

How empathizing develops and affects well-being throughout childhood

Sabbiana Cunsolo, Dominic Richardson and Marloes Vrolijk

Office of Research – Innocenti Working Paper
WP 2021-13 | Dec 2021



UNICEF OFFICE OF RESEARCH – INNOCENTI

The Office of Research – Innocenti is UNICEF’s dedicated research centre. It undertakes research on emerging or current issues in order to inform the strategic direction, policies and programmes of UNICEF and its partners, shape global debates on child rights and development, and inform the global research and policy agenda for all children, and particularly for the most vulnerable.

UNICEF Office of Research – Innocenti publications are contributions to a global debate on children and may not necessarily reflect UNICEF policies or approaches.

UNICEF Office of Research – Innocenti receives financial support from the Government of Italy, while funding for specific projects is also provided by other governments, international institutions and private sources, including UNICEF National Committees.

This project was co-funded by The Learning for Well-being Foundation and the Fetzer Institute.

LEARNING FOR WELL-BEING FOUNDATION

The Learning for Well-being Foundation convenes catalysing partnerships aimed at bringing the voices and qualities of children more fully into creating well-being for themselves and their communities. Its activities cultivate the capacities of children, and the adults who interact with them, to transform each other and the world, while realising their unique potential throughout their lives. To know more visit www.learningforwellbeing.org.

FETZER INSTITUTE

The Fetzer Institute is helping build the spiritual foundation for a loving world. Working with thought leaders, the Institute develops programmes, research projects, convenings and funding collaborations in the sectors of faith, spirituality, democracy, education and organizational culture. Learn more at fetzer.org.

The findings, interpretations and conclusions expressed in this paper are those of the authors and do not necessarily reflect the policies or views of UNICEF.

This paper has been reviewed by an internal UNICEF panel consisting of staff with subject matter or methodological expertise.

The text has not been edited to official publications standards and UNICEF accepts no responsibility for errors.

The designations employed in this publication and the presentation of the material do not imply on the part of UNICEF the expression of any opinion whatsoever concerning the legal status of any country or territory, or of its authorities or the delimitations of its frontiers.

Extracts from this publication may be freely reproduced with due acknowledgement. Requests to utilize larger portions or the full publication should be addressed to the Communications Unit at: florence@unicef.org.

For readers wishing to cite this document, we suggest the following form: Cunsolo, S., Richardson, D., Vrolijk, M. (2021). *How empathizing develops and affects well-being throughout childhood*, Innocenti Working Paper 2021-13, UNICEF Office of Research – Innocenti, Florence.

No conflicts of interest were reported by the authors.

Correspondence should be addressed to:

UNICEF Office of Research – Innocenti
Via degli Alfani, 58
50121 Florence, Italy
Tel: (+39) 055 20 330
Fax: (+39) 055 2033 220
florence@unicef.org
www.unicef-irc.org
twitter: @UNICEFInnocenti
[facebook.com/UnicefInnocenti](https://www.facebook.com/UnicefInnocenti)

© 2021 United Nations Children’s Fund (UNICEF)

Graphic design: Alessandro Mannocchi, Rome

Cover illustration: Sandbox Inc.

How empathizing develops and affects well-being throughout childhood

Sabbiana Cunsoloⁱ

Dominic Richardsonⁱⁱ

Marloes Vrolijkⁱⁱⁱ

ⁱ Research Consultant, UNICEF Office of Research – Innocenti

ⁱⁱ Chief, Social and Economic Policy Analysis, UNICEF Office of Research – Innocenti

ⁱⁱⁱ Research Consultant, UNICEF Office of Research – Innocenti

ABSTRACT

The purpose of this study is to map the empirical and theoretical evidence of children’s ability to show ‘empathy’ as a core capacity for life within the Learning for Well-Being Foundation’s (L4WB) theoretical framework, and how it interacts with overall child development (ages 0–18). More specifically, this review aims to contribute to existing knowledge in three ways: (i) it adds to the evidence of empathy as a core capacity for children from a childhood development perspective, (ii) it assesses the interaction of empathy with other core capacities and with overall child well-being, and (iii) it looks at the development of empathy as a core capacity among significant adults in children’s lives (e.g., teachers, educators, parents). Results show a significant link between children’s levels of empathy and their social functioning, such as prosocial behaviours, bullying behaviours and quality of relationships with parents and peers. Moreover, evidence shows that the development of empathy in children depends both on biological and innate factors (such as neural development or individual temperament), and on socialization factors (relationships with caring adults and peers). Studies tended to focus on the early and middle childhood age range, and, with the exception of ‘noticing’, are not linked to other core capacities. There were no studies that assessed the levels or application of ‘empathy’ among adults working with children, most notably teachers in schools. However, a number of studies showed a relationship among the type and quality of the parent–child attachment relationship, parenting styles behaviours, and the levels of empathy in children.

CONTENTS

1. INTRODUCTION	5
2. CONCEPTUAL UNDERPINNINGS	6
3. METHOD	7
3.1 Applying the Matrix of Four Perspectives	8
4. RESULTS	9
4.1 Dimensions of empathy and its development in children	9
4.2 Empathy and bullying	11
4.3 Empathy and social functioning	12
4.4 Empathy and parent–child relationships	14
4.5 Empathy and training interventions	15
4.6 Empathy and spirituality	16
4.7 Empathy and its physical, emotional, mental and spiritual dimensions	16
5. DISCUSSION	18
5.1 Complementarity with other core capacities	20
5.2 Limitations	20
5.3 Implications for practice and next steps	20
REFERENCES	22
APPENDIX A: INCLUSION CRITERIA	25

1. INTRODUCTION

A growing body of evidence suggests that successful performance in school, work and life needs to be supported by a wide range of skills, the development of which should be nurtured and expanded throughout childhood. The role of these life competencies is gaining increasing interest in academic and public sectors. Despite a growing amount of research on children's life skills, very few studies have attempted to uncover the capacities that support the development of the knowledge and skills necessary for learning in both formal and informal (or everyday) settings; that is, the building blocks of these 21st-century skills (O'Toole, 2016). An overview of existing evidence across domains and contexts is needed to inform priority actions and interventions taken by policymakers and professionals working with children. Specifically, there is a need to understand how these capacities evolve throughout childhood, how they can be nurtured by practitioners, educators and caregivers, and how they are linked.

The purpose of this study is to map the existing evidence of children's ability related to 'empathy' as a 'core capacity'. The aim is to use this learning to bring about real, positive and efficient changes in general policies and practices for child development. According to the Learning for Well-Being Foundation (L4WB) empathy is part of a set of core capacities that are naturally present in children and can be cultivated through various practices across a child's lifetime. From a developmental perspective, capacities such as empathy are commonly considered necessary for children to achieve optimal development and reach their full potential. To the best of our knowledge, this is the first attempt to map the existing evidence on cultivating empathy as a key core capacity and understanding age-related development, links to well-being and other core capacities, and the levels and application of empathy among significant adults in children's lives.

In this study, the literature on empathy was reviewed and organized according to the research streams resulting from a search conducted with multiple keywords and strict inclusion criteria. The relationship between empathy and well-being was explored holistically, and the evidence-based literature found was mapped onto the approach to development proposed by the L4WB theoretical framework.

This literature review has four sections. The first gives an overview of the background and general context of the project. The second details the methodology employed to search for the literature and the selection of studies. In the third section, the results are described. The fourth section discusses these results in terms of main findings, data quality, limitations, contribution to existing knowledge and implications for future research.

2. CONCEPTUAL UNDERPINNINGS

According to L4WB’s definition:

Empathy is central to relating and engaging with other people – a sharing that creates stronger social bonds. Equally, it involves offering that experience to oneself, and receiving it from others (allowing yourself to be changed through receiving new understanding from others). Empathy helps us to see one another – to stop and listen. For full expression, it requires a complete cycle of understanding (to see from another’s perspective), to be touched in our hearts (to experience the feeling with the other), and choosing to make this shared experience operational through action. (O’Toole et al., 2016, p. 26).

According to the L4WB hypothesis, each core capacity can be experienced through each perspective (mental, emotional and physical) and should have a spiritual dimension. Based on the L4WB definitions for empathy, the Matrix of Four Perspectives is applied to categorize all studies identified in this paper (see Table 1 and Table 3).

Applying the matrix to the ‘empathy’ capacity contributes to understanding how the literature allows for the theoretical classification of this capacity within L4WB’s four perspectives. The results section compares all studies placed in the matrix as a full body of evidence. More background information on the development of the matrix is available in the MWM overarching background paper.

Table 1: Matrix of Four Perspectives on empathizing

			SPIRITUAL (S)
	<i>content</i> ‘what’	<i>process</i> ‘how’	<i>intention</i> ‘why’
MENTAL (M)	A <i>mental perspective</i> refers to “our cognitive and rational processes” and the functions of “envisioning, planning and valuing” (O’Toole, 2016, p. 17).	“A <i>mental</i> expression of empathizing can be associated with what has been identified as cognitive empathy, the capacity to <i>see through the other’s eyes</i> ” (Learning for Well-Being, 2019, p. 5).	“At a <i>spiritual</i> level, empathizing is expressed as universal love for all life, for all humans, for the cosmos (compassion at this broad level is a relevant term) – it has subtle qualities of an active felt understanding encompassing the expression of all aspects” (Learning for Well-Being, 2019, p. 5).
EMOTIONAL (E)	An <i>emotional perspective</i> refers both to “our intrapersonal functions – our inner feelings, motivations and our interpersonal functioning – [and] our interactions with others” (O’Toole, 2016, p. 17).	“An <i>emotional</i> expression of empathizing can be associated with affective empathy, as in the capacity to “be in someone’s skin”, feel what they feel (i.e. sad)” (Learning for Well-Being, 2019, p. 5).	
PHYSICAL (P)	A <i>physical perspective</i> refers to “the physical senses, to our bodies, and to the material and natural environments” (O’Toole, 2016, p. 17).	“A <i>physical</i> expression of empathizing is associated with sensing what is needed and/or acting to support another, often without words” (Learning for Well-Being, 2019, p. 5).	

3. METHOD

To conduct the literature review on the capacity for empathy in children, a systematic search was conducted in the following electronic databases: Google Scholar, ERIC, PubMed and APA PsychNet.

The screening stage retained only peer-reviewed studies. To be included, studies had to fulfil several criteria determined prior to starting the systematic search in order to reduce potential bias. First, each study had to focus on children; that is participants under the age of 18, or adults working with children (i.e., teachers, educators). The ethical considerations of each study were also reviewed but they were not an inclusion criterion for this review. Studies that explored the development of empathy solely in adults without any links to children or adolescents were excluded.

Furthermore, studies had to fulfil strict inclusion criteria: being conceptually coherent, using appropriate methods, and being scientifically valid (Appendix A). The time frame for inclusion of studies was set at 20 years (1999 to 2019), but some studies from the 1980s or 1990s were also considered based on their particular relevance for this study. All searches were recorded, including details for each search, number of studies included at the first screening stage, details of studies rejected at the eligibility stage and list of studies accepted. Duplicates were excluded in the identification phase (see *Figure 1*).

Guided by experts in areas of child development, the search was conducted using relevant and closely related keywords and combinations of keywords: empathy, AND child* OR adolescent* AND well-being OR development. All possible combinations of terms across keywords were used separately for each database (i.e., empathy AND child* AND wellbeing/ or empathy AND adolescent* and well-being, etc.).

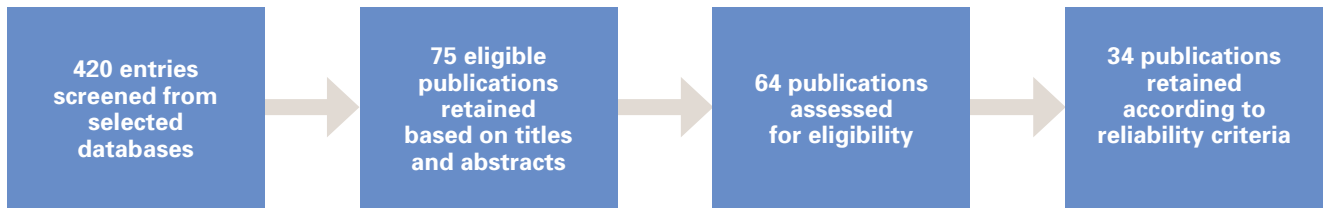
All findings were sorted based on the relevance criteria, and the first 25 studies were retained for screening for each keyword or combination of words used (e.g., the first 25 studies ordered by relevance found through Google Scholar for 'empathy AND child* AND wellbeing' were screened). For each combination of search terms, the relevant literature was screened by including empirical and theoretical studies.

Responding to the gap in evidence on empathy from the perspective of spirituality, an additional search round was conducted. To identify high-quality evidence relating to spirituality and empathy, the input of various experts was considered, including the Learning for Well-Being Foundation, the Fetzer Institute and individual researchers focusing on spirituality. Among a list of 44 articles, the same key search terms were used in the text of each full article or book chapter in order to search for connections of the 'empathy' capacity linked to spirituality. The inclusion and exclusion criteria were applied to the resulting list of spirituality articles. Moreover, the same quality assurance inclusion criteria as in the general 'empathy' searches applied (see *Appendix A*).

After this process, few studies that included the terms 'empathy', 'sympathy' and 'compassion', dealt with the subject in a meaningful way for the objective of this review. In addition, most of these studies did not explore deeply the connection with empathy (and related proxies) and spirituality in children or were not directed to a child population, not passing the inclusion criteria.

Overall, the searches uncovered 64 papers in total, 34 of which were retained for this study. Among the 30 papers excluded, 17 did not meet the inclusion standards, while 4 articles were found twice, and 5 articles/book chapters could not be downloaded from the databases.

Figure 1: Records flow



3.1 Applying the Matrix of Four Perspectives

Each of the studies included in the review was positioned within the Matrix of Four Perspectives to determine to what extent the L4WB hypothesis is supported with evidence. The matrix in Table 1 was applied to organize the articles in the various categories (mental, emotional, physical or spiritual) and levels (content, process or intention). Table 2 provides descriptions of possible studies for the various categories. These descriptions were applied to categorize the included studies and are based on L4WB publications.

After the matrix was applied, two of the authors compared the application matrix, discussed the placement of articles, raised questions, and made necessary adjustments. When agreement was not reached the authors checked the application of the matrix again and discussed the papers in question until agreement was reached. The inter-rater reliability was 97 per cent.

Table 2: Types of studies for the Matrix of Four Perspectives

	<i>content</i> 'what'	<i>process</i> 'how'	SPIRITUAL (S)
			<i>intention</i> 'why'
MENTAL (M)	Studies on the presence of the capacity in children.	Studies that explore how the capacity develops throughout childhood/ in response to specific individual interventions.	Studies that focus upon why children perform/show the capacity and studies which focus on spirituality explicitly.
EMOTIONAL (E)	Studies on the relationship between the capacity and feelings/interpersonal relationships.	Studies on how relationships and/or feelings relate to the capacity.	
PHYSICAL (P)	Studies that focus upon the physical aspects of the capacity, or on doing the action.	Studies into how doing the action or the physical environment relate to the capacity.	

4. RESULTS

Few studies were identified that apply the term ‘empathy’ purely in the sense of its development within children or adolescents in relation to well-being. Rather, there is a body of literature exploring the development of empathy itself. Of the 34 studies included in this review, 10 focus explicitly upon theoretical issues, 5 are systematic/literature reviews, and 19 are empirical studies. Most of these studies treat empathy as a capacity relevant for the social dimension of life, including the relationships with peers, parents and the socialization process in general. By contrast, studies rarely analyse directly the effects that empathy has on other core capacities or well-being outcomes.

4.1 Dimensions of empathy and its development in children

The literature shows different theoretical and empirical perspectives in the definitions and measures of empathy, according to different disciplines, such as social psychology, developmental psychology, neuroscience and philosophy (Cheng et al., 2014; Cuff et al., 2014; Decety et al., 2016; van Zonneveld et al., 2017). Although these disciplines have provided different theoretical frameworks, answers and methodologies, a common understanding of empathy can be found across the various perspectives. However, from the results that emerged in this literature review, the field of psychology is the one in which the concept of empathy has gained major attention.

Empathy “can be defined as the ability to feel or imagine another person’s emotional experience” (McDonald and Messinger, 2014, p. 2). Researchers in social psychology distinguish two types of empathy: cognitive empathy and affective empathy (Bensalah, 2016; van Zonneveld et al., 2017). Affective or emotional empathy consists of the capacity to feel the same emotion as another person (e.g., personal distress in response to perceiving another’s pain), and the capacity of feeling compassion or concern for another person, which refers to the concept of ‘sympathy’ (Spinrad and Gal, 2018). Cognitive empathy consists of the capacity to understand what another person is thinking (Boele et al., 2019; Decety et al., 2016). Perspective-taking is one component of cognitive empathy, and it is defined as the process by which an individual views a situation from another’s point of view (Catrine and Avram, 2019; Hirn et al., 2019; Van Lissa et al., 2014). An important feature of empathy is that while recognizing and sharing another’s emotions, the person still maintains a personal distinction between theirs and the other’s feelings and thoughts. For instance, while empathic children feel distress when someone else is physically hurt, they are not feeling the same physical pain in their body.

Recently, empathy in children has been studied in relation to social functioning and prosocial behaviour (i.e., cooperative behaviours, sharing). Hence, the capacity to empathize influences the development and the quality of social relationships and behaviours. The consequences of not being able to empathize can be observed in various disorders (e.g., the autism spectrum and antisocial personality disorder), meaning that the development of empathy in children is crucial in their development and for their relationships, and has a fundamental role in their socialization (Spinrad and Gal, 2018). The attachment theory in relation to parents has highlighted the importance of social relationships in the development of empathy in children. Notably, warm and supportive parenting plays a fundamental role in satisfying children’s emotional needs, and this can promote a better capacity to understand the emotions of others (Boele et al., 2019; Catrinel and Avram, 2019; Stern et al., 2014; Van Lissa et al., 2014).

Literature on empathy and children is consistent with the idea that empathy is a capacity found in infancy that develops according to biological and social factors (Cuff et al., 2014). For instance, Robinson (1994) found that the second year of life is a period of developmental change in empathy behaviours. In this longitudinal study, the author investigated developmental patterns of empathic attitudes in a sample of 158 children (observations collected at 14 and 20 months) and found that maternal warmth, family environment and child temperament consistently influenced developmental patterns of children and empathic attitude, in particular concerning socialization with family members.

McDonald and Messinger (2010) reviewed different empirical investigations that revealed evidence that very young children (0–3 years of age) possess empathic concern, although measuring empathy in very young children remains a challenge owing to their limited expression of cognitive and communication abilities. They proposed an interesting conceptual understanding of empathy development in children based on ‘contributors’ and ‘outcomes’. Contributors to the development of empathy are: within-child factors, in which genetics plays a fundamental role when looking at neural development and individual temperament; and socialization factors, which depend on the individual experiences of children with peers and parent–child relationships, and imitation behaviours (pp. 8–13). Outcomes associated with empathy development were: prosocial and altruistic behaviours; social competence (i.e., cooperative behaviours); and quality of relationships – that is to say, meaningful relationships (p. 18).

Among other disciplines, neuroscience has explored the development of empathy, showing that both biological and environmental processes facilitate the development of empathy in children (Trevvarthen and Aitken, 1994; Decety et al., 2016; Eisenberg et al., 2006; Iacoboni, 2009; Levy et al., 2019). Trevvarthen and Aitken (1994), studying the infant brain, noted that the learning processes of emotions and communication depend on imitative behaviours and relations that correspond to dynamic brain states of their caregivers. In addition, Cheng et al. (2014) in one study on the development of empathy in early and middle childhood (57 children, aged 3–9 years), showed that the cognitive response in the empathic process is predominant in the development of empathy in early life.

A theoretical study by Iacoboni (2009) discussed how social psychological investigations have demonstrated the existence of physiological mechanisms in the brain implemented by ‘mirror neurons’, which facilitate the processes of imitation. These mechanisms are supposed to facilitate the development of empathy and social behaviour among humans, including children. ‘Mirror neurons’ are thought to be the basis of the existence of empathy; that is, the ability to relate to others, to understand them, and to sympathize with their sufferings and joys. Mirror neurons work similarly when performing an action and when observing another person doing it (Rizzolatti and Craighero, 2004), which explains the experience of learning by imitation, emulation and empathy.

A few studies investigated the construct empathy in relation to other proxies and variables, such as sympathy, compassion (Spinrad and Gal, 2018; Horsthemke, 2015), theory of mind (Xavier et al., 2013; Bensalah et al., 2016), and intelligence (Schwenck et al., 2014).

For instance, Horsthemke (2015) studied empathy in relation to sympathy or compassion, characterized by an understanding of a person’s internal thoughts and feelings and imagining what it would be like to be experiencing those same thoughts and feelings. The author discussed how empathy can be taught and fostered in the learning environment, which is essential for the moral and cognitive education of children (p. 7). Therefore, parents and teachers can teach empathy by demonstrating to children how to empathize, showing them respectful behaviours, sympathy and sensitivity.

Xavier et al. (2013) discussed empathy in relation to the theory of mind. Theory of mind “designates the cognitive processes that allow the representation and understanding of one’s own states of mind (faiths [sic], desires, intentions) and those of others as well as the ability to predict one’s actions” (Xavier et al., 2013, p. 291). Starting from this definition the authors proposed a model in which theory of mind processes and empathic characteristics (specifically emotional sharing) are integrated. By looking at the relationship between children and peers when playing together, at different age stages (0–3, 4–6/7; 6/7 onwards), the authors identified a behavioural model based on imitation and visuospatial abilities, which seemed fundamental for the development of empathy. Similarly, Bensalah et al. (2016) conducted a study on 158 children 4–6 years old, that revealed that cognitive empathy was related to both affective perspective-taking and theory of mind. Consequently, cognitive empathy, which refers to the capacity to recognize another’s mental state, could be thought of as being part of the theory of mind.

Schwenck et al. (2014) studied biological factors (within-child factors) in relation to levels of empathy in 134 children (age range 7–17 years). Notably, they investigated the influence of age, sex and intelligence (IQ) on cognitive and emotional empathy. To measure these variables children had to watch short movies with scenes showing different social interactions. Afterwards children were tested on three variables: emotion recognition, perspective-taking and emotional empathy. Findings suggested that age affected cognitive empathy (specifically, perspective-taking) while sex and intelligence did not have any significance effects on emotional empathy and only minimally affected cognitive empathy.

4.2 Empathy and bullying

Six studies look at how behavioural problems and bullying attitudes of children are linked to their levels of empathy.

In a systematic review Van Noorden et al. (2015) investigated the association of cognitive and affective empathy and bullying episodes, which included different types of behaviours: ‘perpetration’, ‘victimization’, ‘defending’ and ‘bystanding’. Evidence showed that bullying behaviours in children (perpetrators) are generally negatively associated with empathy, and are associated to a greater extent with affective empathy. Among the studies reviewed the researchers also found that victimization was associated with cognitive empathy, while defending was positively associated to both cognitive and affective empathy. Bystanding showed controversial findings in its association with empathy, which did not allow for a clear reliability of results (p. 645).

Longobardi et al. (2020) conducted a survey study in Italy on 430 adolescents (51.6% female, mean age 13 years), on the link between their empathy levels and bullying episodes at school. The authors were particularly interested in whether adolescents were motivated to defend their schoolmates when facing a bullying situation. Findings revealed that students with high levels of empathic skills were motivated to undertake defending behaviours towards schoolmates who were victims of bullying incidents.

In one empirical study, You et al. (2015) investigated bullying behaviours in 756 adolescents from a middle school (grades 7–9) in Korea by analysing their empathy and attachment levels as variables. The authors assumed that the quality of relationships (levels of attachment) with parents, peers and school environments are related to bullying behaviours, moderated by high levels of empathy skills. Overall, sex differences were statistically significant for empathy and bullying behaviours, with girls showing higher empathy (affective and cognitive), and boys reporting more episodes of bullying

behaviour (p. 599). Girls with greater 'maternal attachment' showed fewer bullying behaviours, while their peer attachment, mediated by high levels of empathy, had an indirect effect on bullying. Conversely, boys who had greater attachment to the school environment showed less bullying behaviours, while 'maternal attachment' and 'peer attachment' had indirect effects on bullying (p. 601), mediated exclusively by cognitive empathy.

Williford et al. (2016) conducted a longitudinal study in the USA to investigate levels of cognitive empathy among 431 10-year-old students in relation to their behaviour in bullying episodes (being perpetrators or victims). The researchers submitted questionnaires to the students at different times of the school year. Overall, findings showed that the degree of cognitive empathy diminished over the school year. Moreover, bullying attitudes were associated with lower levels of cognitive empathy, while the effect of victimization was not statistically significant in relation to the decrease of cognitive empathy.

Zych et al. (2019) conducted a meta-analysis on cyberbullying in relation to empathy skills in children. Overall, across the 24 articles selected for analysis, effect sizes results revealed that cyberbullying was related to low empathy levels (p. 16). Effect sizes showed that children who were cyberbullies scored low in both affective and cognitive empathy (p. 17). Conversely, cybervictimization was not statistically significant in relation to empathy levels of children.

Overall evidence showed that children and adolescents who perpetrate bullying behaviours have low levels of empathy skills.

4.3 Empathy and social functioning

Various psychological studies have concentrated their focus on how empathy in children could foster prosocial attitudes, behaviours and social relationships in general.

Spinrad and Gal (2018), in their review article, define empathy and sympathy as different skills, both necessary for the development of prosocial behaviour in children. Prosocial behaviour is defined as voluntary behaviour to help another (Hein et al., 2018). Empathy is "an effective response that stems from the apprehension or comprehension of another's emotional state or condition, and which is identical or quite similar to what the other person is feeling or would be expected to feel" (Spinrad and Gal, 2018, p. 4). Sympathy refers to "feeling sorry or concern for the distressed or needy other" (Spinrad and Gal, 2018, p. 4). From these definitions, empathy and sympathy can be seen as the drivers of prosocial behaviours. Hence, empathy has an essential role in the socialization process during the life course.

Hein et al. (2018) conducted a study on the relationship between empathy and prosocial behaviours among 157 10-year-olds (81 girls), by investigating the role of emotion regulation in empathy responses in social relationships. Findings revealed that those children with higher capacities to regulate emotions showed a higher increase in empathy and prosocial behaviours.

Hirn et al. (2019) studied the relationship of empathy and social competence among 130 adolescent students aged 14 to 17 years (47 females) in Germany. They examined the effects of empathy skills ('emotion recognition accuracy', 'emotional perspective taking' and 'affective responsiveness') as independent variables in relation to a set of dependent variables, which were 'action evaluation', 'consequence anticipation', 'goal attainment' and 'competence expectations' (p. 6), to measure social

competence. Using a Structural Equation Modelling and regression analysis, the findings revealed that evaluation of actions and anticipation of consequences strongly affected the prevalence of emotional perspective-taking. Moreover, three empathy components ('emotion recognition accuracy', 'emotional perspective-taking' and 'affective responsiveness') were positively correlated with the social competence variables ('action evaluation', 'consequence anticipation', 'goal attainment' and 'competence expectations').

Taylor et al. (2019) conducted a study in Northern Ireland, composed of two experiments, to assess the presence of 'constructive' relationships among children living in a post-conflict context. In study 1, they selected a sample of 132 students (74 girls), aged 6–11 to investigate empathy attitudes and prosocial behaviours. Students completed a booklet on 'dispositional empathy' and after completing training they self-reported on their 'out group attitudes' and 'out group prosocial behavior' (p. 470), i.e. Catholics/Protestants. The correlational analysis showed that children with higher empathic skills within a specific group also had a more positive attitude towards other communities, and more prosocial behaviours in relation to groups external to their community. In study 2, the authors set up a longitudinal design with a sample of 466 children 14–15 years old, collecting data at baseline and after one year. In this case the model tested did not produce statistically significant results.

Imece and Cansever (2019) conducted a study in Turkey among 418 elementary school students (208 girls), 10 years old, to investigate the link between empathy skills and problem-solving skills. Sex differences, socioeconomic status, age and parents' education, and family composition were used as dependent variables. Overall, empathy and problem solving were positively associated and statistically significant. Sex differences were statistically significant ($p < 0.05$), with girls showing higher levels of empathy than boys. When looking at parents' education levels and empathy, the students' empathy increased as the education level of the parents increased (p. 23).

An interesting study on empathy deficits and antisocial behaviour in children was conducted by van Zonneveld et al. (2017). The authors discussed social attention (how attention is affected by the presence of other individuals) as a crucial factor in the development of cognitive and affective empathy in children demonstrating antisocial behaviours. The study was conducted in Amsterdam with a sample of 114 children in the intervention group and 43 children in the control group. The intervention sample was recruited from a social project that helped children from difficult social and familial backgrounds (at high risk of criminal behaviours). Heart rate, skin conductance level and skin conductance responses were used to measure affective empathy while children watched videos with different emotional content. Social attention was measured through visual scanning patterns (eyes and face reactions) while watching the videos. Answers to questions about emotions in the videos were used to measure cognitive empathy. Findings showed that children at high risk of developing criminal behaviours showed lower affective empathy (reduced heart rates to emotions of pain and fear and reduced levels of skin conductance and skin conductance responses) compared to the control group. However, the intervention group did not show any differences in their measures of social attention and cognitive empathy, compared to the control group.

Overall evidence showed that empathy is strictly related to social functioning and cooperative behavioural dispositions in children, which indirectly can be seen as proxies of positive well-being outcomes.

4.4 Empathy and parent–child relationships

A consistent body of literature studied parent–child relationships, especially with reference to mothers, to understand how empathy works in very young children and the extent to which the capacity for empathy is influenced by parenting behaviours. From the literature on early childhood it appears that empathy development is especially important in the second year of life and socialization with parents, especially with mothers, is particularly relevant in this phase. Other studies highlighted the importance of attachment theory in the development of empathy. The following nine empirical studies illustrate the importance of the child–parent relationship and the role of ‘attachment theory’ in the development of empathy in children.

Wagers and Kiel (2019) conducted a longitudinal study in the USA with 117 24-month-old children, of whom 54 were female. The study involved mothers and their children in a laboratory where data were collected observing the child behaviour with the mother, measuring parenting style and inhibited temperament in children. Afterwards, mothers were asked to complete a questionnaire to assess parenting behaviours, such as ‘authoritative parenting’, ‘warmth’, and ‘reasoning’. Data were collected when children were 24 months and again at 36 months. The Infant-Toddler Social and Emotional Assessment was used to measure empathy levels in mothers; while inhibited temperament in toddlers was measured by observing the first touch of a toy (‘latency to touch’). Findings showed that maternal warmth was positively associated to greater empathy among children who possessed strong levels of inhibited temperament. Maternal reasoning was not so effective in enhancing empathy development in children with strong levels of inhibited temperament. Overall, inhibited temperament moderated the relation of maternal warmth and maternal reasoning with the development of empathy.

Similarly, Stern et al. (2014) studied the role of parental empathy in the development of parent–child relationships among 60 parents (54 mothers) and their children (60) using qualitative methods and self-reported measures. Parents provided narrative responses to open-ended interview questions focused on everyday interactions with their children. Self-reported measures included the ‘Parent Affective and Cognitive Empathy Scale’, ‘Questionnaire of Cognitive and Affective Empathy’ and ‘Parent Empathy Measure’. Other measures to assess the attachment styles in children were administered to the children, which were the ‘Child Attachment interview’ and ‘Parental Bonding Instrument for Children’ (p. 10). Findings indicated that high levels of empathy in parents corresponded to ‘child attachment security perception’ (p. 15). Empathy was negatively associated with parents’ attachment avoidance. Overall results indicated an important relationship between parents’ empathy and the type of child attachment.

Richaud de Minzi (2013) studied children’s empathy development and the children’s perception of parents’ empathy in a sample of 387 children in Buenos Aires, aged 8–12 years. Regression analyses revealed that girls possessed higher empathic skills than boys. Both boys and girls had similar perceptions of their mother’s empathy, while boys perceived less empathy in their fathers than girls.

Yakupogullari and Yagan Guder (2020) administered a survey to 170 preschool children (85 females, aged 60–72 months) and their parents in Turkey. The aim of the study was to understand to what extent the children’s values were related to their parents’ empathy skills. Data collection tools included ‘Pre-school Values Scale Student Form’, ‘Empathy Tendency Scale’ and ‘Sociodemographic Information Form’ (p. 229). Findings revealed a statistically significant positive correlation between values (i.e., respect, honesty) of children and parents’ empathy behaviours. Results were statistically significant both for mothers and fathers, though slightly higher for mothers.

Another study by Catrinel and Avram (2019) investigated the level of empathic skills in children (specifically perspective-taking) in relation to the type of the attachment relationship with their parents. The sample was composed of 212 preschool children (age range 3–5 years). Data collection relied on the 'Kids' Empathic Development Scale' to assess overall empathy and the perspective-taking skill. Findings suggested that children who had an 'insecure and avoidant' attachment relationship with their parents had lower empathic perspective-taking compared to children with a secure parent-child attachment.

Boele et al. (2019) conducted a meta-analysis on how adolescents' socialization of empathy is related to parent and peer relationships. They conducted an effect size analysis on 75 empirical investigations (N=56 parent-child relationships; N=26, peer relationship) to understand the level of cognitive and affective empathy of children in association with the quality of their relationships (i.e., 'support/warmth' or 'conflict') with parents (both mothers and fathers) and peers. The results showed both strong positive relations between parent-child and peer relationship quality and empathy in adolescence, suggesting that empathy favours the development of quality relationships.

Similarly, Van Lissa et al. (2014) conducted a four-year longitudinal study on adolescents and their mothers through self-reported measures of empathy skills, notably empathic concern and perspective-taking. Results showed perspective-taking in mothers positively predicted perspective-taking in their adolescent children over the four years of the study, even though statistical significance was only found in relation to girls. Albeit partially, the study revealed evidence that empathy skills development in adolescents is associated with empathy skills in their mothers.

Starting from the assumption that empathy is influenced both by biological characteristics and socialization experiences, Levy et al. (2019) in their longitudinal study investigated neural development of empathy in 84 children over 10 years (from early childhood to preadolescence), 42 of whom were exposed to adversities compared to a control group. Specifically, the authors assessed how parenting, child temperament, and anxiety disorders could shape the neural development of empathy. Through observations of mother-child interactions, how children responded to suffering was assessed. When children were 11–13 years old, their empathic response was assessed through 'MEG Neuroimaging' in a lab environment, showing which areas of the brain were activated, while observing distressing situations. Results revealed that specific neural networks in the brain corresponding to the 'sensorimotor area' and the 'middle cingulate cortex' (p. 4) were activated while children were empathizing by observing the others' pain. Moreover, the study provided evidence that mother-child attachment shaped the neural basis of empathy in pre-adolescents. Children exposed to traumatic experiences engaged less in 'mother-child interactions' (p. 5), showing the activation of different neural nodes.

4.5 Empathy and training interventions

The search results yielded only two empirical studies and one review investigating training interventions to enhance empathy skills and prosocial behaviours in children.

Schonert-Reichl et al. (2012) conducted an intervention study that investigated the effects of a training programme called 'Roots of Empathy' on elementary schoolchildren. The programme aimed to enhance the social and emotional skills of children by teaching them how to take care of an infant, with the following training modules, 'Meeting the Baby', 'Crying', 'Caring and Planning for the Baby', 'Emotions', 'Safety', 'Sleep', 'Communication', 'Who Am I?', 'Goodbye', and 'Good Wishes' (p. 6). The sample consisted of 585 children (280 girls, 305 boys, age range 8–12 years) recruited from different

elementary schools, with an intervention group of 306 children, and control group of 279. Pre-post tests were obtained at baseline and after the end of the programme implementation. Twenty-eight teachers also participated by completing survey questionnaires. Findings indicated that children undertaking the intervention learned what it meant to take care of an infant and this significantly increased in their prosocial behaviours and social-emotional skills. Moreover, the teachers reported less aggressive behaviours in children.

Sagkal et al. (2012) conducted a study among elementary school children in Turkey, in which they evaluated the effectiveness of a peace education programme that was supposed to increase empathy skills in children. The sample comprised an intervention group (158) and a control group sample (123), both balanced in terms of sex composition. Data were collected at baseline and after the training to measure the 'Index of Empathy for Children' (p. 1456). Overall findings were statistically significant and revealed that the peace education programme implemented with the intervention group increased their empathy levels compared to the control group.

Malti et al. (2016), in their meta-analytic review, reported 19 school-based social and emotional learning programmes that targeted empathy-related skills and prosocial behaviour conducted in kindergarten and primary schools among children aged 4–11 years. The authors were mostly interested in analysing social-emotional competencies (i.e., positive peer relations, prosocial behaviour, assertiveness, perspective-taking), conduct problems (i.e., aggression, bullying, and class behaviours) and academic performance. Overall, the 19 interventions reviewed showed a small impact on social-emotional competencies, conduct problems and academic outcomes.

4.6 Empathy and spirituality

No studies included in this review showed any link with spirituality. To fill this gap, as stated above, the search terms of empathy and its proxies (i.e., sympathy, compassion) were used across a list of spirituality articles provided by external experts. However, the search did not give substantive results and no findings could be reported.

4.7 Empathy and its physical, emotional, mental and spiritual dimensions

The studies included in this literature review were categorized using the Matrix of Four Perspectives (see Table 3). Most studies fall within the emotional (24 studies) and mental (11 studies) categories towards the tangible and middle part of the continuum. No studies could be classified towards the end of the continuum, so that the spiritual dimension is not supported by evidence. Mostly, the articles focus on the emotional and mental processes, such as how empathy skills develop throughout childhood and how external social relationships or biological factors influence this capacity in children.

By considering the content and process levels of the continuum together, most studies can be grouped within the emotional category, exploring the presence of empathy, and how it works and develops in childhood. Only four studies were linked to the physical domain by exploring the role of biological or environmental factors in influencing the capacity for empathy.

The results show that the empathy capacity demonstrates clear emotional characteristics (feeling, sympathy, sensitivity, compassion, connection with the other) that can be placed under the emotional dimension of the L4WB theoretical framework, and cognitive characteristics (thinking, understanding, imagining, perspective-taking), which are grouped within the mental category. The physical dimension

is hardly supported by the literature identified in this review. Eight articles were categorized in more than one dimension while it was not possible to categorize two articles (either theoretical or reviews) into any of the categories.

Table 3: All studies in the Matrix of Four Perspectives

			SPIRITUAL (S)
	<i>content</i> 'what'	<i>process</i> 'how'	<i>intention</i> 'why'
MENTAL (M)	4 studies ¹	8 studies ²	0 studies
EMOTIONAL (E)	4 studies ³	20 studies ⁴	
PHYSICAL (P)	0 studies	5 studies ⁵	

Note. Two studies were not placed.⁶

- 1 The four studies placed at the Mental (M) content level are: Stern et al. (2014), Imece & Cansever (2019), Richaud de Minzi (2013), and Rizzolatti & Craighero (2004).
- 2 The eight studies placed at the Mental (M) process level are: Bensalah (2016), Schwenck et al. (2014), Levy et al. (2019), Xavier et al. (2013), Cheng et al. (2014), Decety et al. (2016), Iacoboni (2009), and Taylor et al. (2019).
- 3 The four studies placed at the Emotional (E) content level are: Stern et al. (2014), Trevarthen & Aitken (1994), Boele et al. (2019), and Catrinel & Avram (2019).
- 4 The 20 studies placed at the Emotional (E) process level are: McDonald & Messinger (2010), Robinson (1994), Spinrad & Gal (2018), Bensalah (2016), Yakupogullari et al. (2020), Horsthemke (2015), Longobardi et al. (2020), Sagkal et al. (2012), Zych et al. (2019), Wagers et al. (2019), van Noorden et al. (2015), Levy et al. (2019), Boele et al. (2019), Xavier et al. (2013), Hein et al. (2018), Williford et al. (2016), van Lissa et al. (2014), You et al. (2015), Decety et al. (2016), Schonert-Reichl et al. (2012).
- 5 The five studies placed at the Physical (P) process level are: McDonald & Messinger (2010), Spinrad & Gal (2018), Hirn et al. (2015), an Zonneveld et al. (2019), Schonert-Reichl et al. (2012).
- 6 The two studies not placed were: Cuff et al. (2014), Malti et al. (2016).

5. DISCUSSION

The purpose of this review was to map empirical and evidence-based theoretical knowledge of empathy as a core capacity. ‘Empathy’ can be understood as a capacity that includes emotional aspects (sympathy, compassion, sensitivity) and cognitive aspects (thinking, perspective-taking, understanding of the other) and neuropsychological characteristics (emotion regulation, neural mechanisms, imitation). Indeed, based on the database search undertaken using predefined keywords, many of the studies that emerged were mainly associated to cognitive and affective empathy, the neural mechanisms that promote the existence of empathy and the relationship with prosocial attitudes and behaviours. Indeed, empirical research is focused on analysis of social outcomes associated with empathy development in children, such as prosocial social competence, quality of relationships (mostly parent–child relationships), and with the functioning and level of expression of the empathy capacity itself. Few studies were found on practices or interventions and techniques for strengthening empathy capacity. Empathy appears to be studied as a capacity influenced both by the socialization process, mainly with parents and to a minor extent with peers, and by biological factors (i.e., inherent temperament, age, sex, neuronal mechanisms). However, none of the findings lead to coherent results on which of these factors are predominant in the development of empathy in children, as the personal experience of individuals deviates from clear predictions. As such, this study and much of the available literature seems to suggest that empathy is a process inherent in the child from early life, including infancy, and develops in relationship with the other (especially caring adults). Moreover, it is an essential capacity for the development of the social dimension of the child’s life, in order to enhance quality relationships and prosocial attitudes. Indeed, the consequences of not being able to empathize have been observed in various mental disorders, suggesting that empathy and well-being are strictly correlated.

The empirical evidence suggested some understanding of prosocial behaviours as consequences and outcomes of the existence of empathic skills in children, although there is a gap in the literature concerning how to foster empathy skills and prosocial behaviour in young children. In particular, the research still cannot adequately address causal evidence for ways to improve empathic skills and prosocial behaviours. This suggests the need for more experimental intervention designs.

As noted, there are few training intervention evaluations studies that monitor and foster empathy skills, and even fewer regarding training for teachers in the school environment. Indeed, the literature review did not find any evidence of the effects of empathy and its proxies in relation to teachers working with children, especially in schools.

Instead, a body of evidence explored the relation between empathy and parenting style, which seemed an essential condition for the development of empathy in children, especially in relation to maternal warmth and secure attachment to mothers. Other studies highlighted the importance of attachment theory and child-attachment typologies for the development of empathy in children. Notably, when children have a secure attachment style, they feel confident in their relationship with their parents and develop higher levels of empathy towards others’ distress.

Concerning the relationship with peers, some studies focused on the relation of empathy skills in children with reference to bullying behaviours. Evidence shows that high levels of empathic concern reduce the participation of children in bullying episodes (Van Noorden et al., 2015; Longobardi et al., 2020; You et al., 2015; Williford et al., 2016). By contrast, when exploring victimization in bullying, results related to empathic concern in children are not clear and not always significant.

No studies directly addressed empathy in combination with children and well-being. However, some proxies emerged from the research, such as better social outcomes and quality of relationships which mostly can be considered indirectly as well-being outcomes. Therefore, there is a gap regarding the analysis of concrete supportive and positive actions that children could implement, after having empathized with another person's feelings and thinking.

A limitation related to the investigation of empathy processes in childhood refers to the measurement of empathy itself. As children have limited capacity and ability to express certain feelings and thoughts, especially in the early years, their levels of empathy are still difficult to capture, although the most used method to detect empathic attitudes in children is to examine their responses to another's distress. However, each article reviewed measured empathy and its outcomes differently. Moreover, the review provided hardly any comparative angle across country contexts, and many of the empirical studies involved limited samples (none were nationally representative). Furthermore, few were experimental; many were case studies and non-randomized trials.

Nevertheless, the agreement across studies is that empathy comprehends emotional and cognitive skills essential in the socialization process. Studies also emphasized that childhood is a particularly opportune and fruitful period during which to reinforce empathy, as emotion regulation and social skills develop from infancy, mainly with mothers, and markedly across the whole of childhood.

Despite this, the available evidence does not include a full developmental perspective on childhood empathy. Moreover, studies employ different methodological tools to assess the impact of empathy skills, which impedes comparisons across developmental outcomes and contexts. Few studies have a clear life course perspective when targeting children. Specifically, the reviewed evidence is mostly based on children in early childhood (0–3 years old), middle childhood age (6–11), and early adolescence (11–13); the most frequent age ranges were 0–3, 6–9 and 9–13 years, targeting children in preschool and primary schools.

Samples of the reviewed studies were generally balanced in terms of sex, but sex differences were not routinely analysed nor deemed relevant. You et al. (2015) noted statistically significant sex differences for empathy and bullying behaviours, with girls showing higher empathy than boys. Similarly, Imece and Cansever (2019) and Van Lissa et al. (2014) noted that sex differences were statistically significant for girls, showing higher levels of empathy than boys. Studies were mostly set in Western and high-income countries, apart from three Turkish studies (Imece and Cansever, 2019; Yakupogullari and Yagan Guder, 2020; Sagkal, et al., 2012), one in Korea (You et al., 2015), and one in Argentina (Richaud de Minzi, 2013). No cultural background or socioeconomic differences were discussed as relevant variables in empathy changes among children.

Besides these limitations, evidence from the available literature shows that empathy is related to the emotional and mental development of children, with limited evidence for the physical dimension (in the sense of acting in a supportive and cooperative way towards others). The spiritual dimension of 'empathy', according to the L4WB framework, is not represented in the reviewed studies. Nevertheless, the inclusion of a 'transcendent' or 'spiritual' perspective in empathy related to the proxy of 'acting with compassion' (different from prosocial behaviours), could be an interesting area of investigation.

5.1 Complementarity with other core capacities

Another focus of this study was to capture the complementarity and linking of empathy with other core capacities. The literature rarely included a focus on this complementarity, even if some relationships could be extracted informally from evaluations. Evidence showed a rather poor complementarity of empathy practice with other core capacities. When a linkage could, however, be observed, empathy was related to the noticing (observing) capacity in three studies through proxies of social attention, attention and observation (Iacoboni, 2009; van Zonneveld et al., 2017; Rizzolatti and Craighero, 2004). More evidence is needed to further ascertain whether any relationship exists between empathy and other capacities or skills among children.

5.2 Limitations

This study is not without limitations. One limitation relates to the search for studies documenting the empirical and theoretical evidence of empathy capacity among children. The search involving the exact wording 'empathy' produced some studies relevant to the scope of this review. However, the empirical evidence explored in this review did not sufficiently cover the role of educators and teachers in children's life in relation to empathy, and the studies were realized mostly in high-income countries. In addition, other search terms used, such as 'sympathy' or 'compassion' captured substantive variations of empathy for these proxies in empirical work. Indeed, competencies associated with empathy skills relate mostly to socialization, biological and neuropsychological factors. Moreover, most empirical studies are performed within psychology and neuroscience, while other disciplines are not well represented.

Another limitation was that no study included objective measurements of children's outcomes, such as student achievement, grades or office discipline referrals. In addition, only a few intervention training programme studies to foster empathy skills appeared in the search. Finally, studies lacked similarities in the methodological tools, enrolled samples and measured outcomes. This leads to difficulties in comparing the true effects of empathy on social outcomes and well-being.

5.3 Implications for practice and next steps

Evidence-based studies on empathy have different implications that deserve further discussion. Evidence shows that high levels of empathy in children can produce better social relationships and prosocial behaviours. In doing so, evidence also shows some effects and stimulation of areas of the brain that influence the development of empathy, and the cognitive skills of children, especially during imitation processes (Iacoboni, 2009). These effects produced by empathy processes could be put into practice, by intentionally reinforcing empathy skills and inquiring deeply into outcomes in relation to well-being for children. However, school-based intervention or training evaluation studies are not widely explored in the scientific literature (only one empirical study was found) and there is still limited empirical evidence that empathy produces positive effects on mental, psychological or education outcomes (better well-being), while evidence does exist in relation to the development of prosocial attitudes. Most studies still concentrate on the functioning of emotional and cognitive patterns of empathy, and are limited to measuring the existence of empathy itself in children and how it develops with others (mainly in relation to caring adults). As such, research could also engage in exploring how the core capacity involving empathy could be fostered and enhanced in children through extensive training interventions. Moreover, outcomes related to the enhancement of empathy could be explored more concretely, such as analysing in greater detail helping and supportive behaviours in reference

to peers (the dimension of ‘compassion’), or by directly investigating different dimensions of well-being (e.g., health, education outcomes) or in relation to subjective well-being.

However, few consistent studies were found on training interventions and practices to foster empathy. Future evidence-based interventions would do well to test a broader inclusion of dimensions of well-being in which this core capacity may relate to children.

Furthermore, there is a need to map the complexity of empathy and its direct effects to better capture this inner and intrinsic capacity in children and youth.

This means that future research should focus more on large-scale interventions with the same programme characteristics for targeted child age groups, in order to compare and analyse results using the same methodology.

This review has suggested that the concept of empathy is not entirely supported by evidence regarding the four related dimensions of well-being (mental, physical, emotional and spiritual) proposed by the L4WB framework. Additional research is needed to expand further the concept of empathy, covering thoroughly all dimensions suggested by the L4WB framework.

In addition, research is needed to understand the empathy skills and practices surrounding educators working with children and how these can be transferred effectively to children. School environments usually provide a safe setting for children and these types of studies can be easy to implement, involving benefits also for teachers. Thinking of future research, schools also present a good study environment for randomizing child study participants in more rigorous study designs. Such training interventions studies should also target vulnerable groups, such as children who are not in school and are exposed to difficult social and political contexts (conflict or poverty) or in specialized care settings. Future research should explore also other informal educational contexts to capture these vulnerabilities.

REFERENCES

- Bensalah, L., S. Caillies, and M. Anduze, 'Links Among Cognitive Empathy, Theory of Mind, and Affective Perspective Taking by Young Children', *The Journal of Genetic Psychology*, vol. 177, no. 1, 2016, pp. 17–31. <https://doi.org/10.1080/00221325.2015.1106438>
- Boele, S., J. Van der Graaff, M. de Wied, I. E. Van der Valk, E. Crocetti, and S. Branje, 'Linking Parent-Child and Peer Relationship Quality to Empathy in Adolescence: A Multilevel Meta-Analysis', *Journal of youth and adolescence*, vol. 48, no. 6, 2019, pp. 1033–1055. <https://doi.org/10.1007/s10964-019-00993-5>
- Catrinel S.A., and J. Avram, 'Investigating Attachment Status Effects on Preschoolers' Empathic Perspective-Taking', *Child & Youth Care Forum*, vol. 48, no. 5, 2019, pp. 663–675. <https://doi.org/10.1007/s10566-019-09498-5>
- Cheng, Y., C. Chen, and J. Decety, 'An EEG/ERP investigation of the development of empathy in early and middle childhood', *Developmental cognitive neuroscience*, vol. 10, no. 1, 2014, pp. 60–169. <https://doi.org/10.1016/j.dcn.2014.08.012>
- Cuff, B. M. P., S. J. Brown, L. Taylor, and D. J. Howat, 'Empathy: A Review of the Concept', *Emotion Review*, vol. 8, no. 2, 2014, pp. 144–153. <https://doi.org/10.1177/1754073914558466>
- Decety, J., K. L. Meidenbauer, and J. M. Cowell, 'The development of cognitive empathy and concern in preschool children: A behavioral neuroscience investigation', *Developmental Science*, vol. 21, no. 3, 2017. <https://doi.org/10.1111/desc.12570>
- Hein, S., M. Röder, and M. Fingerle, 'The role of emotion regulation in situational empathy-related responding and prosocial behaviour in the presence of negative affect', *International journal of psychology. Journal international de psychologie*, vol. 53, no. 6, 2018, pp. 477–485. <https://doi.org/10.1002/ijop.12405>
- Hirn S.L., T. Joachim, and Z. Christof, 'The role of empathy in the development of social competence: a study of German school leavers', *International Journal of Adolescence and Youth*, vol. 24, no. 4, 2019. <https://doi.org/10.1080/02673843.2018.1548361>
- Horsthemke, K., 'Epistemic empathy in childrearing and education', *Ethics and Education*, vol. 10, no. 1, 2015, pp. 61–72. <https://doi.org/10.1080/17449642.2014.998025>
- Iacoboni, M., 'Imitation, empathy, and mirror neurons', *Annual review of psychology*, vol. 60, 2009, pp. 653–670. <https://doi.org/10.1146/annurev.psych.60.110707.163604>
- Imece, S., and B. A. Cansever, 'Investigation of the Relationship between the Empathic Tendency Skills and Problem Solving Skills of Turkish Primary School Students', *International Journal of Progressive Education*, vol. 15, no. 5, 2019, pp. 19–31. <https://doi.org/10.29329/ijpe.2019.212.2>
- Levy, J., A. Goldstein, and R. Feldman, 'The neural development of empathy is sensitive to caregiving and early trauma', *Nature communications*, vol. 10, 1905, 2019. <https://doi.org/10.1038/s41467-019-09927-y>
- Longobardi, C., L. Borello, R. Thornberg, and M. Settanni, 'Empathy and defending behaviours in school bullying: The mediating role of motivation to defend victims', *The British journal of educational psychology*, vol. 90, no. 2, 2020, pp. 473–486. <https://doi.org/10.1111/bjep.12289>
- Malti, T., M. P. Chaparro, A. Zuffianò, and T. Colasante, 'School-based interventions to promote empathy-related responding in children and adolescents: A developmental analysis', *Journal of Clinical Child and Adolescent Psychology*, vol. 45, no. 6, 2016, pp. 718–731.
- McDonald, N.M., and D. Messinger, 'The Development of Empathy: How, When, and Why', University of Miami, Department of Psychology, 2010.

- Richaud de Minzi, M. C., 'Children's perception of parental empathy as a precursor of children's empathy in middle and late childhood', *The Journal of psychology*, vol. 147, no. 6, 2013, pp. 563–576. <https://doi.org/10.1080/00223980.2012.721811>
- Rizzolatti, G., and L. Craighero, 'The mirror-neuron system', *Annual review of neuroscience*, vol. 27, 2004, pp. 169–192. <https://doi.org/10.1146/annurev.neuro.27.070203.144230>
- Robinson, J. L., 'Patterns of development in early empathic behavior: Environmental and child constitutional influences', *Social development*, vol. 3, no. 2, 1994, pp. 125–146. <https://doi.org/10.1111/j.1467-9507.1994.tb00032.x>
- Sagkal, A. S., A. Turnuklu, and T. Totan, 'Empathy for Interpersonal Peace: Effects of Peace Education on Empathy Skills', *Educational Sciences: Theory and Practice*, vol. 12, no. 2, 2012, pp. 1454–1460.
- Schonert-Reichl, K., V. Smith, A. Zaidman-Zait, and C. Hertzman, 'Impact of the "Roots of Empathy" program on the social and emotional competence of school-aged children', *School Mental Health* vol. 4, no. 1, 2012, pp. 1–21. [10.1007/s12310-011-9064-7](https://doi.org/10.1007/s12310-011-9064-7)
- Schwenck C., B. Göhle, J. Hauf, A. Warnke, C.M. Freitag, and W. Schneider, 'Cognitive and emotional empathy in typically developing children: The influence of age, gender, and intelligence', *European Journal of Developmental Psychology*, vol. 11, no. 1, 2014, pp. 63–76. <https://doi.org/10.1080/17405629.2013.808994>
- Spinrad, T. L., and D. E. Gal, 'Fostering prosocial behavior and empathy in young children', *Current Opinion in Psychology*, vol. 20, 2018, pp. 40–44. <https://doi.org/10.1016/j.copsy.2017.08.004>
- Stern, J. A., J. L. Borelli, and P. A. Smiley, 'Assessing parental empathy: a role for empathy in child attachment', *Attachment & Human Development*, vol. 17, no. 1, 2014, pp. 1–22. <https://doi.org/10.1080/14616734.2014.969749>
- Taylor, L. K., D. O'Driscoll, J. B. Dautel, and S. McKeown, 'Empathy to action: Child and adolescent outgroup attitudes and prosocial behaviors in a setting of intergroup conflict', *Social Development*, vol. 29, no. 2, 2019, pp. 461–477. <https://doi.org/10.1111/sode.12421>
- Trevarthen, C., and K. Aitken, 'Brain development, infant communication, and empathy disorders: Intrinsic factors in child mental health', *Development and Psychopathology*, vol. 6, no. 4, 1994, pp. 597–633. <https://doi.org/10.1017/S0954579400004703>
- van Lissa, C. J., S. T. Hawk, M. de Wied, H. M. Koot, P. van Lier, and W. Meeus, 'The longitudinal interplay of affective and cognitive empathy within and between adolescents and mothers', *Developmental Psychology*, vol. 50, no. 4, 2014, pp. 1219–1225. <https://doi.org/10.1037/a0035050>
- van Noorden, T. H., G. J. Haselager, A. H. Cillessen, and W. M. Bukowski, 'Empathy and involvement in bullying in children and adolescents: a systematic review', *Journal of youth and adolescence*, vol. 44, no. 3, 2015, pp. 637–657. <https://doi.org/10.1007/s10964-014-0135-6>
- van Zonneveld, L., E. Platje, L. de Sonnevile, S. van Goozen, and H. Swaab, 'Affective empathy, cognitive empathy and social attention in children at high risk of criminal behaviour', *Journal of child psychology and psychiatry, and allied disciplines*, vol. 58, no. 8, 2017, pp. 913–921. <https://doi.org/10.1111/jcpp.12724>
- Wagers, K. B., and E. J. Kiel, 'The influence of parenting and temperament on empathy development in toddlers', *Journal of Family Psychology*, vol. 33, no. 4, 2019, pp. 391–400. <https://doi.org/10.1037/fam0000505>
- Williford, A., A. Boulton, S.S. Forrest-Bank, K.A. Bender, W.A. Dieterich, and J. Jenson, 'The Effect of Bullying and Victimization on Cognitive Empathy Development During the Transition to Middle School', *Child & Youth Care Forum*, vol. 45, 2016, pp. 525–541. <https://doi.org/10.1007/S10566-015-9343-9>
- Xavier, J., E. Tilmont, and O. Bonnot, 'Children's synchrony and rhythmicity in imitation of peers: toward a developmental model of empathy', *Journal of physiology*, vol. 107, no. 4, 2013, pp. 291–297. <https://doi.org/10.1016/j.jphysparis.2013.03.012>

- Yakupogullari, A., and S. Yagan Guder, 'The Role of Parents' Empathic Tendencies in Children Value Acquisition', *Eurasian Journal of Educational Research*, vol. 86, 2020, pp. 223–247.
- You, S., Lee, J., Lee, Y., and Kim, A. Y., 'Bullying among Korean adolescents: the role of empathy and attachment', *Psychology in the Schools*, vol. 52, no. 6, 2015, pp. 594–606. <https://doi.org/10.1002/pits.21842>
- Zych, I., A. C. Baldry, D. P. Farrington, and V. J. Llorent, 'Are children involved in cyberbullying low on empathy? A systematic review and meta-analysis of research on empathy versus different cyberbullying roles', *Aggression and Violent Behavior*, 2018. <https://doi.org/10.1016/j.avb.2018.03.0>

APPENDIX A: INCLUSION CRITERIA

	Criteria	Sub-categories	Description
1	What does it mean for a study to be Conceptually Coherent ?	Introduction	Topic, purpose, and study rationale are clearly stated.
		Literature Review	The relevant conceptual underpinnings of the issue are fully explained.
		Research questions	Research questions and/or hypotheses are well defined and drawn from sound evidence-based theoretical or conceptual framework.
2	What does it mean for a study to use Appropriate Methods ?	Methods	The research design and sampling are appropriate for the study. The study includes a well-articulated rationale.
		Theory (especially for studies with a primary theoretical framework)	A sound and established theoretical line is present.
		Data	Relevant data have been employed. Where survey data are used, the sample is well described and clearly appropriate for the task at hand.
		Analyses	The procedures and measures have been selected correctly and applied correctly.
3	What does it mean for a study to be Scientifically Valid ?	Results	The results of the statistical/empirical tests fully and correctly interpreted. Basic statistical information, such as probability stats, sample sizes, etc., and coherent explanation of findings are included – avoids overstating the study's importance and generalizability.
4	Ethics (important but not a requirement to be accepted)	Ethical review	If the research involves primary data collection and/or the use of sensitive secondary data, ethical considerations are described in the study. For example, the article might include details of the procedures followed to ensure the ethical review of data, an indication that the study received the proper oversight from review board or any mitigation strategies.

for every child, answers

UNICEF Office of Research – Innocenti
Via degli Alfani, 58
50121 Florence
ITALY

Tel: (+39) 055 20330
Fax: (+39) 055 2033220
florence@unicef.org
www.unicef-irc.org
twitter: @UNICEFInnocenti
facebook.com/UnicefInnocenti

© 2021 United Nations Children’s Fund (UNICEF)

unicef 
Office of Research – Innocenti