations by Zygosity: Emotion Recognition Misses

	rMZ	rDZ	h²
Fearful	.21	-.02	.21
Angry	.46**	.01	.46
Happy	-.14	.39**	.00
Sad	.59**	-.21	.59*

*p< .05, **p<.001, +p<.07

Results

Correlations between parent and child ER H1: The results revealed a significant positive relationship in emotion recognition skills between parents and children, providing strong evidence in support of the hypothesis. As shown in Table 1 angry and fearful have the highest correlation. In addition, Table 2 indicates that a positive correlation between angry misses in parents and fearful misses in children suggests a weak positive relationship between these two variables.

Heritability of emotional recognition H2: The findings provided strong support for the hypothesis that fear, sadness, happiness, and anger skills are significantly heritable, confirming the hypothesis as correct. The results shown in Table 3 and 4 show that monozygotic twins tend to exhibit more similarity in fear biases and some similarity in correctly recognizing fearful emotions compared to dizygotic twins.

Discussion

- This study investigates emotion recognition skills in children aged 7 to 10 and their potential heritability, focusing on fear, sadness, happiness, and anger.
- The most significant findings reveal that parents' predominant expression of fear may lead to a bias in children's ability to recognize emotions in others.
- Understanding this bias sheds light on parent-child emotional dynamics and their impact on children's emotional perception.

Literature Cited

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