

PROSOCIAL BEHAVIOR AS A BOND OF INTERPERSONAL RELATIONS AMONG THE YOUNGEST PART MEMBERS OF SOCIETY

Emilia GOGACZ

The Maria Grzegorzewska University, Institute of Human Development Support and Education, Warsaw;
egogacz@aps.edu.pl, ORCID: 0000-0003-2668-1679

Purpose: The aim of this article is to present the results of a study on the manifestations of prosocial behavior among children aged 1;6 to 3;3 attending a public nursery, in a Polish sample.

Design/methodology/approach: The study was conducted in a state nursery affiliated with the Nursery Complex of the Capital City of Warsaw, using a sample of 33 children (18 girls and 15 boys) and the original diagnostic task "Pain".

Findings: During the "Pain" diagnostic task, involving young children aged 1;6 to 3;3, prosocial behaviors in the form of empathy-driven helping were observed. These behaviors were manifested through giving, bringing, or moving—that is, through specific, observable actions—but also through providing information ("you need to take your medicine") and by attempting to distract. Gradation, or the order in which messages appear in a task, was helpful for the children, providing scaffolding for the learning process. Thanks to this, the children quickly recognized the social situation and knew what to do to help.

Practical implications: The proposed diagnostic task, "Pain", can be used in the process of teaching children prosocial behavior in preschool education, and can also be used in research on prosocial behavior at the youngest segment of society.

Originality/value: The study on the prosocial behavior of children up to 3 years of age conducted in a public nursery (with the participation of these children) is the only known study on a Polish sample.

Keywords: prosocial behavior, helping, empathy, young children, nursery.

Category of the paper: Research paper.

1. Introduction

Facing the endless challenges of today's world, situations that exceed individual capacities, and the search for answers to fundamental questions, attention should be drawn to interpersonal relationships, and particularly to the bond that binds them together—prosocial behavior. These behaviors are manifested through helping, sharing, and comforting others, and can be

observed even among the youngest members of society, children below the age of three (Paulus, 2014, 2018). Although research in this field is rare in Poland, it is becoming particularly important today, as we are receiving reports of acts of aggression by increasingly younger children and against younger children. Prosocial behavior provides a natural counterbalance to these aggressive behaviors (Schaffer, 2006).

While working as a psychologist in a public nursery for nearly 10 years, I frequently observed situations in which children displayed various prosocial behaviors toward peers who were, for example, experiencing strong emotional responses, such as separation from a parent or the loss of a toy snatched from another child's hand, or who were experiencing the low mood characteristic of the initial stages of a physical illness. I often witnessed situations where children, after noticing another child crying, would point the child out to the caregiver, clearly expecting their intervention, or would approach and wipe the tears of a crying friend, trying to comfort them by bringing them a toy, making a cheerful face, or tenderly saying, "Don't cry".

I observed this type of behavior in all age groups, among children from the age of eighteen months to three years old. I also observed the reactions of the caregivers to these early displays of kindness in children. Some noticed these moments and rewarded them with words and gestures, but I also saw adults who passed by indifferently or even stopped children who ran to help, explaining it was for safety reasons.

It appeared to me that the adults' knowledge was insufficient to understand the essence of prosocial behavior and to consciously develop it within natural and structured situations, both at home and in daycare. These observations prompted me to seek and consolidate my knowledge, and subsequently, to conduct scientific research.

2. Literature review

"Prosocial behavior" (Reykowski, 1986) constitutes "the center of human social functioning" (Gupta, Thapliyal, 2015, p. 38). In the literature, the term is often treated interchangeably or combined with concepts such as "altruistic behavior" (e.g., Eisenberg, 1987) or "empathic behavior" (e.g., Hoffman, 2006).

When defining the concept of prosocial behavior, many authors focus on the criterion of selflessness (voluntariness) as a necessary condition for a given behavior to be classified as prosocial (e.g., Comte, 2008; Bar-Tal, 1976). Some authors, however, argue that this is not a necessary condition (e.g., Kenrick et al., 2002). Some researchers also point out that prosocial behavior is susceptible to environmental conditions, which means that a given person may sometimes exhibit prosocial behavior and refrain from it at other times, in various social situations, claiming that "today's altruist may be tomorrow's passive observer" (Latane, Darley, 1969, 1970, as cited in Bierhoff, 2002).

In this article, I follow Hans W. Bierhoff's view of prosocial behaviors in relation to helping and altruistic behaviors as hierarchically nested. According to this author, **prosocial behaviors are actions that benefit another person, regardless of the motivation behind them.** In this approach, the result of prosocial behavior can be, for example, "receiving social approval or reducing one's own suffering when witnessing a crisis involving another person" (egoistically motivated behavior) (Bierhoff, 2002, p. 4).

As the literature review shows, early prosocial behaviors in children do not constitute a homogeneous category and are not interrelated (Paulus, 2018). Longitudinal studies have not confirmed a relationship between early helping and later sharing or comforting (Paulus et al., 2015). This has several consequences. The multidimensional nature of prosocial behavior is increasingly emphasized, drawing attention to its distinct developmental path, the different socio-cognitive abilities required for specific types of behavior, and the motivation that triggers specific behaviors. Situational context is also important (Paulus, 2018).

A study by Audun Dahl (2015) found that children between 11 and 25 months of age were already helping around the house before their first birthday, and by the second year of life, helping became commonplace. Children helped by handing items needed by an adult during meal preparation, turning on the washing machine, or watering plants. Most attempts at help involved encouragement, praise, or thanks from the caregiver (this type of caregiver behavior can encourage children to make further attempts). The author also investigated how children first engage in helping situations and what their parents were doing at that time, and sought to answer these questions in a subsequent study (Dahl, 2017). She found that around their first birthday, children are oriented towards the adult (focusing their attention on him or her), but without offering help yet. Then, the adult encourages them to join in (child attentiveness, adult encouragement). In the second year of life, children become more likely to help even before receiving instructions from the adult. This is illustrated by a situation in which they see an adult watering flowers, for example, and run up to him or her, calling out, "Help?" Interestingly, in Dahl's study, parents thanked younger children more often for their help than they thanked older children, which may indicate that older children already consider their actions to be regular, daily activities for the common good. The author also noted that encouragement and praise increased prosocial behavior in young children, which she believes is related to their age. Her research showed that in a group of 13-14-month-old children, encouragement increased prosocial behavior, while in the case of slightly older children (15-18 months), it had no effect.

Most researchers agree that prosocial behaviors in children flourish in their second year of life. During this time, children are able to infer a great deal about the emotions and needs of others and demonstrate motivation to help those in need (Bischof-Kohler, 1991; Brownell, Carriger, 1990, as cited in Svetlova, Nicholas, Brownell, 2010, p. 1823; Brownell, 2013).

Young children are not indifferent to the sight of others experiencing sadness and melancholy. They usually demonstrate a willingness to offer help or comfort (Zahn-Waxler et al., 1992, as cited in Hay, 2021), although their help is not always tailored to what is actually needed in a given situation. There are also instances when young children react with amusement or physical aggression at the sight of a person in pain (Demetriou, Hay, 2004; Zahn-Waxler et al., 1992 as cited in Hay, 2021). This largely applies to children who know each other or are related to each other (e.g., siblings).

Young children have been documented to exhibit prosocial behavior toward a wide range of suffering individuals, including family and non-family members. They offer help to parents (Zahn-Waxler et al., 1992, as cited by Hay, 2021), siblings (Dunn, Munn, 1986, as cited by Hay, 2021), and peers (Lamb, Zakhireh, 1997; Murphy, 1937, as cited by Hay, 2021). Children who respond positively to a peer's suffering are also able to share their resources with them if so requested (Hay et al., 1999, as cited by Hay, 2021).

An analysis of the literature on the development of prosocial behavior indicates a pattern in the emergence of specific types of prosocial behavior in young children, including instrumental, empathetic, and altruistic help. The first physical signs (cuddling, stroking) appear around the middle of the second year of life, followed by verbal comforting such as "It'll be okay", advice ("Be careful!"), instrumental help (giving a bottle to a crying infant), sharing food with siblings, or distraction. Concern for others, both in the form of an emotional reaction to sadness (empathy) and behavioral attempts to reduce it (altruism), is therefore noticeable at the beginning of the second year of life (Schaffer, 2006).

At the earliest stage, children cooperate in tasks requiring **instrumental** assistance (as early as the second year of life) (Svetlova, Nichols, Brownell, 2010). This is because "the ability to provide help to overcome instrumental needs is based on the ability to interpret goal-directed behavior, distinguish purposeful actions from accidental actions, and correct unintended outcomes of skills, which occurs in children as young as 15 months of age (e.g., Behne, Carpenter, Call, Tomasello, 2005; Csibra, Gergely, Biro, Koos, Brockbank, 1999; Meltzoff, 1995; Woodward, 1998; as cited in Malti et al., 2016). Instrumental help is conditioned by understanding the goal of the action and the willingness to help the adult achieve it (e.g., a child gives an object that the adult cannot reach). It has been documented in experimental situations in children at 12 and 14 months of age (e.g., Liszkowski et al., 2006, Warneken, Tomasello, 2008).

Empathic helping is associated with a response to the distress of others and the intention to alleviate their pain (Zahn-Waxler, Radke-Yarrow, 1992). This form of helping is much more complex than instrumental helping. Besides the intention to help, the child must also manage their own emotional state, a much more demanding skill. This type of helping is believed to emerge between 18 and 24 months of age, when a child's social understanding, self-awareness, and emotions become more developed.

Altruistic helping appears last in the development of prosocial behavior and involves the child consciously giving up their own resources for the benefit of someone in need. This kind of help requires children to bear some costs, as they may find it difficult to part with an item or give up a favorite game. Research suggests that even young children are sometimes capable of doing so (Svetlova, Nicholas, Brownell, 2010).

3. Method and sample

The aim of the study was to enrich the knowledge about the prosocial behavior of young children aged 1;6 to 3;3 based on the results of the diagnostic task "Pain" conducted in a way that took into account the degree of gradation of messages and the type of actor to whom help¹ was directed.

The research was conducted at Public Nursery No. 49, part of the Warsaw City Nursery Complex. A total of 33 children (18 girls and 15 boys) participated in the study. The research lasted six months and followed a six-month pilot study. The entire process was recorded using a camera.

Using the knowledge about children acquired from interviews with parents, document analysis, and own notes, the following children were selected to participate in the study: born at full-term; healthy; without any diagnosed disabilities; not in the process of making any specialist diagnosis, as well as those children who had successfully completed the adaptation process (they felt safe in the nursery, ate meals, fell asleep and slept peacefully, played individually and joined in with other children), and those children who usually came to the nursery willingly, and whose farewells to their parents were warm and not very long.

In order to collect empirical data, the method of **diagnostic tasks** was used - introduced into the methodology of psychological and pedagogical research by Jean Piaget, and used together with Jean Piaget by Alina Szemińska (Piaget, Szemińska, 1941), used in Polish scientific research (Tyszkowa, Czepajtis, 1968), and popularized by Edyta Gruszczyk-Kolczyńska and Ewa Zielińska (e.g. *Children with specific difficulties in learning mathematics. Causes, diagnosis, corrective and compensatory classes* (1997). Warsaw: WSiP; *Teachers' diagnosis of children's mathematical education. Methods, interpretations, conclusions* (2013). Nowa Era, etc.).

¹ The presented study results are part of the collected research material that formed the core of the doctoral dissertation entitled: "Exploring and shaping prosocial behaviors in young children", prepared under the supervision of dr hab., prof. APS Agnieszka Olechowska and defended at the Maria Grzegorzewska University in December 2024.

Diagnostic tasks, therefore, involve situations in which an adult presents a child with a problem and then observes how the child solves it. During diagnostic tasks, the researcher observes the children's functioning, analyzes it and then draws conclusions about the researcher's topic of interest.

The diagnostic task method "can be used in assessments organized for one child as well as in assessments involving a group of children" (see Gruszczyk-Kolczyńska, Zielińska, 2013, pp. 25-120). In the presented research, the diagnostic task method was used in groups of children differentiated by age: the youngest (from 1;6 to 2;1), older (from 2;1 to 2;9), and the oldest (from 2;7 to 3;3). During the research, children belonging to individual groups participated in diagnostic tasks carried out in subgroups (1-, 2-, 3-, and 5-person groups plus the researcher).

Each diagnostic task was structured according to a fixed plan:

1. Bringing the children to the room where the space and props for the assessment were prepared and initiating contact through shared play (e.g., stacking blocks).
2. Establishing contact with the children, describing the space and the situation, and providing the children participating in the diagnostic task with a first-level message – informing them of the need to provide assistance to a given actor.
3. If necessary (no response to the first-level message), providing the children with a second-level message.
4. If necessary (no response to the second-level message), providing the children with a third-level message.
5. Concluding the diagnostic task (playing with blocks, thanking the children, escorting the children to their homerooms and caregivers, and saying goodbye to the children).

The message addressed to children could be categorized into three levels:

M – "Message" (first level).

MH – "Message naming the Help needed" (second level).

MHM – "Message naming the Help needed and the Method of providing it" (third level).

Addressing a message of a given level to children determined the **phases** of the diagnostic task:

Phase I – M message.

Phase II – MH message.

Phase III – MHM message.

Depending on the variant (type of actor to be helped), the messages took the following forms:

M – Variant I (help should be provided to a toy) "The teddy bear has a headache".
Variant II (help should be provided to an adult) "I have a headache".

MH – Variant I (help should be provided to a toy) "The teddy bear has a headache. The teddy bear needs medicine." Variant II (help should be provided to an adult) "I have a headache. I need medicine".

MHM – Variant I (help should be provided to a toy) "The teddy bear has a headache. The teddy bear needs medicine. Here it is, please pass it." Variant II (help should be provided to an adult) "I have a headache. I need medicine. Here it is, please pass it".

The "Pain" diagnostic task required blocks, a teddy bear (toy), syrup, and a spoon. Each diagnostic task could therefore be shorter or longer, depending on which message was followed by the children's expected action. When none of the children demonstrated helpful action, the researcher modeled the problem solution and demonstrated to the children how it should be solved. After completing the diagnostic task, the researcher thanked the children, sometimes played with the blocks for a while, and then escorted the children to the room where the other children and their caregivers were.

4. Results

The presentation of research data will include tabular summaries:

- for a given type of diagnostic task ("Pain"),
- completed first in Variant I and then in Variant II,
- in subsequent research groups and subgroups.

A tabular summary was chosen due to the accumulation ("density") of data, one task, three age groups, and four research subgroups within each group, three levels of communication, and two actors. The tabular summary allows for more detailed analysis of:


1. After communication, at which level (in which phase) did the **first prosocial behavior** occur:
 - in a given type of diagnostic task ("Pain"),
 - in a given Variant (I – with a toy, II – with an adult),
 - in a given research group (N, S, SN),
 - in a given subgroup of a specific research group (I, II, III, IV).
2. **How many children** exhibited prosocial behavior in a given group/subgroup and throughout the entire task?
3. **From which subgroups** were the children recruited who exhibited prosocial behavior?
4. **What types of prosocial behavior** did the children demonstrate (giving, informing, pointing out, or attempting to comfort).

Table 1.*Prosocial behavior of children from the youngest group in the "Pain" research tasks*

DIAGNOSTIC TASK „PAIN”			
GROUP N – the youngest			
Phase	Subgroup	Variant I – with a toy	Variant II – with an adult
M	I	1 information	1 bringing and giving before the message
	II	0	0
	III	0	0
	IV	0	1 bringing and giving
MH	I		
	II	0	0
	III	1 information	0
	IV	0	
MHM	I		
	II	0	0
	III		1 bringing and giving
	IV	2 bringing and giving	
The total number of children		4	3

Legend:

0, 1, 2 ... – number of children who behaved in a prosocial way.

– the  diagnostic task was completed in the earlier phases.

Text in the table row – a manifestation of prosocial behavior.

Source: own work.

As illustrated by the data in Table 1, in the youngest research group (N), a comparable number of children responded in a prosocial way in both Variant I (with a toy) and Variant II (with an adult) during the "Pain" research task. However, in the second variant (with an adult), a child from the same first subgroup (subgroup I always consisted of the researcher and one child) responded in a prosocial way in the adult variant after completing the task in the toy variant, before the researcher had finished uttering the message.

In Variant II, subgroup IV, the children completed the task in the first phase (prosocial behavior occurred after hearing the first-level message), whereas in Variant I, this only happened after hearing the third-level message (the last level in the three-level gradation of messages).

Table 2.*Prosocial behavior of children from the older group in the "Pain" research tasks*


DIAGNOSTIC TASK „PAIN”			
GROUP S – older			
Phase	Subgroup	Variant I – with a toy	Variant II – with an adult
M	I	0	1 information before the message
	II	0	0
	III	0	1 bringing and giving
	IV	0	2 bringing and giving
MH	I	0	
	II	0	1 trying to distract from the pain
	III	0	
	IV	0	

Cont. table 2.

MHM	I	1 bringing and giving	
	II	0	
	III	1 bringing and giving	
	IV	2 bringing and giving	
The total number of children		4	5

Legend:

0, 1, 2 ... – number of children who behaved in a prosocial way.

– the  diagnostic task was completed in the earlier phases.





Text in the table row – a manifestation of prosocial behavior.

Source: own work.

Based on the analysis of the empirical data presented in Table 2, it is very clear how effectively children can learn during the diagnostic tasks. In Variant I (with a toy), the first prosocial behaviors appeared only in the final phase of the task (after hearing the third-level message) and occurred in three of the four subgroups. This means that despite the increasingly specific messages provided, none of the children in Subgroup II took action to provide help. Meanwhile, in Variant II, prosocial behavior appeared in Subgroup II, and at the second (not the last) level of the message gradation. However, the greatest difference can be observed among the children in Subgroups I, III, and IV, as in Variant I, they did not react in a prosocial way in either the first or second phase of the task. In Variant II, I observed as many as four prosocial behaviors in all the subgroups mentioned, including one before the researcher even delivered the first-level message.


Table 3.

Prosocial behavior of children from the oldest group in the "Pain" research tasks

DIAGNOSTIC TASK „PAIN”			
GROUP NS – the oldest			
Phase	Subgroup	Variant I – with a toy	Variant II – with an adult
M	I	0	0
	II	0	0
	III	0	0
	IV	0	0
MH	I	0	0
	II	1 pointing	0
	III	0	1 bringing and giving
	IV	1 bringing and giving	1 bringing and giving
MHM	I	1 bringing and giving	1 bringing and giving
	II		1 bringing and giving
	III	0	
	IV		
The total number of children		3	4

Legend:

0, 1, 2 ... – number of children who behaved in a prosocial way.

– the  diagnostic task was completed in the earlier phases.

Text in the table row – a manifestation of prosocial behavior.

Source: own work.

None of the children from the eldest group responded to the first-order message in either the first or second task variant. The first prosocial behaviors in this group occurred after the children heard the second-order message (the same number of children responded in task variants I and II). Prosocial behaviors also occurred after the researcher delivered the third-order message, including the observation of prosocial behavior by a child in subgroup I in both task variants I and II. In the first task variant, one subgroup (III) completed the task without any prosocial behavior from any of the children in that subgroup.

5. Discussion

During the "Pain" diagnostic task, involving young children aged 1;6 to 3;3, prosocial behaviors characterized by empathic helping were observed. These behaviors manifested in various ways. Not only in the most obvious ways, such as giving, bringing, or pushing—that is, through specific, observable actions—but also, as Tomasello (2016) pointed out in his research, through providing information ("you need to take your medicine"), and, as observed in my own research, through attempts to distract. In this case, it involved an adult experiencing pain, to whom Mikołaj (2;3), from the second subgroup of older children, said: "Don't be afraid. Build! Build!".

Considering the number of children who exhibited prosocial behavior in the diagnostic task, the number of children providing help in Variant I (toy) and Variant II (adult) is similar in most cases. However, when comparing the gradation of the message followed by these behaviors, it is clear that in Variant II, children reacted faster, and sometimes even before the adult's message (in two cases). This means they don't need much to accurately interpret the social situation and rush to help, offering what is required (this is clearly visible in the group of older children).

As for the occurrence of prosocial behaviors even before the message given by the researcher, research conducted by Warneken and Tomasello showed that children from post-infant age helped an adult (each child in at least one of the tasks) almost immediately after the need arose, often even before the adult looked at the object, and even more so before he or she verbalized his or her difficulty (the authors state that "84% of the helping acts occurred in the initial 10-second phase", Warneken, Tomasello, 2006).

It's worth noting that in the largest of the subgroups, subgroup IV (5 participants), there were two prosocial leaders, children who stood up and helped, both in Variant I of the teddy bear (toy) task and Variant II with an adult. This is an interesting result, demonstrating that children are not indifferent to displays of pain when in a group. Responsibility is not shared, and children do not wait for the one next to them who is also watching. They stand up and take

action; everyone wants to be first, everyone wants to help. This is the opposite of the pattern observed among adult participants in social situations (Le Bon, 1930).

The gradation (order) of the messages (M, MH, MHM) delivered by the adult (the researcher) on behalf of both the toy and herself was helpful, as it served as a scaffolding that allowed the child to use the gradual prompting to perceive and recognize the signaled need, and then to understand and take action to solve the problem (provide help in an appropriate manner).

Prosocial behavior was evident both in situations when the task was conducted with one child and when the children were together in a group.

Another interesting observation was that the children who decided to help were keenly interested in whether their help had the desired effect, asking if the medication had helped. All the children responded positively to thanks, usually smiling, and some, encouraged by the praise, wanted to repeat the action.

After repeatedly playing the recorded scenes and observing the children's behavior, it could be observed that in tasks where the children's toy "needed" help, a larger number of children behaved with more confidence than in tasks where it was the adult who needed help. This may be because children perceive an adult as independent, strong, and less likely to need help than a smaller, defenseless teddy bear. Furthermore, the behavior of adults may also play a role. Even in nurseries (e.g., out of haste, fear of getting the child's clothes dirty or damaged, but also a lack of confidence in the child's abilities) the adults often say things like, "No, I'll do it", "Sit down. That's what auntie is for". While working at the nursery where the research was conducted, an increasing emphasis on children's safety in a broad sense could be noticed. Everyday situations in which children are allowed to help and cooperate are gradually being eliminated. When I asked caregivers if they felt they were preventing children from acting, I was told that safety was paramount, and that children would still have time to learn the skill. However, many children in nursery settings demonstrate an incredible readiness to learn helpful behaviors. Later in a child's development, there will be time to learn other important skills, but many nursery caregivers don't perceive it this way.

The occurrence of prosocial behaviors in children at this age has been described by various authors (Brownell (2011, 2013, 2016), Svetlova, Nicholas, and Brownell (2010), Dunfield and Kuhlmeier (2013), Dahl (2015, 2017) and in a series of studies by the team led by Tomasello (2016). What distinguishes my research from the research plans carried out by the above-mentioned authors is the fact that my research took place in the peer environment in a nursery, i.e., in an institution that constitutes a specific, Bronfenbrenner-style microsystem in which the child is "nested" every day for a period of several years, and which is still perceived primarily as a place of typical childcare.

Analyzing the research results showed that when comparing the behavior of children in variant I of the diagnostic tasks (with a toy) with the behavior in variant II (with an adult), it can be clearly stated that the speed of the emergence of prosocial behaviors appeared in

relation to the level of communication which preceded it and the number of children who exhibited these actions. It was important that the tasks were conducted in two variants, one after the other, because **this contributed to an increase in the number of children who engaged in prosocial behaviors** thanks to the opportunity to gain experience and through the ongoing learning process.

Meanwhile, the manifestations of prosocial behavior observed during the designed diagnostic task indicate that they can serve as guidelines for activities that **stimulate the development of prosocial behavior in young children**. Furthermore, this task can be conducted in a nursery, contributing to the development of these skills in children in a group setting, in a collaborative manner, leveraging learning not only from adults (parents/guardians) but primarily from their peers.

References

1. Bar-Tal, D. (1976). *Prosocial behavior*. New York: Wiley.
2. Bierhoff, H.W. (2002). *Prosocial behaviour*. New York: Psychology Press, 176-195.
3. Brownell, C.A. (2011). Early developments in joint action. *Review of Philosophy and Psychology*, 2, 193-211. <https://doi.org/10.1007/s13164-011-0056-1>
4. Brownell, C.A. (2013). Early development of prosocial behavior: current perspectives. *Infancy*, 18(1), 1-9.
5. Brownell, C.A. (2016). Prosocial behavior in infancy: The role of socialization. *Child Development Perspectives*, 10(4), 222-227. <https://doi.org/10.1111/cdep.12189>
6. Comte, A. (2008). *U źródeł mądrości*. Warszawa: Instytut Wydawniczy PAX, 15-68.
7. Dahl, A. (2015). The developing social context of infant helping in two U.S. samples. *Child Development*, 86, 1080-1093. <https://doi.org/10.1111/cdev.12361>
8. Dahl, A. (2017). Ecological commitments: why developmental science needs naturalistic methods. *Child Development Perspectives*, 11, 79-84. <https://doi.org/10.1111/cdep.12217>
9. Dunfield, K.A., Kuhlmeier, V.A. (2013). Classifying Prosocial Behavior: Children's Responses to Instrumental Need, Emotional Distress, and Material Desire. *Child Development*, 84(5), 1766-1776. <https://doi.org/10.1111/cdev.12075>
10. Eisenberg, N., Miller, P.A. (1987). The Relation of Empathy to Prosocial and Related Behaviors. *Psychological Bulletin Vol. 101(1)*, 91-119. <https://doi.org/10.1037/0033-2909.101.1.91>
11. Gruszczyk-Kolczyńska, E., Zielińska, E. (1997). *Dzieci ze specyficznymi trudnościami w uczeniu się matematyki. Przyczyny, diagnoza, zajęcia korekcyjno-wyrównawcze*, Warszawa: WSiP.

12. Gruszczyk-Kolczyńska, E., Zielińska, E. (2013). *Nauczycielska diagnoza edukacji matematycznej dzieci. Metody, interpretacje, wnioski*. Warszawa: Nowa Era.
13. Gupta, D., Thapliyal, G. (2015). A study of prosocial behaviour and self-concept of adolescent. *Journal on Educational Psychology*, Vol. 9(1), 38-45. <https://doi.org/10.26634/jpsy.9.1.3524>
14. Hay, D.F. (2021). *Rozwój emocjonalny od niemowlęstwa do dorastania. Kierunki rozwoju kompetencji emocjonalnych i problemów emocjonalnych*. Warszawa: Difin.
15. Hoffman, M.L. (2006). *Empatia i rozwój moralny*. Gdańsk: GWP.
16. Kenrick, D.T., Neuberg, S.L., Cialdini, R.B. (2002). *Psychologia społeczna*. Gdańsk: GWP.
17. Le Bon, G (1930). *Psychologia tłumu*. Lwów: Księgarnia Wydawnicza L. Igła.
18. Liszkowski, U., Carpenter, M., Striano, T., Tomasello, M. (2006). 12- and 18-month-olds point to provide information for others. *Journal of Cognition and Development*, 7, 173-187. https://doi.org/10.1207/s15327647jcd0702_2
19. Malti, T., Averdijk, M., Zuffianò, A., Ribeaud, D., Betts, L.R., Rotenberg, K.J., Eisner, M.P. (2016). Children's trust and the development of prosocial behavior. *International Journal of Behavioral Development*, 40(3), 262-270. <https://doi.org/10.1177/0165025415584628>
20. Paulus, M. (2014). The emergence of prosocial behavior: Why do infants and toddlers help, comfort, and share? *Child Development Perspectives*, 8, 77-81. <https://doi.org/10.1111/cdep.12066>
21. Paulus, M. (2018). The multidimensional nature of early prosocial behavior: a motivational perspective. *Current Opinion in Psychology*, 20, 111-116. <https://doi.org/10.1016/j.copsyc.2017.09.003>
22. Paulus, M., Licata, M., Kristen, S., Thoermer, C., Woodward, A., Sodian, B. (2015). Social understanding and self-regulation predict pre-schoolers' sharing with friends and disliked peers. *International Journal of Behavioral Development*, 39, 53-64. <https://doi.org/10.1177/0165025414537923>
23. Piaget, J., Szemińska, A. (1941). *La geneste du nombre chez l'enfant*. Neuchatel: Delachaux et Niestlé.
24. Reykowski, J. (1986). *Motywacja, postawy prospołeczne a osobowość*. Warszawa: PWN, 806.
25. Schaffer, H.R. (2006). *Rozwój społeczny: dzieciństwo i młodość*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
26. Svetlova, M., Nichols, S.R., Brownell, C.A. (2010). Toddlers' Prosocial Behavior: From Instrumental to Empathic to Altruistic Helping. *Child Development*, 81(6), 1814-1827. <https://doi.org/10.1111/j.1467-8624.2010.01512.x>
27. Tomasello, M. (2016). *Dlaczego współpracujemy*. Kraków: Copernicus Center Press, Sp. z o.o.

28. Tyszkowa, M., Czepajtis, J. (1968). Stosowanie eksploracyjnej metody psychologii genetycznej w badaniu rozwoju umysłowego dzieci. *Przegląd Psychologiczny*, nr 2.
29. Warneken, F., Tomasello, M. (2008). Extrinsic rewards undermine altruistic tendencies in 20-month-olds. *Developmental Psychology*, 44, 1785-1788. <https://doi.org/10.1037/a0013860>
30. Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., Chapman, M. (1992). Development of concern for others. *Developmental Psychology*, 28, 126-136. <https://doi.org/10.1037/0012-1649.28.1.126>