

Introduction

A strong association between prosocial behavior and greater well-being, health, and longevity exists in adult populations [1].

Empathy, the capacity to identify what another being is experiencing. Child empathy can be assessed through self-report questionnaires and behavioral observation upon exposing a child to someone feigning distress [2].

Emotion Regulation (ER), the ability to monitor and adjust the experience and expression of emotions.

ER moderates the relationship between empathy and prosocial behavior in adults [3].

Present study: extends extant empathy research to a sample of school-aged children to investigate if this moderating effect is also present in childhood.

Hypotheses:

H₁: Child age will be positively correlated with child's self-reported empathy.

H₂: Low, moderate, and high groups of empathic behavior responses will have different scores of prosocial behavior as indexed via a donation task.

H₃: Child ER will moderate the correlation between child empathy (as measured by child's self-reported empathy), and prosocial behavior (as measured by number of candies donated in the donation task).

Methods

Participants

- Community sample of 93 (52 female) school aged children 5-8 years old ($M = 7.00$, $SD = 1.14$) and one parent per child.

Materials

- Children self reported empathy through BEI (Bryant Empathy Index)
- Prosocial behavior in children was assessed based on how many pieces of candy they chose to donate to a sick child
- Emotion Regulation Checklist (ERCL), a parent report of child ER.

Donation Task: The child was given 7 Swedish Fish candies with the option of donating some of their candy to a sick child (of the same gender). The number of candies the child wished to donate were recorded.



30 seconds	- RA "hurts finger" and simulates pain
30 seconds	- RA simulates relief

Empathy Task Timeline



Empathy Task Segment

Behavioral Coding

Table 1. Behavioral Codes for Empathy Task

Low Empathy	1	Demonstrates no concern
	2	Demonstrates some attention with little evidence of concern.
	3	10 seconds of attention; mild or brief expression of facial concern; or isolated act of assistance
Moderate Empathy	4	Sustained attention with some expression of concern
	5	Expresses concern in various ways
High Empathy	6	Many expressions of strong concern
	7	Expresses strong concern and provides assistance

- We divided children's empathy scores into three groups (low $n=23$, moderate $n=28$ and high $n=16$) based on a seven-point rating scale.
- This was based on the 67 coded videos of participants ($n = 93$). The remaining videos were disregarded for the purpose of this analysis.

Results

Hypothesis 1

Pearson correlation revealed child age was significantly positively correlated with self-reported empathy (BEI), $r = .263$, $p < .05$

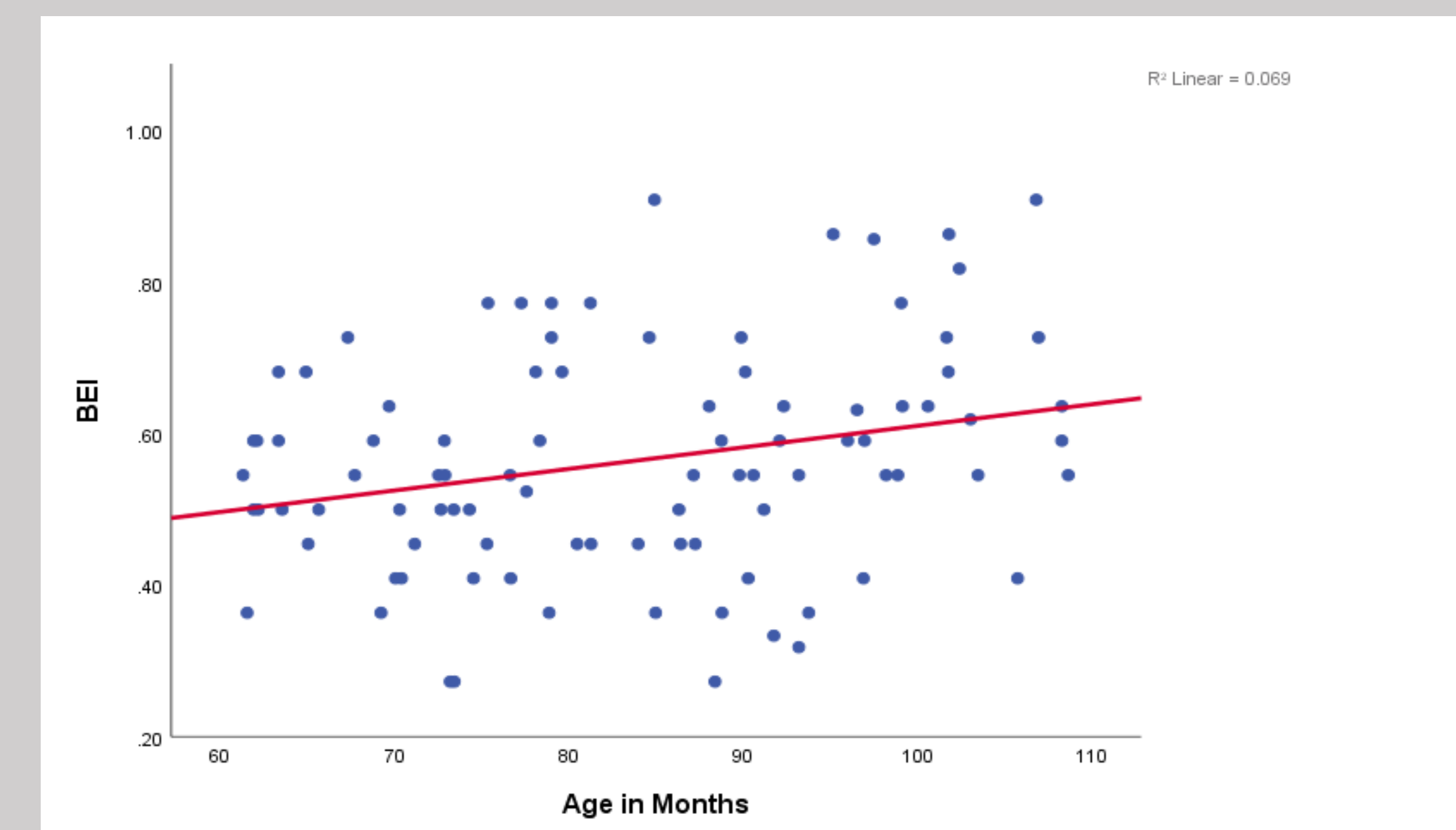


Figure 1. Child age significantly positively correlated with self-reported empathy (BEI).

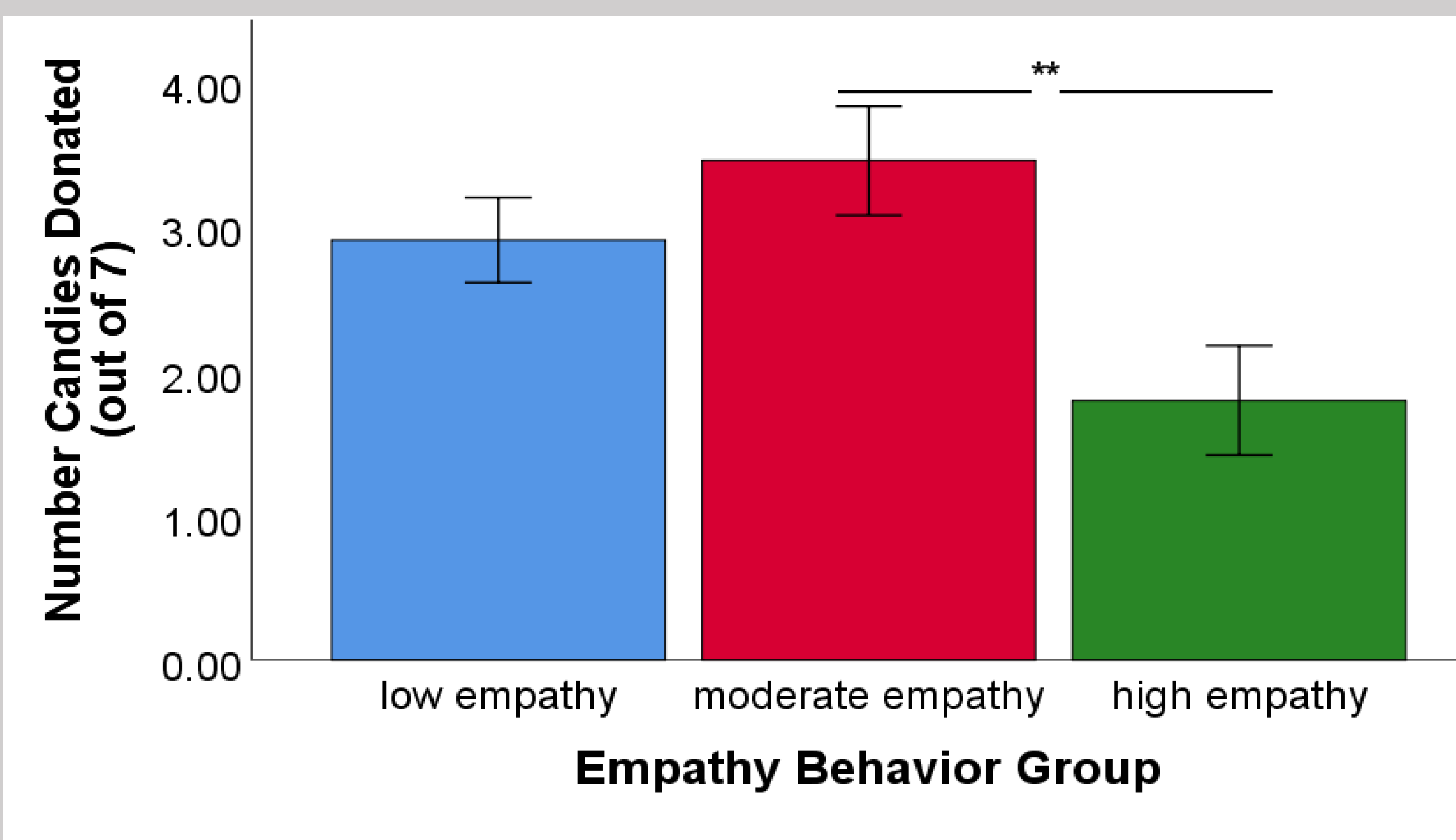


Figure 2. Prosocial behavior, indexed by number of candies donated, significantly differed among empathy behavior groups, $F(2,63) = 4.65$, $p = .013$

Hypothesis 2

Bonferroni's correction was used to control for multiple comparisons, resulting in the new critical p value of 0.016.

Prosocial behavior, indexed by number of candies donated, significantly differed among empathy behavior groups, $F(2,63) = 4.65$, $p = .013$

Children in the moderate empathy group ($M = 3.46$, $SD = 2.00$) donated significantly more candies compared to the high empathy group ($M = 1.80$, $SD = 1.47$), $t(41) = 2.82$, $p = .007$.

Children in the low empathy group ($M = 2.91$, $SD = 1.41$) did not donate a significantly different amount of candies than the moderate empathy group did, $t(49) = -1.10$, $p = .273$.

Children in the low empathy group did not donate a significantly different amount of candies than the high empathy group did, $t(36) = 22.33$, $p = .025$.

Hypothesis 3

There was no moderation effect involving our behavioral measure of empathy; we then investigated if ER played a moderating role on the relationship between the self-reported measure of empathy and prosocial behavior.

Results showed that child positive regulation moderated the effect between child empathy and prosocial behavior, Child ER X Empathy: $F(1, 87) = 2.95$, $p = .08$, $\Delta R^2 = .03$.

For children with high ER ($t = 3.01$, $p = .003$) as well as moderate ER ($t = 2.29$, $p = .024$), greater empathy predicted significantly more candies donated during the donation task.

However, this correlation was not significant for children with low ER ($t = -.27$, $p = .78$)

The dysregulation subscale of the ERCL did not significantly moderate the association between child empathy and prosocial behavior ($p > .05$).

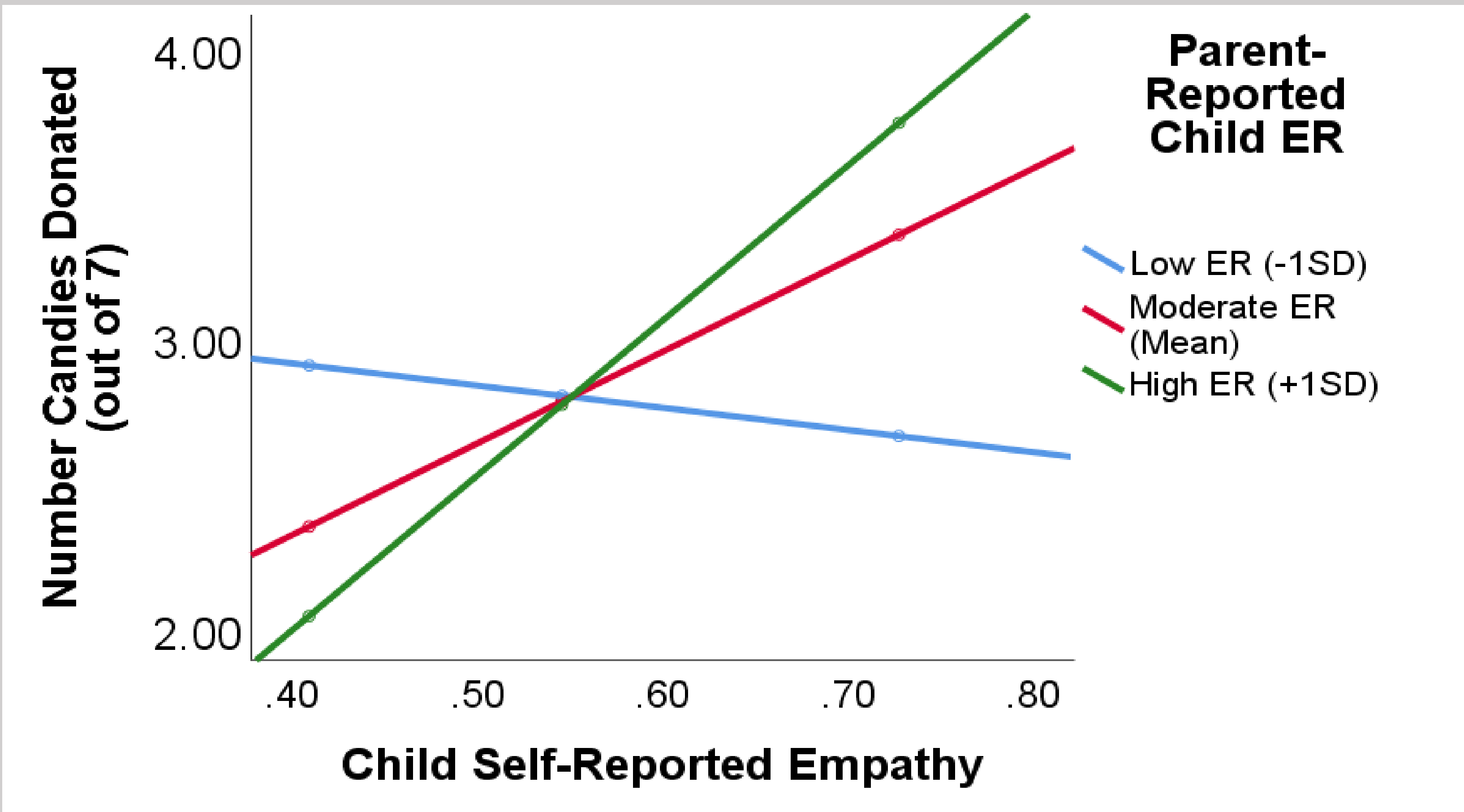


Figure 3. ER moderates the association between empathy and prosocial behavior.

Discussion

H₁: The finding that older children had higher levels of empathy aligns with previous studies demonstrating that empathy develops with age [4,5,6].

H₂: When divided into groups of low, moderate, and high empathic behavior response, the moderate group had significantly higher scores on the donation task than the high empathy group did.

ER did not have a moderating effect on the relationship between empathic behavior response and prosocial behavior. This may be because only a subsample of the empathy task was used (coded 67 videos out of 93).

H₃: The correlation between self-reported empathy and prosocial behavior was strongest for children with high and moderate ER, and not significant for children with low ER.

ER moderated the relationship between self-reported empathy and prosocial behavior [3]. This moderation effect appears to be unique in children as opposed to adults.

In this sample, it is possible that those children with low ER do not engage in more prosocial behavior even when they have a high degree of empathy because they have difficulty regulating their emotions, and thus need to focus on themselves in distressing situations rather than helping the one in need. It is also possible that because prosocial behavior was measured with a donation task involving candy, those children with low ER could not regulate their positive emotions about receiving candy, and therefore donate the same amount of candy whether they have high or low empathy.

Further exploration of the mechanisms underlying ER may explain why children with moderate levels of ER demonstrated a more similar moderation effect to those high in ER than to those low in ER.

Such investigation may also help clarify why the moderation effect was only apparent for the positive regulation subscale and not the dysregulation subscale.

References

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