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The Effect of Philosophy for Children on Cognitive Empathy: An Experimental Study

Çocuklar için Felsefenin Bilişsel Empati Üzerine Etkisi: Deneysel Bir Çalışma

Rumeysa ULUURGUN [1*]

[1] Akdeniz University, Social Sciences Institute, Antalya, Türkiye

Abstract: The claim that the education system, which must adapt to changing societal needs and advancing technology, is inadequate in developing students' life skills remains a current debate today.In this context, the Philosophy for Children (P4C) approach, developed under the leadership of Matthew Lipman and integrated into educational programs in many countries, has attracted attention. P4C aims not only to transfer knowledge but also to create meaningful understanding, to improve students' thinking skills, and to raise them as democratic individuals. This study examined the effect of the P4C program on the cognitive empathy skills of 4th grade primary school students. A quasi-experimental pretest–posttest control group design was used. The research was conducted with 40 students in a public school in Alanya, Antalya. The experimental group participated in P4C sessions for six weeks, while the control group continued with the regular curriculum. Data were collected using the Reading the Mind in the Eyes Test developed by Baron-Cohen et al. (2001). Findings showed that P4C positively supported students' cognitive empathy. While most studies in the literature focus on thinking skills, research on social-emotional skills such as empathy is limited. Therefore, this study is expected to contribute to the limited research on cognitive empathy.

Keywords: Philosophy for Children (P4C), cognitive empathy, socio-emotional skills, primary school students, quasi-experimental design

Özet: Değişen toplum ihtiyaçlarına ve gelişen teknolojiye uyum sağlamak zorunda olan eğitim sistemi, öğrencilerin yaşam becerilerini geliştirmekte yetersiz kaldığı savı günümüzde hâlâ güncel bir tartışma konusudur. Bu bağlamda, Matthew Lipman'ın öncülüğünde geliştirilen ve birçok ülkede eğitim programlarına entegre edilen *Çocuklar için Felsefe* (P4C) yaklaşımı dikkat çekmektedir. P4C, bilginin yalnızca aktarılmasını değil, anlamlı bir bütün oluşturmasını; öğrencilerin düşünme becerilerini geliştirmesini ve demokratik bireyler olarak yetişmesini öngörmektedir. Bu çalışma, P4C programının ilkokul 4. sınıf öğrencilerinde bilişsel empati becerisine etkisini incelemiştir. Çalışmada öntest–sontest kontrol gruplu yarı deneysel desen kullanılmıştır. Antalya ili Alanya ilçesindeki bir devlet okulunda öğrenim gören 40 öğrenciyle yürütülen araştırmada, deney grubuna 6 hafta süreyle P4C oturumları uygulanmış, kontrol grubu ise mevcut eğitim programına devam etmiştir. Veri toplama aracı olarak Baron-Cohen ve arkadaşları (2001) tarafından geliştirilen *Gözlerden Zihni Okuma Testi* kullanılmıştır. Bulgular, P4C'nin öğrencilerde bilişsel empatiyi olumlu yönde desteklediğini göstermiştir. Literatürde P4C araştırmaları genellikle düşünme becerilerine odaklanırken, empati gibi sosyal-duygusal becerilere yönelik çalışmalar sınırlı kalmıştır. Bu bağlamda çalışmamızın, bilişsel empati üzerine sınırlı sayıdaki araştırmalara önemli bir katkı sunması beklenmektedir.

Anahtar Kelimeler: Çocuklar için Felsefe (P4C), bilişsel empati, sosyal-duygusal beceriler, ilkokul öğrencileri, yarı deneysel desen

1. Introduction

Cognitive empathy is an important social-cognitive skill that enables individuals to understand the thoughts, beliefs, intentions, and perspectives of others. This skill plays a key role in helping children regulate their social relationships, evaluate different viewpoints, and communicate effectively. Indeed, cognitive empathy is closely related to social awareness, which is one of the core components of social-emotional learning (CASEL, 2013). The primary school years

*Corresponding author: rumeysagrali@gmail.com
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are a critical developmental stage in which children begin to overcome the cognitive egocentrism observed in early childhood. In parallel, their ability to take perspectives and to understand the thoughts, beliefs, and intentions of others develops. Therefore, it is essential that educational environments provide learning experiences that support the development of children's cognitive empathy.

Philosophy for Children (P4C) is an educational approach that encourages students to engage in dialogue within communities of inquiry, justify their ideas, evaluate different perspectives, and reconstruct their views. In P4C sessions, students not only express their own thoughts but also have the opportunity to listen carefully to others, try to understand alternative viewpoints, and critically evaluate them. In this respect, P4C is thought to support skills related to cognitive empathy, such as perspective-taking and understanding the mental states of others. This relationship can also be linked to the Theory of Mind approach in developmental psychology, which explains the capacity of individuals to understand the beliefs, intentions, and thoughts of others. Dialogues conducted in communities of inquiry require students to evaluate different perspectives, make sense of others' thoughts and intentions, and draw inferences about mental states. According to Fisher (2013), *caring thinking*, one of the components of P4C, represents an important dimension of empathy. This form of thinking, which involves sensitivity to the feelings and thoughts of others, is closely related to processes of social interaction. However, in this study, the relationship between P4C and cognitive empathy is not based solely on the concept of caring thinking; rather, it is mainly considered within the framework of dialogues in communities of inquiry, perspective-taking, and cognitive processes aimed at understanding the mental states of others.

However, most studies on P4C have focused on critical thinking, creative thinking, and reasoning skills, while its effects on students' socio-emotional development have been examined in a relatively limited way. In particular, the small number of experimental studies investigating its impact on cognitive empathy shows that new research in this area is needed. The primary school years are a period in which children's social and cognitive development accelerates, and their ability to understand and evaluate others' perspectives develops significantly. Therefore, examining the effect of P4C practices on cognitive empathy during this stage is important. In line with this, the present study aimed to investigate the effect of P4C practices conducted with fourth-grade primary school students on their levels of cognitive empathy. To achieve this aim, the following hypotheses were tested:

H1. The post-test scores of the experimental group students who participated in the Philosophy for Children (P4C) program on the *Reading the Mind in the Eyes Test* will increase significantly compared to their pre-test scores.

H2. After the intervention, the post-test scores of the experimental group on the *Reading the Mind in the Eyes Test* will be significantly higher than those of the control group.

H3. The pre-test to post-test change (time × group interaction) in the *Reading the Mind in the Eyes Test* scores of the experimental and control groups will be significant in favor of the experimental group.

1.1. Philosophy for Children (P4C)

In the 1980s, Matthew Lipman, who developed the P4C curriculum, adopted pragmatism as its philosophical foundation and stated that he was influenced by the ideas of his teacher John Dewey. Pointing to Dewey as one of the philosophers who most influenced his work reflects their shared view that learning is based not on memorization but on thinking (Dewey, 1996, p. 247; Lipman, 2017, p. 3). In response to criticisms of rote education, Lipman worked on a compensatory

model of inquiry. Emphasizing the importance of students' academic development, he repeatedly noted that knowledge lacked meaningful integrity. He argued that learning processes should be engaging and adventurous. To address problems ranging from fragmented learning to uninspiring learning environments, he presented the "Philosophy for Children" program, developed with the help of the discipline of philosophy, as a solution (Lipman, 1980, p. 9).

In his research, Matthew Lipman argued that the best way to develop children's thinking skills was to design a curriculum with a philosophical perspective. In line with this view, he founded the *Institute for the Advancement of Philosophy for Children* (IAPC) at Montclair State University in 1974. Together with Ann Margaret Sharp, he structured his work and developed teacher guides and instructional materials. Lipman organized numerous teacher training programs for P4C; through these trainings he introduced an approach that guided the field, enriched the program, and trained new facilitators, thereby becoming the pioneer of P4C (Özdemir, 2021, p. 5). Lipman defined the aim of P4C as fostering children's curiosity and equipping them with reasoning skills. Encouraging students to ask questions and justify their ideas was among the targeted behaviors of the program. P4C contributes to children becoming respectful of different opinions, flexible in their thinking, and open-minded individuals (Mehdiyev & Tozduman Yaralı, 2020, p. 4). In Lipman's theory, the "4Cs" represent dimensions of thinking: critical, creative, and caring thinking, with collaborative thinking added to emphasize functionality in everyday life. Thus, the abbreviation "P4C" emerged from the English expression *Philosophy for Children* (Lipman, 2003, pp. 62–66).

In later years, the works of Catherine McCall and Karin Murris became prominent in the development of the P4C program. Based on her studies with children and parents in Scotland, McCall established the *Community of Philosophical Inquiry*, which is regarded as an important approach to fostering thinking skills. According to McCall (2017), the core of philosophical inquiry lies not in a fixed curriculum but in the dialogue and shared inquiry process carried out by participants. To encourage dialogue within the community of inquiry, various educational materials such as films, stories, games, and works of art are used (UNESCO, 2007, p. 61). McCall's work later influenced the development of the approach known as *Philosophy with Children* (PwC), often referred to as the "second generation." Unlike Lipman's specially designed curriculum and stories, this approach allows for a wider variety of educational materials and focuses on philosophical dialogue itself and the process of shared inquiry. Karin Murris, on the other hand, implemented classroom activities using picture books, and through these practices contributed to the development of the PwC approach, which diverged from Lipman's specific curriculum (Şahinkaya, 2024).

Roger Sutcliffe (2017) states that the main difference between P4C and PwC lies in their method. P4C, developed by Lipman and the IAPC, aims to train students as young philosophers by using specially designed children's stories. PwC, however, is able to conduct philosophical discussions without relying on these stories. At the same time, P4C and PwC are not officially defined concepts. Some researchers prefer the term "with" to avoid direct reference to Lipman's specific curriculum, while others use it to emphasize the shared inquiry process rather than the transmission of knowledge. The International Council for Philosophical Inquiry with Children (ICPIC) has also adopted the term "with," highlighting the inclusiveness of different approaches.

Both approaches emphasize that philosophy should be practiced in a social atmosphere, highlight the importance of teachers providing pedagogical guidance, and stress adherence to democratic procedures in inquiry processes. Although there are differing views on whether teachers need formal training in philosophy, there is consensus that they should be strong pedagogues and guide students until they are able to conduct independent inquiry. In addition, both

approaches underline the moral importance of respect for others and open-mindedness in the context of communal inquiry (Sharp, 2017, p. 30). Nevertheless, the literature shows that the concepts of P4C and PwC are not always sharply distinguished. Researchers and educators sometimes use these terms interchangeably or prefer broader expressions such as "philosophy in schools," "philosophical inquiry with children," or "childhood philosophy practices" to encompass both approaches. This indicates that the differences between them are often addressed at the level of methodological emphasis and practical preferences. In conclusion, although P4C and PwC carry different methodological emphases, their common aim is to develop children's thinking skills and to bring philosophy into educational settings as a pedagogical tool. Researchers and educators continue to enrich and advance this approach, pioneered by Lipman, through diverse theoretical perspectives and practices.

1.2. Cognitive Empathy

The concept of empathy has been addressed with different meanings throughout history. In its early uses, empathy was explained mainly as imitating another person's behavior or emotional state and entering into a similar experience. In this approach, empathy was largely considered an unconscious and emotional process (Setgal, 2025, p. 17). However, with the development of studies in psychology, the concept of empathy gained a broader meaning. Especially through the work of Carl Rogers, empathy began to be understood as a process in which an individual comprehends the feelings and thoughts of the other person. Rogers' definition of empathy, in its most widely accepted form, refers to placing oneself in another's position, understanding and sensing their feelings and thoughts, and communicating this understanding to them (Dökmen, 2002, p. 136). This perspective revealed that empathy is not merely emotional closeness but also includes a cognitive dimension aimed at understanding another person's thoughts, perspectives, and inner experiences. Accordingly, empathy is considered a multidimensional construct that involves both cognitive and affective components.

Neuropsychologist Daniel Goleman, known for his work on emotional intelligence, places special emphasis on the concept of *attention* when defining empathy. The Latin root of the word, *attendere*, means "to reach forward." According to Goleman, this expression powerfully conveys the act of directing one's focus toward another person's inner world and attempting to understand their experience. He describes this structure as the "empathy triad," explaining empathy through three components: cognitive empathy, emotional empathy, and empathic concern (Goleman, 2017, pp. 10). Cognitive empathy is the product of an inquisitive mind in which curiosity plays a central role. It involves the effort to understand why another person chooses a particular behavior, how they interpret events, and from which perspective they act. This effort requires reconsidering the judgments formed and analyzing the emotions that arise from them. Alongside curiosity, self-awareness also comes to the forefront.

Over time, research on empathy has focused not only on emotional sharing but also on cognitive processes, raising the question of how individuals understand the mental states of others. In this context, the concept of *theory of mind* was developed in developmental psychology to explain the ability to grasp others' beliefs, intentions, thoughts, and desires, and it has been discussed in close relation to studies on cognitive empathy. Since cognitive empathy is also associated with the capacity to understand others' perspectives and mental states, many researchers have evaluated these two concepts as closely related (Hogan, 2022, p. 159). Focusing on the development of theory of mind in childhood, Henry M. Wellman examined how children comprehend mental processes in his work *The Child's Theory of Mind*. According to Wellman (1990, pp. 1–8), children's ability to relate behaviors to mental states such as beliefs, desires, and intentions is an important indicator of cognitive development in their understanding of the social world. Through this process,

children learn to distinguish between their own mental states and those of others, thereby developing the ability to evaluate different perspectives and to make sense of others' behaviors.

Research in social neuroscience highlights the necessity of separating one's own emotions while taking another person's perspective during cognitive empathy. For this reason, cognitive empathy is also defined as the ability to use information gained from reading emotions in interpersonal communication (Gica et al., 2021, p. 228). In this sense, cognitive empathy plays a central role in human interaction. The capacity to understand how others behave and what they feel enables the establishment and maintenance of constructive relationships in social life. On the other hand, studies in neuropsychology show that individuals who engage in bullying or display antisocial behavior may exhibit deficits in empathy. When examined closely, these deficits appear to be more strongly related to the cognitive dimension of empathy (Chang et al., 2021, p. 1; Reniers, Abu-Akel, & Seara-Cardoso, 2022, pp. 1–3). Similarly, Simon Baron-Cohen, who has conducted research on empathy for more than thirty years, positions borderline personality disorder, narcissistic personality disorder, and psychopathy on the zero degree and negative spectrum of empathy through the scale he developed. According to Baron-Cohen (2023, p. 23), empathy, encompassing both affective and cognitive dimensions, is a fundamental social capacity that enables individuals to direct their attention not only to themselves but also to others. A lack of empathy, in turn, may accompany various problems in interpersonal relationships and psychopathological patterns.

The importance of empathy for individual and social life has also drawn attention in the field of education. Social workers and educational researchers, recognizing the risks of empathy deficits, have emphasized that especially the cognitive dimension of empathy is a skill that can be developed and supported through education. In this regard, numerous studies, reports, and intervention programs have been designed. Reports by institutions such as CASEL and UNESCO highlight the need to focus on children's social and emotional development. In contemporary educational approaches, supporting empathy and self-regulation skills is considered part of preventive and protective efforts against peer bullying and violence (CASEL, 2020; Fletcher, 2016, pp. 185–198; Jaya et al., 2025; Popa, 2024; Quílez-Robres et al., 2023; Savina et al., 2025; Schertz, 2007, pp. 185–198; UNESCO, 2024).

1.3. The Relationship Between Philosophy for Children and Cognitive Empathy

Philosophy for Children (P4C) is an educational approach that encourages students to engage in dialogue within communities of inquiry, justify their ideas, evaluate different perspectives, and reconstruct their views. In P4C sessions, students not only express their own thoughts but also have the opportunity to listen carefully to others, attempt to understand alternative viewpoints, and critically evaluate them. In this respect, P4C is thought to support skills related to perspective-taking and understanding others' mental states, which are closely linked to cognitive empathy. Focusing on the relationship between empathy and P4C, Mathew Schertz (2007) argues that considering empathy merely as an affective response is insufficient. He evaluates empathy as a cognitive and communicative capacity that involves perspective-taking, meaning-making, and dialogue. Boler (1997) suggests that approaches which define empathy only through emotional identification with others' suffering may obscure differences and produce a superficial understanding of empathy. In response to this critique, Schertz views dialogue as a fundamental pedagogical condition for the development of empathy and maintains that learning environments where different perspectives are negotiated foster cognitive empathy (Schertz, 2007, pp. 185–198).

Fisher (2013), when explaining Lipman's concept of *caring thinking*, relates this mode of thought to empathy and emotional intelligence, considering sensitivity to others' feelings and thoughts as one of its core features. However, the relationship between P4C and cognitive empathy is not limited to caring thinking. Dialogues conducted within the community of inquiry require students to attempt to understand different perspectives, evaluate reasons, and take into account the viewpoints of others. In this way, the program provides a learning environment that supports the fundamental components of cognitive empathy, namely perspective-taking and understanding mental states.

The primary school years represent a crucial developmental stage in which children begin to overcome the cognitive egocentrism observed in early childhood. At this stage, their abilities to take perspectives and to understand others' thoughts, beliefs, and intentions develop significantly. For this reason, it is important that educational settings provide learning experiences that foster the development of cognitive empathy. Communities of inquiry created within P4C allow students to encounter diverse viewpoints, evaluate them, and reconstruct their own ideas. Thus, children are encouraged to think not only from their own perspective but also from the perspectives of others.

For this reason, the present study aims to examine the impact of P4C on children's cognitive empathy. A review of the literature shows that numerous studies have focused on the direct effects of P4C on thinking skills. Recent meta-analyses clearly demonstrate a strong emphasis on critical and creative thinking skills (Kilby, 2025; Wei & Chen, 2025; Onur, 2023). In contrast, cognitive empathy has been addressed relatively less in P4C research. Therefore, this study focuses on cognitive empathy as one of the less explored dimensions of P4C. Considering that most studies in the literature have concentrated on the preschool period, the scope of this research has been defined as the primary school level. In this way, the study is expected to contribute to the literature by revealing the effects of P4C on cognitive empathy during a developmental stage that has been examined less frequently.

2. Methodology

This study was conducted within the framework of a quantitative research approach to examine the effects of Philosophy for Children (P4C) practices on students' levels of cognitive empathy. A quasi-experimental design with pre-test and post-test control groups was employed. Quasi-experimental designs are frequently preferred in educational settings where existing classes are used and random assignment of participants is not possible, yet the aim is to investigate the impact of experimental interventions (Cohen, Manion, & Morrison, 1994; Karasar, 2005).

During the research process, a pre-test was administered to both the experimental and control groups before the intervention. Students in the experimental group participated in P4C sessions for six weeks, while students in the control group continued with the regular curriculum without any intervention. At the end of the process, a post-test was administered to both groups to examine changes in students' cognitive empathy levels.

The data obtained were analyzed using the Jamovi statistical package program. Before starting the analyses, the normality assumption was tested with the Shapiro–Wilk test, and skewness and kurtosis values were also evaluated. Skewness values ranged between –0.875 and 0.164, and kurtosis values between –1.066 and 0.950, indicating that the data showed a normal distribution. The assumption of homogeneity of variances was checked with Levene's test.

To examine the effects of socio-demographic characteristics on pre-test scores, a one-way analysis of variance (ANOVA) was conducted. A paired-samples t-test was used to determine the change between the experimental group's pre-test and post-test scores, while an independent-samples t-test was applied to compare the post-test scores of the

experimental and control groups. In addition, a mixed repeated measures ANOVA was performed to evaluate the effect of P4C on cognitive empathy and to compare changes over time between the experimental and control groups. In this analysis, time (pre-test and post-test) was treated as the within-group factor, and group (experimental and control) as the between-group factor. The level of statistical significance was set at 0.05.

2.1. Participants

The study was conducted with 40 fourth-grade students enrolled in a public school in Alanya, Antalya. Of the two existing classes, one was randomly assigned as the experimental group (n = 20) and the other as the control group (n = 20). Demographic information such as gender, number of siblings, and socioeconomic status was collected through an information form prepared by the researcher.

Prior to the study, ethical approval was obtained from the Ethics Committee for Social and Human Sciences Research at Akdeniz University (Decision No. 1279598, dated 31.07.2025). In addition, permission to conduct the research was granted by the Ministry of National Education (Application No: MEB.TT.2025.028648.03). Participation in the study was voluntary, and informed consent forms were obtained from the students' parents. Throughout the research process, the confidentiality of participants' identities was protected, and the data collected were used solely for scientific purposes.

2.2. Measures

In the experimental group, Philosophy for Children (P4C) sessions were conducted once a week for six weeks. Each session lasted 60 minutes and was facilitated by the researcher, who also works as a guidance counselor and is pursuing doctoral studies in philosophy.

A structured lesson plan was prepared in advance by the researcher for each session. These plans included stimulus material, the formulation of philosophical questions, the community of inquiry process, and stages in which students justified their ideas and evaluated different perspectives. The alignment of the sessions with P4C principles was carefully monitored. In preparing the lesson plans, key sources in the field of P4C were consulted, particularly Akkocaoğlu Çayır's (2024) *Philosophy for Children (P4C) Guide for Teachers*, which provided examples and recommendations for structuring the six-week program. The sessions were based on the principles of dialogue and community of inquiry, using stories drawn from mythology, fairy tales, and real-life events as stimulus materials. Themes such as freedom, reality, justice, courage, moderation, and compassion were explored, with the aim of fostering conceptual inquiry, perspective-taking, and reasoned thinking skills.

Sessions were held in the school library, arranged in a circle to allow students to maintain eye contact with one another. Each session began with the reading of a story, which was paused at certain points to direct students' attention to events, characters, and conceptual problems in the text. Discussions progressed from factual questions to conceptual and philosophical ones, encouraging students to justify their ideas, listen to different viewpoints, evaluate alternatives, and reconsider their positions. Throughout the process, the researcher did not assume the role of a knowledge transmitter but acted as a facilitator in line with the core principles of P4C.

In all sessions, the lesson plan prepared according to P4C principles was followed. Although different stimulus stories were used in each session, the principles of community of inquiry, dialogue-based discussion, and facilitation were consistently maintained. Since the experimental and control groups were drawn from different classes, their classroom

teachers differed; however, all P4C sessions were conducted by the researcher. Students in the control group did not participate in any P4C activities during the study and continued with the regular curriculum.

2.3. Data Collection Instruments

Demographic Information Form; A demographic information form prepared by the researcher was used to identify the characteristics of the participants. The form included questions regarding students' gender, number of siblings, mother's employment status, father's employment status, and perceived socioeconomic level.

Reading the Mind in the Eyes Test – Child Version (RMET-C); To assess students' levels of cognitive empathy, the child version of the *Reading the Mind in the Eyes Test* (RMET-C), developed by Simon Baron-Cohen and colleagues, revised in 2001, and adapted into Turkish by Yıldırım et al. (2011), was used (Baron-Cohen et al., 2001). RMET-C is a widely used instrument in the fields of social cognition and cognitive empathy. It evaluates individuals' ability to interpret another person's feelings, thoughts, and mental states based solely on limited social cues from the eye region (Warrier et al., 2020).

Cognitive empathy is considered a multidimensional construct involving mental processes aimed at understanding others' emotions, thoughts, intentions, and perspectives. In developmental psychology, cognitive empathy and theory of mind are regarded as closely related constructs, as both concern the capacity to comprehend others' mental states. Within this framework, RMET-C does not comprehensively measure all components of cognitive empathy but specifically assesses the ability to infer internal states, recognize mental conditions, and take perspectives based on limited social cues. Therefore, in this study, RMET-C was used as an indicator of the dimension of cognitive empathy related to "understanding and interpreting another's mental state." The child version of the test consists of 28 items, each presenting a photograph showing only the eye region, accompanied by four response options—one correct and three distractors. Participants are asked to select the mental state that best matches the eye expression. Higher scores indicate stronger cognitive empathy and mental state inference skills. In the Turkish adaptation study, the KR-20 reliability coefficient was reported as 0.72 (Yıldırım et al., 2011). In the present study, internal consistency analysis yielded a Cronbach's α reliability coefficient of 0.747.

Pre-test and post-test administrations were conducted in a quiet classroom arranged for testing. The researcher administered the test individually, with students entering the room one by one. Necessary instructions were provided before the test, and only the researcher and the student were present during administration.

3. Results

The study was conducted with 40 fourth-grade primary school students enrolled in a public school in Alanya, Antalya. Within the scope of the research, one class of 20 students was designated as the experimental group, while the other class of 20 students was assigned as the control groupThe findings regarding the socio-demographic characteristics of the students in both the experimental and control groups are presented in Table 1.

Table 1

Socio-Demographic Characteristics of Experimental and Control Group Participants

Variable	Category	Experimental Group *n* (%)	Control Group *n* (%)
Gender	Male	10 (50.0)	7 (35.0)
	Female	10 (50.0)	13 (65.0)
Mother's Employment	Yes	13 (65.0)	11 (55.0)
	No	7 (35.0)	9 (45.0)
Father's Employment	Yes	20 (100.0)	19 (95.0)

	No	—	1 (5.0)
Socio-Economic Status	Good	12 (60.0)	7 (35.0)
	Moderate	8 (40.0)	13 (65.0)
Number of Siblings	*M* (*SD*)	1.05 (0.61)	1.70 (0.92)
	Min–Max	0–2	0–3

When Table 1 is examined, it is observed that the gender distribution in the experimental group is balanced (50% male, 50% female), whereas the control group consists predominantly of female students (65%). Mothers' employment rates are higher in the experimental group (65%) compared to the control group (55%). Nearly all fathers in both groups are employed, with a slightly higher rate in the experimental group (100%) than in the control group (95%). In terms of socio-economic status, the majority of students in the experimental group reported a "good" status (60%), whereas most students in the control group reported a "moderate" status (65%). Regarding the number of siblings, the experimental group has a lower mean (M = 1.05, SD = 0.61) compared to the control group (M = 1.70, SD = 0.92). Although some differences were observed between the groups in terms of gender distribution, socioeconomic status, and number of siblings, the effects of these variables on the baseline pre-test scores of the *Reading the Mind in the Eyes Test* were analyzed separately, and the results are presented in Table 2.

Table 2

ANOVA Results of Experimental and Control Group *Students'* Pre-Test Scores *on the Reading the Mind in the Eyes Test According to Demographic Variables*

Variable	Experimental Group SS	df	F	p	Control Group SS	df	F	p
Gender	8.32	1	0.96	.344	0.57	1	0.07	.793
Number of Siblings	20.72	2	1.19	.332	50.53	3	2.12	.147
Mother's Employment	23.32	1	2.69	.123	14.36	1	1.81	.202
Socioeconomic Status	13.95	1	1.61	.226	0.26	1	0.03	.860
Error	121.49	14			103.31	13		

As shown in Table 2, the pre-test scores of the experimental and control groups on the Reading the Mind in the Eyes Test did not differ significantly across demographic variables (p>.05). The F values obtained for gender, number of siblings, mother's employment status, and socioeconomic status were not statistically significant. This finding indicates that the socio-demographic differences observed in Table 1 did not have a meaningful effect on students' baseline pre-test scores in the Reading the Mind in the Eyes Test.

Table 3

Independent Samples t-Test Results of Experimental and Control Group Students' Pre-Test Scores

Scale	t	df	p
Reading the Mind in the Eyes Test	-1.416	38	.165

As shown in Table 3, there was no statistically significant difference between the experimental and control groups in their pre-test scores on the *Reading the Mind in the Eyes Test* (t = -1.416, df = 38, p = .165). This finding indicates that, prior to the intervention, the experimental and control groups demonstrated similar levels of cognitive empathy. Therefore, any differences observed in the post-test can be appropriately interpreted in the context of the intervention's effects.

Table 4

Mixed Repeated Measures ANOVA Results of Experimental and Control Groups' Pre-Test and Post-Test Scores on the Reading the Mind in the Eyes Test

Effect	SS	df	MS	F	p	ηp²
Time	31.25	1	31.25	12.70	.001	.250
Time × Group	84.05	1	84.05	34.10	<.001	.473
Error	93.70	38	2.47			

As shown in Table 4, the mixed repeated measures ANOVA conducted to examine changes in the *Reading the Mind in the Eyes Test* scores revealed a significant main effect of time, $F(1, 38) = 12.70$, $p = .001$, $\eta p^2 = .250$. In addition, the interaction effect between time and group was also significant, $F(1, 38) = 34.10$, $p < .001$, $\eta p^2 = .473$. This finding indicates that the changes in pre-test and post-test scores differed significantly between the experimental and control groups. In other words, the increase in cognitive empathy scores among students in the experimental group who participated in the P4C intervention was significantly greater than the change observed in the control group.

Table 5

Paired Samples t-Test Results Comparing the Pre-Test and Post-Test Scores of Students in the Experimental Group on the Reading the Mind in the Eyes Test

Measurement	t	df	p
Pre-Test – Post-Test	-5.92	19	< .001

When Table 5 is examined, it is observed that there is a statistically significant difference between the pre-test and post-test scores of the experimental group on the Reading the Mind in the Eyes Test ($t = -5.92$, $df = 19$, $p < .001$). This finding indicates that the implemented program led to a significant improvement in students' cognitive empathy levels. The parametric test results demonstrate that the change measured in the experimental group is both strong and statistically significant.

Table 6

Comparison of the Post-Test Scores of Students in the Experimental and Control Groups on the Reading the Mind in the Eyes Test

Group	N	Mean	SD	t	df	p
Experimental	20	20.2	1.79	3.47	38	.001
Control	20	17.4	3.05			

When Table 6 is examined, it is observed that there is a statistically significant difference between the post-test scores of the experimental and control groups ($t = 3.47$, $df = 38$, $p = .001$). The mean score of the experimental group was 20.2 ($SD = 1.79$), whereas the control group had a mean score of 17.4 ($SD = 3.05$). This result demonstrates that the implemented program significantly increased the cognitive empathy levels of the students in the experimental group.

4. Discussion

According to Lipman, children evaluate multiple ideas through the community of inquiry and learn to justify their own reasoning. In this process, students not only express their own thoughts but also listen to the reasoning of their peers, thereby gaining the opportunity to consider events from different perspectives. The process of understanding diverse viewpoints and comparing them with one's own ideas supports perspective-taking, which is one of the core components of cognitive empathy.

As students' reasoning skills develop, they engage with many individuals and begin to see the world through lenses they have never experienced before (Fisher, 2013, p. 22). Encountering different ideas enables them to establish cognitive empathy toward the holders of those ideas. Lipman's (2003) notion of "caring thinking" operates as a spontaneous and natural process through dialogue. The stories used in P4C nurture children's imagination while helping them ground their thoughts in emotions. This process contributes to students' ability to integrate emotions into critical thinking, making emotions an integral part of reasoning.

Questioning the feelings, thoughts, and intentions of characters in stories encourages students to make inferences about the characters' mental states. This aligns theoretically with the mental state inference skills assessed by the *Reading the Mind in the Eyes Test*, which was employed in this study to evaluate cognitive empathy.

Recent studies have also demonstrated that P4C supports both the cognitive and emotional development of children (Işıklar & Öztürk, 2022; Şipar & Akkocaoğlu Çayır, 2025; Karadağ & Demirtaş, 2018; Boynueyri & Güven, 2025; Kilby, 2025). The literature highlights that P4C enhances students' ability to grasp different perspectives, engage in empathetic thinking, and develop critical thinking skills. The increase in cognitive empathy observed in this study is considered to stem not only from the content of the stories but also from the interactive processes within the community of inquiry—such as dialogues, evaluating peers' reasoning, and discussing diverse viewpoints.

Our findings are consistent with previous research indicating that P4C practices can foster cognitive empathy (Gasparatou et al., 2020; Taş, 2017; Mehdiyev & Tozduman Yaralı, 2020). Although the number of studies directly examining the impact of philosophy with children on cognitive empathy is limited, research has shown that P4C supports students' empathy, perspective-taking, and social interaction skills (Siddiqui, Gorard, & See, 2019). In the existing literature, studies on P4C and empathy have generally addressed empathy within broader value frameworks, while research focusing specifically on cognitive empathy as a narrow and distinct dimension remains scarce. Therefore, this study makes an important contribution to the limited body of research on cognitive empathy.

The findings suggest that P4C is not only an approach that develops critical thinking but also one that supports students' socio-cognitive processes of understanding others' thoughts and perspectives. Previous studies have predominantly focused on preschool samples. Conducting this study with primary school students provides a unique contribution to the limited research on P4C and cognitive empathy. In this respect, the study offers experimental evidence of the potential of P4C to foster cognitive empathy during the primary school years.

Nevertheless, certain methodological limitations should be taken into account when interpreting the findings of this study. The *Reading the Mind in the Eyes Test* used in the research does not assess all dimensions of cognitive empathy; rather, it specifically evaluates the ability to infer and interpret others' mental states. Therefore, the findings should be interpreted within the framework of this particular dimension of cognitive empathy.

In addition, the possibility that the P4C process may have enhanced students' emotional awareness, thereby indirectly influencing their test performance, should not be overlooked. The awareness of the experimental group students that they were participating in a special intervention may also have produced a Hawthorne effect. Furthermore, since the experimental and control groups were drawn from different classrooms, potential influences stemming from teachers' communication styles and classroom climate could not be fully controlled. Future research would benefit from studies in which these variables are more rigorously controlled, and in which diverse samples and multiple instruments for measuring cognitive empathy are employed. Such studies are expected to provide further contributions to the literature.

5. Conclusions and Recommendations

The study was conducted with 40 fourth-grade primary school students attending a public school in Alanya, Antalya. Philosophy for Children (P4C) sessions were implemented with the experimental group over a six-week period, while no intervention was applied to the control group. The *Reading the Mind in the Eyes Test* was administered to both groups

before and after the intervention to examine changes in students' cognitive empathy levels. The findings revealed that P4C practices significantly improved students' cognitive empathy skills. Moreover, the results of the mixed repeated measures ANOVA indicated that the improvement observed in the experimental group was significantly greater than that in the control group. These findings are consistent with previous studies. Given the limited number of experimental studies directly investigating the impact of P4C on cognitive empathy, this research provides an important contribution to the literature.

In line with the findings of this study, several recommendations can be made for researchers and practitioners. This research was conducted with fourth-grade primary school students and limited to a six-week intervention. Future studies are recommended to be carried out with different age groups, larger samples, and longer intervention periods. In addition, the use of complementary measurement tools that can assess different dimensions of cognitive empathy would contribute to presenting the effects of P4C practices more comprehensively. While the Philosophy for Children approach primarily focuses on cognitive development through thinking skills, it is also suggested that more studies be conducted on socio-emotional variables such as empathy, curiosity, and anxiety. New assessment tools and materials should be developed to monitor the outcomes of philosophy education with children. Story-based activities help children develop different perspectives and strengthen their empathy skills; therefore, it is recommended that the materials used in P4C be enriched with stories specific to Turkish culture. Finally, integrating P4C practices into the guidance and socio-emotional development programs conducted by the Ministry of National Education, and developing comprehensive implementation programs through collaboration between teachers and academics, may contribute to the systematic and widespread use of this approach in educational settings.

Declaration of Conflicts of Interest

The author declares no conflicts of interest.

Declaration of Generative AI Use

In the preparation of this manuscript, the author made limited use of a AI tools (e.g., ChatGPT and Microsoft Copilot) for language editing, grammar correction, and clarity enhancement. All scientific content, analyses, and conclusions were developed independently. Full ethical and scholarly responsibility for the use of this tool rests with the author.

Ethical Statement

Prior to the study, ethical approval was obtained from the Ethics Committee for Social and Human Sciences Research at Akdeniz University (Decision No. 1279598, dated 31.07.2025). The study fulfilled all ethical requirements regarding human participants, and informed consent was obtained from all participants.

Author Contributions

As the sole author, Rumeysa Uluurgun is responsible for all aspects of the research, including conceptualization, methodology, data collection, analysis, and the writing and final revision of the manuscript.

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