

## EMPATHIC RESPONDING IN TODDLERS: THE ROLE OF EXPERIENCE AND OBSERVATION OF COMFORTING BEHAVIOR

T.O. YUDINA<sup>a</sup>, T.N. KOTOVA<sup>a</sup>

<sup>a</sup> *Russian Academy of National Economy and Public Administration, 82/1 Prospect Vernadskogo Str., Moscow, 119571, Russian Federation*

---

### Abstract

Although human empathy has genetic background, numerous studies revealed the great power of social contributors in empathy development. Researchers found a positive correlation between number of factors in mother-child relationship, between level of socialization and the level of empathic development in toddlerhood. This study is designed to enrich the understanding of the social factors, which assist in acquisition of complex behavioral repertoire for empathic responding. We examined whether the similarity of negative experience and familiar behavioral model of comforting facilitate empathic acts (e.g. comforting or sharing) of toddlers. We measured empathic responses to other's frustration in children who have previously experienced a similar frustrating event (did not find a toy) vs. those who have not such experience, and in those subjects who have been exposed to an adult's model of comforting behavior vs. have been not. We also recorded participants' emotional reactions to experimental events. Results showed that the similarity of the negative emotional experience did not significantly influence on the empathic behavior of toddlers, while the familiar model of comforting act promoted more frequent empathic acts. The results were discussed in relation to the existing data on the role of similar experience in empathic behavior and on the association between parental style, social competence and prosocial development.

**Keywords:** empathy development, empathic behavior, similar experience, model of prosocial act.

---

Empathy is an important psychological construct that received much attention in literature from the developmental, neurosocial and cognitive perspectives. As a result, we can find a number of different definitions of empathy (Batson, 2009). In the current paper, we consider empathy in its broadest sense as the ability to feel as another person feels, to understand and to share others' states and emotions, as

well to respond to them in a prosocial way (Eisenberg, Spinrad, & Sadovsky, 2006).

Primitive forms of empathy are found in newborn reflective cry that is in its essence a subconscious motor or emotional resonance (Hoffman, 2008). Later on, empathic responding depends more on a higher order cognitive function and social understanding. Empathic response can be expressed as a

verbal or a non-verbal concern or as a prosocial act (comforting, sharing). In early childhood it develops in line with the development of self-other differentiation, perspective taking, and emotion regulation (Ibid.). Research shows that very early in life toddlers possess a diverse behavioral repertoire for manifesting empathy. For example, an extensive longitudinal study by Zahn-Waxler and her colleagues demonstrate that by the third year of life children display complex empathy related behaviors including expressing verbal and facial concern about another's distress, and engage in different helping behaviors (comforting, sharing, and even distracting a person in distress) (Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). These findings suggest that in early empathy development children have already learned a number of behavioral scripts for empathic responding and appropriately reacting to another person's distress. One question is what factors contribute to the acquisition of complex behavioral repertoire for expressing empathy.

Previous research suggests that although our ability to empathize has biological roots (Hoffman, 2008; Preston & de Waal, 2002; Ruby & Decety, 2004; Oberman, Winkielman, & Ramachandran, 2007), its development strongly depends on social experiences during childhood. A number of studies revealed a positive correlation between parental warmth and responsiveness, between secure attachment and the level of empathic development (Mikulincer et al., 2001; Kochanska, Forman, & Coy, 1999; Laible & Carlo, 2004; Strayer & Roberts, 2004; Van der Mark, van Izendoorn, & Bakermans-Kranenburg, 2002). Thus, children

with secure attachment and those whose parents display high levels of warmth have a strong advantage in developing appropriate empathic behavior. On the opposite, children who experience an aggressive or punitive parental style show low levels of prosocial development (Strayer & Roberts, 2004; Asbury, Dunn, Pike, & Plomin, 2003). One possible explanation for this relationship is that parents with high levels of warmth display high levels of empathy to the child thus demonstrating a behavioral model of comforting and providing the child with a sensation of relief.

Previous research points toward the importance of both the availability of an adult model of comforting behavior and of the child's experience with distress themselves and in others. It appears that both factors are contributing to the process of acquiring the right level of social understanding and appropriate behavioral script necessary for displaying empathy. On one hand, experiencing distress themselves may enhance the child's ability to understand emotions in others. On the other hand, watching an adult model of comforting either directed at the child or at someone else may provide crucial information to the child for developing schemas for appropriate empathic responding.

Several studies have found associations between empathic concern and social understanding in young children which was measured by parent ratings of socially appropriate behaviors and popularity (Bischof-Köhler, 1991; Zahn-Waxler et al., 1992; Ensor & Hughes, 2005; Garner, Dunsmore, & Southam-Gerrow, 2008; Brownell, Svetlova, Anderson, Nichols, &

Drummond, 2013; Nichols, Svetlova, & Brownell, 2009; Sommerville, Schmidt, Yun, & Burns, 2013; Gross et al., 2015). For example, Gross et al. (2015) looked at how individual differences in the ability to understand mental and emotional states, intentions and wishes of another person relate to the frequency and variability of prosocial acts in 18-30-month-old infants. Among a number of important predictors of prosocial behavior this study demonstrated a positive correlation between individual levels of social understanding and empathic helping (for example, an adult is cold and sad and the child bring them a blanket). Surprisingly, this correlation did not hold for sharing and instrumental helping (e.g., helping an adult get a dropped or a misplaced object).

As shown above, the ability to infer others' internal states such as goals, feelings, and desires is quite necessary for prosocial intervention acts (see also Gross et al., 2015). One way children learn to understand others is through experiencing similar states themselves. Indeed, several studies reveal an association between the similarity of experience and empathic responding in older ages (Davis, 1994; Barnett, 1984; Barnett, Tetreault, Esper, & Bristow, 1986; Barnett, Tetreault, & Masbad, 1987; Hodges, Kiel, Kramer, Veach, & Villanueva, 2010; Stotland & Dunn, 1963). For example, in Barnett (1984) a group of preschoolers (39-62 months) played one of two games (Puzzle Board or Buckets) where they either failed or succeeded. Subsequently, each child watched a videotape of another child with a similar or dissimilar experience with a familiar or an unfamiliar game. Measures of childrens' facial reactions

as well as of their assessment of another child's feelings revealed that the similarity of unpleasant experience enhanced empathy (Ibid.). In the current research, we experimentally manipulate experiencing or observing a frustrating event in younger children (2-3 years old) to investigate the contributions of this factor to empathic responding.

Some authors suppose that social understanding includes the appropriate type of assistance or particular behavioral script in situations when another person is in distress (e.g., Gross et al., 2015). Therefore, we hypothesize that along with the cognitive abilities to take another person's perspective (Decety & Jackson, 2004, 2006) and abilities to understand and share the other's emotions (Eisenberg & Eggum, 2009; Zahn-Waxler & Radke-Yarrow, 1990; Taylor, Eisenberg, Spinrad, Eggum, & Sulik, 2013), children should possess appropriate social skills such as a repertoire of appropriate behavioral responses consistent with the prosocial context of the situation (for example, comforting in response to the other's frustration). Evidently, such skills could be acquired by watching the appropriate behavioral model in corresponding conditions in the child's everyday life. In the current research we test this hypothesis by manipulating the presence or absence of an adult's behavioral demonstration of empathic responding.

Specifically, we measure empathic responses to other's frustration in children who experienced a similar frustrating event (did not find a promised toy) and did not, as well as who were exposed to an adult's model of empathic response vs. were not. We predicted

that children who experienced a frustrating event themselves and who were exposed to the model of comforting would show the highest frequency of empathic acts in the situation of other's frustration. We also evaluate children's emotional reactions to all events in all conditions to ensure that these events provoke the expected emotions and to link emotional understanding to empathic acts.

## Method

### *Participants*

Participants were seventy two 34-month-old children (34 boys,  $M = 34$  months, range 33–37 months). Two children were omitted because of distraction. All subjects were recruited from Moscow child care centers. Participants for this study were from middle class families and were full-term at birth, normally developing and hearing, with Russian as their primary language. Parents provided written consent for their children's participation.

### *Materials*

We used two sets of boxes with two boxes in each set. The boxes were ready-made, plastic, each of its own color.

Presents from the fairy were age-appropriate toys purchased at a store. We picked gender specific toys to make

them more appealing to children. A pearl necklace and a self-made elastic bangle were used with girls, while for boys we used a real steel medal on a ribbon and a flash card with a music player function.

During the warm-up, we played with a small ball and toy animals familiar to children. They were a black stuffed dog named Grisha, a green-and-yellow stuffed cow and a black-and-yellow rubber frog named Motya. The toy dog Grisha was also used as the comforter in the Interaction phase. During the break between the phases of the experiment we used an illustrated fairy-tale book, a set of color pencils, and paper.

### *Design*

The purpose of this research was to investigate the role of two factors in empathy development in toddlerhood – the availability of a similar emotional experience and the demonstration of empathic behavior. We used a 2×2 between-participants factorial design to investigate the effects of these two factors and their interaction. Some children experienced a frustrating event and some observed another person experience it. Some also observed a demonstration of an empathic response, while others did not. Crossing these two factors resulted in four experimental conditions (see Table 1 for summary).

Table 1

Summary of experimental conditions

	Experienced a negative event (E)	Observed a negative event experienced by other (O)
Demonstration of a comforting (D)	D/E	D/O
No demonstration of a comforting (N)	N/E	N/O

Children were randomly assigned to these four conditions resulting in 18 participants in each.

### *Procedure*

The Experiment consisted of the following two phases: 1) the Interaction phase and 2) the Test phase. The purpose of the Interaction phase was to deliver our main manipulation (experiencing or observing a negative event and watching vs. not an adult demonstration of comforting). The purpose of the Test phase was to assess the effect of conditions on children's levels of empathy. There was also a break between these two phases during which children were offered to draw, to play or a to read a book of their choice.

### **The Interaction phase**

After 4–5 minutes of warm-up play children were told a story. According to the story, on the way to the child's day care the experimenter met a fairy. The fairy gave the experimenter 2 boxes, one containing a present for the experimenter and one with a present for the child. She asked the experimenter to make sure she does not swap the boxes and does not look inside before meeting the child. After the story, the experimenter and the child each opened their box to look at the fairy's present. Events that followed varied across conditions.

1) D/E (*demonstration of comforting / experienced a negative event*) – Participants in this group found their box empty, but the experimenter found a present inside the box. Children got comforting from Grisha the dog (operated by the experimenter, like in pretend

play) after approximately 0.5–1 minutes of discovering no present in the box (demonstration of a comforting act is described below). Then, the experimenter offered to have some fun (to fill the break before the test phase).

2) D/O (*demonstration of comforting / observed a negative event experienced by other*) – Children in this group found their present in the box, but the experimenter found her box empty. Children watched the experimenter's frustration for approximately 0.5–1 minutes. Then the frustrated experimenter got comforting from Grisha. During the experimenter's frustration (0.5–1 minutes before Grisha's comforting) children had a chance to engage in empathic behavior naturally (e.g. display concern, engage in comforting or share their present). In case a child manifested any kind of empathy during this period the experimenter thanked him/her. After that she still said "Look! Grisha also wants to comfort me" and demonstrated her model of comforting behavior. In this condition Grisha comforted the experimenter who was operating him. Then, the experimenter offered to have some fun (to fill the break before the test phase).

3) N/E (*no demonstration of comforting / experienced a negative event*) – Participants in this group found their box empty, but the experimenter found a present inside her box. Children got no comforting from Grisha. The experimenter expressed joy at discovering her present, and then silently engaged with the toy for 0.5–1 minute not attending to the child in order to give the child time for their feelings. Then, the experimenter offered to have some fun.

4) N/O (*no demonstration of comforting / observed a negative event experienced by other*) – Children in this group found their present in the box, but the experimenter found her box empty. Subject watched the experimenter's frustration and no comforting by Grisha followed. The experimenter expressed frustration until a child performed some kind of empathic act (e.g. a concern, comforting, sharing), but not more than for 1 minute. Then, the experimenter offered to have some fun.

*Demonstration of the comforting act and emotional expressions of joy and frustration.*

Demonstration of the comforting act was performed in each relevant condition in the same manner. The toy dog Grisha patted the frustrated person on their hands, head and cheeks, and emotionally provided an empathic verbal support. For example, Grisha said "You have no present from the fairy! What a pity! You are upset. Look, I am comforting you to make you feel better."

The Experimenter expressed frustration in the same emotional manner in each relevant condition through mimics (furrowed brows, depressed lip corners, a look of concern etc.), paralinguistic elements (sigh, humming etc.), and verbally ("I've got nothing from the fairy! What a pity! I am so sad about this!").

In N/E and D/E conditions the experimenter expressed positive feelings through mimics (e.g. a smile) and words (e.g. "Wow! I've got a present from fairy! What a lovely thing!").

Overall, the Interaction phase lasted for about 5–7 minutes. During this period, we recorded children's emotional responses to the events and their

spontaneous empathic behavior. After the Interaction phase all children had 3–5 min of break during which they were offered to play, to draw or to read a book. Next, the Test phase followed.

### The Test phase

This phase was identical for all experimental conditions. The Test phase started with the experimenter's words «Wow! How could I forget! The fairy gave me two more boxes! Let's look inside them!» Having said that, the experimenter brought out the other set of boxes.

All children in the Test phase discovered a present in his/her box, but the experimenter never found a present in her box and expressed negative feelings (frustration) in the same manner as in the Interaction phase. The Experimenter demonstrated frustration until a child performed an empathic act (e.g. comforting, sharing), but not more than for 2 minutes. During this period we recorded all forms of empathic behavior children engaged in – motor, verbal and sharing, and emotional responses to the events.

### Coding

We recorded children's empathic responses and emotional responses in the Interaction and in the Test phase.

The following behaviors were coded as **empathic responses**:

- Sharing (the child gives his/her present to experimenter);
- Verbal comforting (the child says co-feeling words, e.g. "Don't cry, next time the fairy will give you a present..." or offers some decision, e.g. "I will buy you a toy...").

- Motor comforting (patting, stroking, caress or other comforting motor acts. In the Test phase children could also use Grisha for comforting.

The final coding was binary: engaging in any kind of empathic behavior yielded a score of «1», otherwise children were given a score of «0».

**Emotional responses.** In addition to our main measure of empathic behavior we also coded children's emotional responses to the experimental events and whether they were congruent or incongruent with the valence of the event. We divided the events which these emotional responses were addressed into two types as "own event" (it began when child found/not found the present in the box and finished when the experimenter began to open her box) and "other's event" (it began when the experimenter found/not found a present in her box and finished when the experimenter offered to have some fun).

- Expression of emotion (in "own event" and in "other's event"). Any emotional mimical movements were counted: a smile or dropping corners of the lips, eyebrow movements. Coding: "0" – the absence of an emotional expression; "1" – the presence of an emotional expression.

- Congruency (in the "own event" and in the "other's event"). The consistency of child's emotional expression with the valence of the event (positive or negative): child expresses gladness at finding the present in his/her box (i.e., in "own event"); child expresses gladness when the experimenter finds the present in her box (i.e., in "other's event"), or child expresses upset at not finding the present in his/her box (i.e.,

in "own event"); child express upset when experimenter does not find present in her box (i.e., in "other's event"). We coded child's congruency as follows: 0 – the presence of at least one non-congruent expression during the event, 1 – all child's expressions during this event were congruent.

- Sharing of emotions. In the "own event" – actively engaging the experimenter in the child's own event verbally (e.g., "Look what I've got!"), with mimics (e.g., eye gaze) or with gestures (e.g., manipulations with the present, making it more visible to the experimenter). In "other's event" – emotional reflection, verbal or facial response to the experimenter's reaction to the event (e.g. eye contact, reflective mimics, comment or question). Coding: "0" – the absence of any sign of emotional sharing; "1" – the presence of some signs of emotional sharing.

In the D/E (demonstration of comforting / experience with frustration) group in the Interaction phase we also recorded subjects' reaction to comforting. Cases when the child rejected comforting (e.g., turned its back, looked away etc.) were coded as "0". Cases when the child showed passive, indifferent attitude (e.g., did not change pose and mimics, etc.) were coded as "1". Cases when the child accepted comforting (e.g., relaxed his/her pose, smiled etc.) were coded as "2".

The two primary coders were not blind to conditions. Reliability was assessed on a randomly selected 22% of children (4 in each group) by two secondary coders who were blind to conditions. There was 98% inter-rater agreement.

## Results and discussion

The purpose of the current study was to experimentally manipulate toddlers' own experience with frustrating events and their exposure to an adult model of empathic behavior to investigate their effect on facilitation of the empathic behavior in toddlerhood.

Main effects of similar experience (Experienced/Observed) and of demonstration of comforting (Demonstration / No demonstration) on toddlers' empathic responding were analyzed using Exact test on two independent proportions. Thirty-six percent of participants who experienced a frustrating event themselves engaged in empathic behavior at test, while 30.5% of children who observed other's frustrating experience did so. This difference was not statistically significant ( $p = .62$ ). However, children who watched an adult demonstration of comforting behavior were more likely to display empathic response at test (47.2%) than children who did not watch such demonstration (19.4%),  $p < .01$ . Such findings partially support our hypothesis. As we expected the demonstration of a behavioral model of comforting facilitated the empathic behavior, but in contrast to our expectation, experiencing a similar negative event did not have this effect.

Next, to compare toddlers' empathic response in different subgroups we ran a probit regression model predicting instances of empathic behavior at test from Experienced/Observed and from Demonstration/No Demonstration conditions. Independent variables were dummy coded. First, children in the No Demonstration condition who observed other's negative event showed empa-

thic responses less than half the time: only 11% of them displayed empathic behavior at test ( $B_o = -1.2206$ ,  $SE = 0.3911$ ,  $Z = -3.121$ ,  $p < .01$ ). Children in the No Demonstration who experienced a frustrating event themselves showed empathic response marginally less than half the time - 27% ( $B_o = -0.5895$ ,  $SE = 0.3148$ ,  $Z = -1.872$ ,  $p = .0612$ ). This difference between empathic behavior rates in children who experienced and observed a negative event in the No Demonstration condition was not significant ( $B_i = 0.6312$ ,  $SE = 0.5021$ ,  $Z = 1.257$ ,  $p = .209$ ).

Children who watched a demonstration of comforting showed empathic responses about half the time: 50% in the group who observed a frustrating event ( $B_o = 0$ ,  $SE = 0.3$ ,  $Z = 0$ ,  $p = 1$ ) and 44.4% in the group who experienced such event ( $B_o = -0.1397$ ,  $SE = 0.2965$ ,  $Z = -0.471$ ,  $p = .637$ ). These two groups were not different from each other ( $B_i = 0.1397$ ,  $SE = 0.42$ ,  $Z = 0.334$ ,  $p = .739$ ).

To summarize, these pairwise comparisons are consistent with the absence of main effect of experiencing vs. observing a negative event on levels of empathic behavior. As for the main effect of the demonstration of comforting, pairwise comparisons revealed that this was mostly driven by children who observed another person's frustration. Thus, the difference between Demonstration and No Demonstration for children who experienced a negative event (44.4% and 27.8% respectively) was not significant ( $B_i = -0.4497$ ,  $SE = 0.4324$ ,  $Z = -1.04$ ,  $p = .298$ ). However, the difference between Demonstration and No Demonstration for children who observed the other's frustration was significant (11% and 50% respectively:  $B_2 = 1.2206$ ,  $SE = 0.4901$ ,  $Z = 2.490$ ,  $p < .05$ ).

Therefore, watching a demonstration of comforting had a smaller impact on the empathic behavior of children who experienced their own frustration than of children who observed the other person's frustration (see Figure 1).

Let us remind that in the no demonstration of comforting/observed the other's negative experience group subjects could demonstrate prosocial behavior (sharing, comforting) already in the Interaction phase. We found a relatively low "baseline" rate of prosocial behavior: only 3 out of 18 children in this condition showed empathic response.

Next, we coded children's emotional reactions to the experimental events, the compliance of these reactions to the events' values, and instances of emotional sharing (see Table 2). First, note that the Emotional expression in "own event" did not differ between groups being high in each condition and phase in both positive and negative events ( $p > .1$  for paired comparison). The Congruency in "own event" in the Interaction phase was also high in each

condition ( $p > .1$  for paired comparison) and did not significantly differ between phases ( $p > .1$  for paired comparison). Hence, we suppose that the materials used in this study as well as the experimental events were meaningful to the participants and provoked the expected emotions in them.

Second, the Emotional expression in the Test phase in the "own event" showed no significant difference between all the conditions ( $p > .1$  for paired comparison). Besides, we can see that participants in the Test phase clearly expressed emotions in the "other's event" regardless of whether the situation was positive or negative ( $p > .5$  for paired comparison). This is particularly important because this emotional reaction might be an indicator of empathic feelings to the other person. Since the Emotional expression in "other's event" has not significantly differed between phases in each of condition, we believe that the intensity of such empathic feelings had not been affected by the factors.

Figure 1

Percent of children showed empathic response in the Test phase

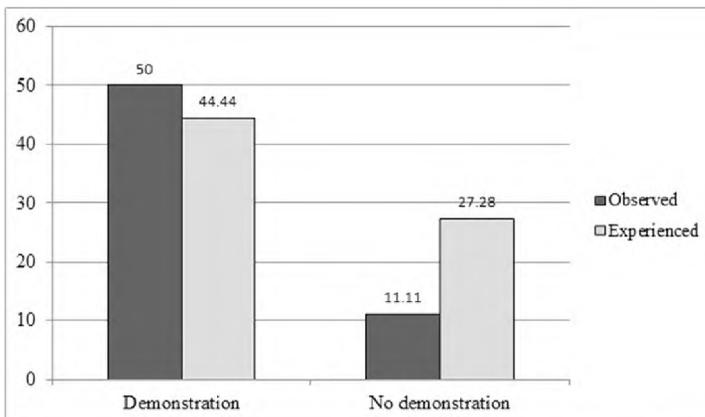


Table 2

Means and standard deviations of participants' emotional responses

Emotional responses in the Interaction phase							
	Expression of emotion (own event)	Congruency (own event)	Sharing of emotions (own event)	Reaction to comforting (own event)	Expression of emotion (other's event)	Congruency (other's event)	Sharing of emotions (other's event)
Group D/E							
M	0.89	0.47	0.61	1.67	0.89	0.53	0.50
SD	0.31	0.50	0.48	0.81	0.31	0.50	0.49
Group D/O							
M	0.83	0.53	0.83		0.94	0.35	0.83
SD	0.36	0.50	0.36		0.22	0.47	0.36
Group N/E							
M	1.00	0.41	0.78		0.83	0.53	0.67
SD	0.00	0.49	0.41		0.36	0.50	0.46
Group N/O							
M	0.94	0.71	0.72		0.83	0.41	0.28
SD	0.22	0.45	0.44		0.36	0.49	0.44

Emotional responses in the Test phase						
	Expression of emotion (own event)	Expression of emotion (other's event)	Congruency (own event)	Congruency (other's event)	Sharing of emotions (own event)	Sharing of emotions (other's event)
Group D/E						
M	0.89	0.78	0.89	0.17	0.61	0.39
SD	0.32	0.43	0.32	0.38	0.50	0.50
Group D/O						
M	0.94	0.83	0.94	0.28	0.89	0.61
SD	0.24	0.38	0.24	0.46	0.32	0.50
Group N/E						
M	0.94	0.78	0.94	0.33	0.83	0.72
SD	0.24	0.43	0.24	0.49	0.37	0.45
Group N/O						
M	0.83	0.78	0.83	0.50	0.56	0.50
SD	0.38	0.43	0.38	0.51	0.51	0.50

The Congruency in “other’s event” continued to remain high in the Test phase in conditions where subjects have observed the other’s frustration within the Interaction phase (D/O and N/O,  $p > .5$  for paired comparison) and in condition with experienced frustration without demonstration of comforting model (N/E,  $p > .1$ ). However, Congruency in the “other’s event” declined in Test phase ( $\chi^2(2) = 7.54, p < .05$ ) in condition D/E where children found themselves in a similar situation of frustration and got the model of comforting act in the Interaction phase.

We assume that such decline and difference could be explained by the effect of the child’s own previous negative experience, which got a response from the adult. Thus, participants who experienced similar frustrating feelings did respond emotionally to the other’s frustration in the Test phase, but such emotion has been expressed with, so called “unsteady” character of Congruency. That is, children initially responded to the experimenter’s frustration with a sad or shy expression, but then their mimics moved to a smiley face and vice versa while one event lasted.

We suppose that the child’s previous similar experience together with the other’s prosocial responding allegedly makes the nature of empathic feelings in toddlerhood more complex. Thus, the hybrid composition of emotions (sadness over the experimenter’s frustration, the satisfaction of the “restoration of justice”, the expectation of positive, comforting communication from the experimenter) might interfere in the emotional component of empathy at this age. Presumably, such a compound emotional picture might have

prevented us from finding the effect of similar experience in facilitating the empathic behavior of toddlers.

## Conclusion

In general, our investigation focuses on better understanding of the social factors in toddlers’ sensitivity and care for other people’s emotions. Previous studies show that by 3 years of age children had learned a number of behavioral scripts for displaying empathy and appropriately reacting to another person’s distress. With the present study, we addressed the question about the contributors to the acquisition of this repertoire for expressing empathy in toddlers. The experimental design contained manipulation both similar experience and the demonstration of comforting, and measurement of the empathic response in these four conditions.

We found that watching a demonstration of comforting facilitates the empathic behavior of toddlers. We assume that such finding partly explains the data on empathy development in toddlerhood. However, the similarity of negative experience did not show a significant impact on the empathic behavior of the participants. We suppose that this result could be explained by the complex nature of empathic mechanisms and by the young age of our participants. Worth noting that in M. Barnett’s study (1984), which we referred to in our hypothesis about the facilitating effect of the similar experience, has been found the relation between similar experiencing and self-reported empathic feelings. Obviously, the focus of such relation lays in the emotional component of empathy. Nevertheless, such

relation might have a mediated effect in behavior. However, comparing to toddlers, we suppose that the empathic behavior in preschool age could be displayed under such a condition due to a wider repertoire of social competence, particularly by developed prosocial skills.

Our finding that the availability of a demonstration of comforting facilitates empathic responding in toddlers may shed light on the nature of correlation between parental style, social competence and prosocial behavior (Mikulincer et al., 2001; Kochanska et al., 1999; Laible & Carlo, 2004; Strayer & Roberts, 2004; Van der Mark et al., 2002; Asbury et al., 2003; Gross et al.,

2015). It is possible that warmth and emotional responsiveness in parental behavior is accompanied by prosocial models demonstrated by the parents both to the child and other people. By watching such models children could improve their social competence, particularly prosocial and empathic behavioral skills.

The question about the role of similar experience as a factor in empathy development during toddlerhood remains important and requires the further investigations. Along with this, it remains unclear what conditions modulate the acquirement of behavioral scripts in the presence of comforting model.

## References

- Asbury, K., Dunn, J. F., Pike, A., & Plomin, R. (2003). Nonshared environmental influences on individual differences in early behavioral development: A monozygotic twin differences study. *Child Development, 74*(3), 933–943.
- Barnett, M. A. (1984). Similarity of experience and empathy in preschoolers. *The Journal of Genetic Psychology, 115*(2), 241–250.
- Barnett, M. A., Tetreault, P. A., Esper, J. A., & Bristow, A. R. (1986). Similarity and empathy: The experience of rape. *The Journal of Social Psychology, 126*(1), 47–49.
- Barnett, M. A., Tetreault, P. A., & Masbad, I. (1987). Empathy with a rape victim: The role of similarity of experience. *Violence and Victims, 2*(4), 255–262.
- Batson, C. D. (2009). *These things called empathy: eight related but distinct phenomena*. Cambridge, MA: MIT Press.
- Bischof-Köhler, D. (1991). The development of empathy in infants. In M. E. Lamb & H. Keller (Eds.), *Infant development. Perspectives from German speaking countries* (pp. 245–273). Hillsdale, MI: Lawrence Erlbaum Associates.
- Brownell, C. A., Svetlova, M., Anderson, R., Nichols, S. R., & Drummond, J. (2013). Socialization of early prosocial behavior: Parents' talk about emotions is associated with sharing and helping in toddlers. *Infancy, 18*(1), 91–119.
- Davis, M. H. (1994). *Empathy: A social psychological approach*. Boulder, CO: Westview Press.
- Decety, J., & Jackson, P. L. (2004). The functional architecture of human empathy. *Behavioral and Cognitive Neuroscience Reviews, 3*(2), 71–100.
- Decety, J., & Jackson, P. L. (2006). A social-neuroscience perspective on empathy. *Current Directions in Psychological Science, 15*(2), 54–58.

- Eisenberg, N., & Eggum, N. D. (2009). Empathic responding: Sympathy and personal distress. *The Social Neuroscience of Empathy*, 6, 71–83.
- Eisenberg, N., Spinrad, T. L., & Sadovsky, A. (2006). Empathy-related responding in children. In M. Killen & J. G. Smetana (Eds.), *Handbook of moral development* (pp. 517–549). Mahwah, NJ: Lawrence Erlbaum Associates Publ.
- Ensor, R., & Hughes, C. (2005). More than talk: Relations between emotion understanding and positive behaviour in toddlers. *British Journal of Developmental Psychology*, 23(3), 343–363.
- Garner, P. W., Dunsmore, J. C., & Southam-Gerrow, M. (2008). Mother–child conversations about emotions: Linkages to child aggression and prosocial behavior. *Social Development*, 17(2), 259–277.
- Gross, R. L., Drummond, J., Satlof-Bedrick, E., Waugh, W. E., Svetlova, M., & Brownell, C. A. (2015). Individual differences in toddlers' social understanding and prosocial behavior: disposition or socialization? *Frontiers in Psychology*, 6, 600. doi:10.3389/fpsyg.2015.00600
- Hodges, S. D., Kiel, K. J., Kramer, A. D., Veach, D., & Villanueva, B. R. (2010). Giving birth to empathy: The effects of similar experience on empathic accuracy, empathic concern, and perceived empathy. *Personality and Social Psychology Bulletin*, 36(3), 398–409.
- Hoffman, M. L. (2008). Empathy and prosocial behavior. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *Handbook of emotions* (3rd ed., pp. 440–455). New York/London: Guilford Publ.
- Kochanska, G., Forman, D. R., & Coy, K. C. (1999). Implications of the mother-child relationship in infancy for socialization in the second year of life. *Infant Behavior and Development*, 22(2), 249–265.
- Laible, D. J., & Carlo, G. (2004). The differential relations of maternal and paternal support and control to adolescent social competence, self-worth, and sympathy. *Journal of Adolescent Research*, 19(6), 759–782.
- Mikulincer, M., Gillath, O., Halevy, V., Avihou, N., Avidan, S., & Eshkoli, N. (2001). Attachment theory and reactions to others' needs: Evidence that activation of the sense of attachment security promotes empathic responses. *Journal of Personality and Social Psychology*, 6, 1205–1224.
- Nichols, S. R., Svetlova, M., & Brownell, C. A. (2009). The role of social understanding and empathic disposition in young children's responsiveness to distress in parents and peers. *Cognition, Brain, Behavior: An Interdisciplinary Journal*, 13(4), 449–478.
- Oberman, L. M., Winkelman, P., & Ramachandran, V. S. (2007). Face to face: Blocking facial mimicry can selectively impair recognition of emotional expressions. *Social Neuroscience*, 2(3–4), 167–178.
- Preston, S. D., & De Waal, F. B. (2002). Empathy: Its ultimate and proximate bases. *Behavioral and Brain Sciences*, 25(01), 1–20.
- Ruby, P., & Decety, J. (2004). How would you feel versus how do you think she would feel? A neuroimaging study of perspective-taking with social emotions. *Journal of Cognitive Neuroscience*, 16(6), 988–999.
- Sommerville, J. A., Schmidt, M. F., Yun, J. E., & Burns, M. (2013). The development of fairness expectations and prosocial behavior in the second year of life. *Infancy*, 18(1), 40–66.
- Stotland, E., & Dunn, R. E. (1963). Empathy, self-esteem, and birth order. *The Journal of Abnormal and Social Psychology*, 66(6), 532–540.
- Strayer, J., & Roberts, W. (2004). Children's anger, emotional expressiveness, and empathy: Relations with parents' empathy, emotional expressiveness, and parenting practices. *Social Development*, 13(2), 229–254.
- Taylor, Z. E., Eisenberg, N., Spinrad, T. L., Eggum, N. D., & Sulik, M. J. (2013). The relations of ego-resiliency and emotion socialization to the development of empathy and prosocial behavior across early childhood. *Emotion*, 13(5), 822–831.

- Van der Mark, I., van IZendoorn, M., & Bakermans-Kranenburg, M. (2002). Development of empathy in girls during the second year of life: Associations with parenting, attachment, and temperament. *Social Development, 6*, 451–468.
- Zahn-Waxler, C., & Radke-Yarrow, M. (1990). The origins of empathic concern. *Motivation and Emotion, 4*, 107–130.
- Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., & Chapman, M. (1992). Development of concern for others. *Developmental Psychology, 2*, 126–136.



Tatiana O. Yudina — lecturer, General Psychology Department, Russian Academy for National Economy and Public Administration.  
Research area: social learning, prosocial development, empathy developments, linkage between empathy and prosocial behavior.  
E-mail: judinatatyana@gmail.com



Tatyana N. Kotova — senior research fellow, laboratory for cognitive research, Russian Academy of National Economy and Public Administration, Ph.D.  
Research area: cognitive development, category learning, language development.  
E-mail: tkotova@gmail.com

## Эмпатический отклик у детей раннего возраста: роль собственного негативного опыта и наблюдения утешающего поведения

Т.О. Юдина<sup>а</sup>, Т.Н. Котова<sup>а</sup>

<sup>а</sup> *Российская академия народного хозяйства и государственной службы при Президенте РФ, 119571, Россия, Москва, проспект Вернадского, д. 82, стр. 1*

### Резюме

Многочисленные данные обнаруживают роль вклада различных социальных факторов в развитие эмпатии в раннем возрасте. Данное исследование призвано расширить понимание роли ряда социальных факторов, участвующих в усвоении комплексного поведенческого репертуара, необходимого для осуществления эмпатического поведения. В частности, мы пытались понять, способствуют ли проявлению эмпатического поведения (например, актам альтруизма или утешения) такие факторы, как схожий негативный опыт и демонстрация модели утешающего поведения у детей раннего возраста. Мы измеряли частоту эмпатических актов в ответ на фрустрацию другого в четырех экспериментальных группах, а именно: в группе, где дети испытывали ранее схожий опыт фрустрации (не обнаруживали ожидаемую игрушку в коробке), vs в группе, где дети не испытывали ранее похожий опыт, а также в группе, где дети наблюдали социальную модель утешающего поведения, vs когда они не наблюдали такой модели. В процессе экспериментальной процедуры мы также фиксировали возникающие эмоциональные реакции у детей в ответ на свои и чужие события. Результаты показали, что схожий негативный опыт не имеет значимого влияния на проявление эмпатического поведения, тогда как знакомая поведенческая модель утешения способствует более частому проявлению эмпатических актов помощи детьми. Результаты обсуждаются в соотнесении с существующими данными о влиянии схожего опыта на проявление эмпатического поведения, а также данными о связи эмпатии и родительского стиля, социализации и просоциального развития.

**Ключевые слова:** развитие эмпатии, эмпатическое поведение, схожий опыт, модель просоциального акта.

**Юдина Татьяна Олеговна** — преподаватель, кафедра общей психологии, Российская академия народного хозяйства и государственной службы при Президенте РФ.

Сфера научных интересов: социальное научение, просоциальное развитие, развитие эмпатии, связь эмпатии с просоциальным поведением.

E-mail: judinatatyana@gmail.com

**Котова Татьяна Николаевна** — старший научный сотрудник, лаборатория когнитивных исследований, Российская академия народного хозяйства и государственной службы при Президенте РФ, кандидат психологических наук.

Сфера научных интересов: когнитивное развитие, категориальное научение, развитие речи. Контакты: tkotova@gmail.com