

HOLISTIC DEVELOPMENT OF PRE-SCHOOL CHILDREN IN LIGHT OF THE APPLICATION OF UNESCO STANDARDS

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Abstract. In this study we highlight the importance of applying UNESCO standards in preschool education by reviewing the literature on children's holistic development and identifying interventions, assessment tools and associated factors. A systematic review of the literature (2019–2023) based on the PRIMA protocol was conducted. This review yielded 31 studies categorized into three main themes according to their purpose: interventions (preschool children or professional development of pre-school teachers); evaluation and assessment; and factors associated with early childhood development and children's well-being. Our findings identified a number of programs that were effective in ameliorating the holistic development of children aged between 4 and 6 years old. Some of these programs targeted children and pre-school teachers while others focused on the involvement of parents. Other interventions aimed to improve their countries' policies and frameworks. Our results also revealed numerous effective assessment tools and recognized the effectiveness of initiatives in several countries. Factors we identified as being associated with holistic child development included family, teachers' educational practices, and educational interventions. Overall, greater effort should focus on policy and practice in order to develop suitable programs for addressing holistic child development, monitor the application of UNESCO standards, and address factors associated with early development.

Keywords: Holistic Child Development, Early Childhood Education, UNESCO standards, preschool education.

Resumen. El propósito de este estudio es resaltar la importancia de aplicar los estándares de la UNESCO en la educación preescolar mediante la revisión de la literatura sobre el desarrollo holístico infantil y la identificación de intervenciones, herramientas de evaluación y factores asociados. Se realizó una revisión sistemática de la literatura entre 2019 y 2023 basada en el protocolo PRIMA. La revisión arroja 31 estudios categorizados en tres temas principales según el propósito del estudio: intervenciones (niños en edad preescolar o desarrollo profesional de maestros de preescolar); evaluación y valoración y factores asociados al desarrollo infantil temprano y al bienestar de los niños. Los hallazgos identificaron una serie de programas efectivos para mejorar el desarrollo integral de niños de edades comprendidas entre 4 y 6 años. Algunos de estos programas estaban dirigidos a niños y maestros de preescolar, mientras que otros mejoraron la participación de los padres. Otras intervenciones apuntaron a mejorar las políticas y marcos nacionales. Además, los resultados reconocieron muchas herramientas de evaluación efectivas y reconocieron la efectividad de varias iniciativas en diferentes países. Los resultados identificaron varios factores asociados con el desarrollo infantil integral, incluida la familia, las prácticas educativas de los maestros y las intervenciones educativas. En general, se deberían concentrar más atención y esfuerzos en políticas y prácticas para desarrollar programas adecuados que aborden el desarrollo infantil holístico y monitorear la aplicación de las normas de la UNESCO, además de abordar diversos factores asociados con el desarrollo temprano.

Palabras clave: desarrollo holístico infantil, educación infantil temprana, normas de la UNESCO, educación preescolar.

Introduction

Pre-school is one of the most important stages of childhood for forming a child's personality and preparations. At this stage children are strongly influenced by their environment and the people around them (UNESCO, 2021). Early childhood experiences (during pregnancy and up to six years of age) also affect health and well-being throughout an individual's life. A

holistic approach to early childhood education positively affects a child's school readiness, physical growth, and mental health (UNESCO, 2014).

Caregivers have an important impact on a child's development – from providing the child with a healthy, safe and loving environment to enhancing their well-being and cognitive, socio-emotional and physical development. Caregivers also crucially affect a child's school readiness and long-lasting life skills (Tinajero & Loizillon, 2012). Societies invest in human capacities through children's participation in early-childhood and care-development programs. To measure progress, UNESCO monitors changes in pre-primary education (access, participation, duration and gender equality), literacy and early childhood health indicators (Tinajero & Loizillon, 2012).

The literature provides evidence of good-quality, well-designed and holistic early childhood programs with multidimensional aspects of early development (Tinajero & Loizillon, 2012). To be workable, child policies targeting learning, holistic development and children's well-being should be defined in line with the views of country, society and family (Diaz, 2016). The United Nations Educational, Scientific and Cultural Organization (UNESCO) developed a set of standards to ensure that the outcomes of the educational learning process meet the requirements of contemporary society. UNESCO standards emphasize teachers' continuous learning, positive communication, physical education, gender equality, learning for all, literacy, higher education, technical and vocational education, inclusive education, as well as education in war, conflicts and other emergent circumstances (UNESCO, 2017).

In 2021 UNESCO conducted a study to provide evidence of how countries have implemented international human rights frameworks. Their findings reveal concern about the status of pre-primary education from a legal rights perspective. Of 193 countries, only 63 have adopted legal provisions for free pre-primary education. Negative aspects may arise, especially in relation to teachers' preparedness and training, that may affect the quality of such programs. Special attention must therefore be paid to expand the capacities of pre-primary teachers (UNESCO, 2021).

In this paper we discuss the importance of applying UNESCO standards in preschool education by reviewing the literature on child holistic development and identifying interventions, assessment tools and associated factors.

1. Method

A systematic review of the literature on child holistic development, conducted between 2019 and 2023 and based on the PRIMA protocol, identified interventions, assessment tools and associated factors to determine the importance of applying UNESCO standards in preschool education. Our research questions included:

- What intervention programs (those targeting children, families and pre-primary teachers) have been carried out in educational settings to promote holistic early childhood development according to UNESCO standards?
- What evaluation methods identified in the literature assess the quality and efficacy of early childhood interventions and programs?
- What factors are recognized in the literature as being associated with early child development and children's well-being?

Based on these research questions, we hypothesized that the literature would inform policy and practice about the best procedures for enhancing holistic early childhood development in educational settings.

2. Procedure

A search of Web of Science was conducted using keywords identified in preliminary searches: Holistic child development, Early childhood education, UNESCO standards of preschool education, and Kindergarten education. Articles published between 2019 and 2023 were examined. The studies selected for inclusion in the review were categorized into three main themes according to the purpose of the study: interventions (preschool children or professional development of pre-school teachers), evaluation and assessment, and factors associated with early childhood development. Inclusion criteria were the year of publication, the language of publication (English), and the age of the targeted group (children aged 3 to 6 years old).

This research strategy yielded 705 items. After the articles were screened, duplicate items were removed and the inclusion criteria were applied to determine eligibility. A total of 31 relevant studies were retrieved and downloaded to Mendeley Reference Manager.

3. Data Analysis

Thirty-one studies published between 2019 and April 2023 addressed holistic early childhood development. Table 1 summarizes the methodological approaches used by the researchers to achieve their objectives. Most of these studies (22) used qualitative methods, while eight used quantitative methods and one used a mixed-method approach.

Table 1. Methodological approaches of the 31 studies published between 1998 and April 2023 that reported a description of holistic child development and UNESCO standards.

Methodological approach	N	Studies
Randomized controlled trial	1	(Aadland <i>et al.</i> 2020)
Qualitative descriptive studies	5	(Agrawal <i>et al.</i> 2021; Chapman & O’Gorman, 2022; Hasbi, M, 2020; Ponguta <i>et al.</i> 2019; Uchitel <i>et al.</i> 2022)
Narrative review	2	(Pulimeno <i>et al.</i> 2020; Riviere , 2019)
Case studies	2	(Gove <i>et al.</i> 2019; Pearly Lim Pei & Azizi, 2020)
Exploratory qualitative studies	4	(Draper <i>et al.</i> 2023; Oke <i>et al.</i> 2021; Siagian & Adrian, 2020; Watts & Pattnaik, 2022)
Exploratory quantitative studies	6	(Chansa-Kabali, 2022; Ng, D & Fisher, 2022; Sincovich <i>et al.</i> 2019; Sincovich <i>et al.</i> 2020; Su <i>et al.</i> 2020; Xi & Wang, 2022)
Exploratory qualitative and quantitative studies	1	(Beery & Magntorn, 2021)
Qualitative phenomenological studies	1	(RodriguezMeehan, 2021)
Qualitative descriptive exploratory studies	2	(Richards <i>et al.</i> 2020; Engdahl & Losso, 2019)
Analytical research (scale development and validation)	1	(Cheng & Yu, 2022)

Methodological approach	N	Studies
Qualitative analytical studies	3	(DurgaLekshmi, GS, 2022; Kalburan NC, 2022; Mata-McMahon, J, 2019)
Mixed-method concurrent design	1	(Binasis <i>et al.</i> 2022)
Scoping reviews	1	(Rad, <i>et al.</i> 2022)
Qualitative approach within participatory action learning and action research (PALAR) design	1	(Lunga <i>et al.</i> 2022)

Table 2 presents educational implementations for holistic child development categorized into three main themes: interventions for professionals and preschoolers (8 studies), evaluations of early childhood education programs (8), and factors associated with early childhood education and child well-being (15).

Table 2. Educational implementations for holistic child development aimed at addressing interventions for professionals and preschoolers, evaluations, and associated factors.

Educational Implementation.	Studies
Active Learning Norwegian Preschool(er)s (ACTNOW).	Aadland <i>et al.</i> , 2020
Outdoor Education in Early Childhood Course.	Kalburan, 2022
TeachKloud, a cloud-based management system aimed at facilitating quality family involvement in early childhood education and care and increasing families’ communication with practitioners.	Oke <i>et al.</i> , 2020
Intersectoral actions for early childhood development.	Agrawal <i>et al.</i> , 2021
A scoping review on the pathways to inclusive and equitable quality early childhood education.	Rad <i>et al.</i> , 2022
Play-based pedagogy to enhance holistic child development.	Lunga <i>et al.</i> , 2022
Art Immersion, a project aimed at transforming the early childhood learning environment through the arts.	Chapman & O’Gorman, 2022

Educational Implementation.	Studies
Pre-service training in a UNESCO Biosphere Reserve for early childhood educators. The Kristianstad Vattenrike Biosphere Reserve.	Beery & Magntorn, 2021
Measuring Early Learning Quality Outcomes (MELQO).	Ponguta <i>et al.</i> , 2019
The Tayari (“Read in Kinswahili”) early child development program, 2014–2018 The Tusome Pamoja program (2016–2021).	Gove <i>et al.</i> , 2019
Improving preschool quality through the physical environment.	Pearly Lim Pei & Azizi, 2020
The Early Childhood Educators’ Education for Sustainable Development Practices Scale (ECEESDPS).	Cheng & Yu, 2022
The early Human Capability Index (eHCI) as a tool for measuring holistic childhood development.	Sincovich <i>et al.</i> , 2020
The early Human Capability Index (eHCI) as a tool for measuring holistic childhood development.	Sincovich <i>et al.</i> , 2019
Analysis of the concerns of National Education Policy with regard to early childhood education and care in India.	DurgaLekshmi, 2022
The Holistic Integrated Approach of Early Childhood Education and Development in Indonesia: Between Issues and Possibilities.	Siagian and Adriany, 2020
Home and parental factors in rural communities.	Chanse-Kabali, 2023
Caregivers’ perceptions of factors influencing early childhood development.	Draper <i>et al.</i> , 2023
Factors associated with child well-being.	Riviere, 2019
Children’s literature as a factor for promoting holistic development and well- being.	Pulimeno <i>et al.</i> , 2020
Play as a suitable practice for enhancing children’s holistic development.	Rodriguez-Meehan, 2022
The effects of participating in early childhood education, ethnicity and language on early childhood development.	Richards <i>et al.</i> 2021

Educational Implementation.	Studies
Spirituality in play for holistic early childhood education.	Mata-McMahon, 2019
The effect of parental migration, family socioeconomic status and home environment on the early development of children.	Xi & Wang, 2022
Investing in Quality Early Childhood Education.	Hasbi, 2020
The impact of teachers’ spiritual well-being on their perspectives of holistic early childhood education.	Ng & Fisher, 2022
The effect of parents’ beliefs, perceptions and practices on school readiness.	Binasis <i>et al.</i> , 2022
The perspectives of parents and teachers on the impact of the COVID-19 pandemic on children’s socio-emotional well-being.	Watts and Pattnaik, 2022
The impact of preschool quality on child development.	Su <i>et al.</i> , 2021
The Human Rights of Children and Young People from the Beginning: Early Childhood Care and Education for all.	Engdahl & Losso, 2019
Role of Pediatricians, Pediatric Associations, and Academic Departments in Ensuring Optimal Early Childhood Development Globally.	Uchitel <i>et al.</i> , 2022

The geographical distribution of the 31 studies was as follows: global qualitative research (7), from Europe (5), from Africa (3), from China (3), from the United States (3), from Hong Kong (1), from Australia (1), from Colombia (1), from Myanmar (1), from Malaysia (1), from India (2), and from Indonesia (3).

4. Results and Discussion

Our systematic review yielded 31 studies that satisfied the inclusion criteria. These studies were classified into three categories according to their main objective. *Studies in the first category* reported intervention programs conducted in educational settings to promote holistic early childhood development (those targeting children, families and pre-primary teachers) according to UNESCO standards. UNESCO has highlighted the

importance of targeting teachers' competencies by developing frameworks and initiatives in numerous countries to achieve quality early childhood care and education by 2030 (UNESCO & SEAMEO, 2018).

For example, the ACTNOW intervention program for preschool teachers in Norway, which ran for three years (2019–2022), targeted 60 preschool teachers and 1200 children aged 3-5 years with the aim of improving teachers' professional development by providing training in methods of integrating play activities with cognitive and learning activities. Training lasted for seven months and follow ups were conducted every seven or eight months. The results of the program provided evidence of positive effects on children's physical fitness, motor skills, socioemotional development, self-regulation, learning, and executive function (Aadland *et al.*, 2020).

Lunga *et al.* (2022) also presented evidence of the importance of play-based learning experiences for enhancing children's holistic development via the implementation of the Action Learning Set (ALS) in three centers in South Africa.

Chapman & O'Gorman (2022), on the other hand, supported the learning and teaching of the Arts approach. These authors emphasized the essential role of the Arts in enabling children to understand their world, enhancing their imagination, enriching their spiritual and emotional development, improving their intellectual, social and cultural development, establishing values, and empowering them to cope with difficulties. They also argued that the Arts can positively affect children's reading, writing and mathematical skills.

Our review also highlighted interventions that targeted the professional development of preschool teachers and that had significant impacts on pedagogical approaches and children's holistic (cognitive, physical, social, emotional and linguistic) development in outdoor educational settings (Peery & Magntorn, 2021; Kalburan, 2022). The results of these programs show that policy and practice should provide greater support for environmental educational interventions.

With regard to family intervention programs, considerable evidence illustrates the importance of meaningful family involvement in early childhood care and education and the positive impacts of this involvement on the holistic development of their children. Despite numerous barriers – such as limited time due to employment obligations, different expectations and attitudes, mental health issues, cultural beliefs and communication

methods – that may limit communication with professionals in early education settings, Oke *et al.* (2020) proposed Teachcloud, a cloud-based management system aimed at facilitating quality family involvement. These authors recommended on-line technology to effectively reduce the barriers to communication between families and professionals.

Other interventions targeted governmental policies and frameworks in the context of early childhood education. Agrawal *et al.* (2021), for example, highlighted the importance of a multidimensional approach to improve holistic child development in India. After identifying the reasons for the delivery of disintegrated child development services, these authors suggested that better outcomes are possible if resources are combined and the goals of the various sectors are aligned. They proposed a five-step action plan that involves emphasizing rights to survive, thrive and change; developing a common early childhood framework; designating authority and leadership; promoting effective communication between professionals; and enhancing collaboration with academic institutions.

On a global level, Rad *et al.* (2022) conducted a scoping review to explore the qualitative and inclusive early childhood education interventions and care strategies being established to achieve Sustainable Development Goal (SDG) 4.2 («Equal access to quality pre-primary education by 2030 worldwide») on the micro-level (child, family and community), meso-level (nursery and kindergarten), and macro-level (national policies and SDG 4.2 agenda for 2030).

The above review targeted research methods aimed at looking into evidence-based, inclusive and equitable early childhood education initiatives, research instruments used to investigate excellent inclusive and equitable early childhood education efforts, and the outcomes of excellent inclusive and equitable early childhood education programs. It also emphasized that inclusive education is critical for children's early development and schooling since it includes numerous aspects of a child's growth (i.e., the academic, emotional, social and cognitive). Preschool instructors therefore need continual professional development and flexible training programs as well as a comfortable physical and social environment. They also need family, societal and institutional support. The authors of the study recommended emphasizing children's rights, creating a qualitative and inclusive culture with a holistic understanding of a child's development, investing in teachers' perceptions, enhancing positive attitudes towards equity in early childhood services, developing inclusive

educational policies that are supported by all stakeholders, adapting curriculum and assessment methods for all early childhood educational contexts, piloting good practices, and investing in infrastructure, facilities and innovative educational services.

Studies in the second category reported evaluation methods (interventions and programs) that have been identified in the literature to assess the quality and efficacy of early childhood development and education. Many assessment tools and scales have been identified, validated and applied in various countries. These include the MELQO (Measuring Early Learning Quality Outcomes) in Colombia (Ponguta *et al.*, 2019), the Early Childhood Educators' Education for Sustainable Development Practices Scale (ECEESDPS) (Cheng & Yu, 2022), and the early Human Capability Index (eHCI) (Sincovich *et al.*, 2019; Sincovich *et al.*, 2020). All assessment tools were shown to have adequate psychometric properties (validity and reliability).

Some studies aimed to evaluate the impact of early childhood care and development programs. The study by Gove *et al.* (2019), for example, evaluated six early learning programs in African counties, including the Tayari («Read in Kinswahili») early child development program in Kenya and the Tusome Pamoja program in Tanzania. Follow-up evidence indicates that performance and development were better by children who participated in these programs than by their peers who did not. Better quality in the instructional methods employed by participating teachers as well as greater parental and community involvement in such programs were also observed.

Pearly Lim Pei & Azizi (2020) investigated the appropriateness of four (profitable) preschools in Malaysia while reflecting on learning cultures, relative policies and the physical environment. Their results suggest that guidelines for establishing preschools in Malaysia do not provide adequate strategies for developing physical environments according to the National Preschool Curriculum Standard (NPCS).

Siagian & Adriany (2020) examined the implementation of holistic approaches to early childhood education in Indonesia (HI-ECE). Although they confirmed the essential role of holistic approaches in developing children and countries, they also highlighted the need for better understanding, integration and governance while also taking into account the countryside and children's needs.

DurgaLekshmi (2022) analyzed the concerns and recommendations of the National Education Policy (NEP, 2020) in India with regard to early childhood care and education by exploring various new educational policies. Their results suggest that the NEP laid the foundation for universal Early Childhood Care and Education by aiming to provide children aged 3 to 6 years with fundamental education, holistic (cognitive, psych-motor, socio-cultural-emotional) development, teaching of the 3Rs (i.e., reading, writing and arithmetic), and communication skills. Plans are therefore in place to communicate with primary schools to provide quality training for workers and teachers and facilitate universal access to education through early childhood care and education. Non-governmental organizations are also encouraged to take part in this process.

Studies in the third category identified factors associated with caregivers/parents and the home environment. These factors include the roles of caregivers/parents in developing, nurturing, providing, protecting and communicating, emotional support and disciplinary methods, as well as family socioeconomic status, ethnic identity and mental health. Parents' beliefs, expectations and home practices are also considered to be key factors. These studies indicated that adverse childhood experiences and hostile home or school environments negatively affect a child's development and well-being (Riviere, 2019; Binasis *et al.*, 2022; Chanse-Kabali, 2023; Xi & Wang, 2022; Draper *et al.*, 2023). This can be explained by a family's ability to provide stimulating opportunities for their children. Educators recommend providing assistance for caregivers and parents and introducing parental awareness programs aimed at improving their ability to create a positive home environment that enhances their children's holistic development and well-being.

Pulimeno *et al.* (2020) suggested that children's literature, especially storybooks, have positive educational, teaching and psychotherapy benefits for children by providing them with opportunities to engage in motivating learning activities, helping them to deal with inner conflicts, adapting to life's difficulties, and fostering well-being.

Other studies identified play activities in kindergartens as providing numerous benefits for children's growth, development and learning. Play has positive impacts on children's memorization, problem-solving ability, language, social communication skills, imagination, physical competency, self-confidence, feelings of security, and ability to develop stable relationships with other children. Play was also seen to nurture spirituality

References

(feelings of joy, awe, wonder and inner peace) (Mata-McMahon, 2019; Rodriguez-Meehan, 2022).

Richards *et al.* (2021) confirmed that participating in early childhood care and education programs has positive effects on children's holistic development by, for example, promoting their cognitive, social, emotional and physical abilities. Other studies also focused on preschool quality as a key factor in early childhood development (Engdahl & Osso, 2019; Su *et al.*, 2021).

Hasbi (2020) highlighted other factors in children's holistic development, such as the importance of the relationship between family, education programs and health institutions, as well as the quality of teachers (especially their ability to communicate with children), curriculum and teaching methods. Uchitel *et al.* (2022) highlighted the role of pediatricians in delivering early childhood development services by raising funds for early childhood development initiatives, increasing awareness of how early childhood development services can be delivered, and focusing on issues related to medical insurance for provision of early childhood services rather than for medical treatment alone. They also stressed the importance of uniform guidelines for developmental monitoring and screening and the need to focus on the vision of the International Pediatric Association regarding the role of pediatrics, academic departments and medical training programs in supporting early childhood development with collaboration from local stakeholders such as WHO and UNICEF.

Teachers' spiritual well-being was also identified as an important factor that affects children's development and well-being (Ng & Fisher, 2022).

Watts & Pattnaik (2022) focused on the effects of emerging adverse circumstances such as the COVID-19 pandemic on children's socio-emotional well-being from the perspectives of parents and teachers. Their results suggest that many negative effects arose due to social and communication deprivation and the absence of peer learning and play opportunities. Children's social skills, high order thinking skills, mental health and activity levels were all negatively affected. Moreover, children exhibited negative behaviors such as anger, negative attention seeking, aggressiveness, lying and disrespect. Also reported were over-reliance, difficulty in performing daily tasks, and emotional issues such as being scared, sad, lost, stressed and cautious. These authors recommended that the post-pandemic curriculum should focus on socio-emotional and life skills that contribute to children's overall well-being.

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