

Article

The Role of Outdoor Play Environments in Promoting Early Childhood Development Among Kindergarten Learners

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Abstract: This study assessed the influence of the outdoor learning environment on the early childhood development of kindergarten learners at Banilad Elementary School, Cebu City, as a basis for an action plan. A descriptive-correlational research design was employed, involving 96 kindergarten learners as subjects of observation, with three (3) teachers assessing learners' development across physical fitness, approaches to learning, socialization, and imagination, while 96 parents assessed the outdoor environment in terms of physical features, safety, natural elements, and play affordances. Total enumeration sampling was used, and data were analyzed using frequency, percentage, weighted mean, standard deviation, and Pearson's correlation coefficient. Findings revealed that most learners were five years old (56.25%) and male (56.25%). Parents rated the outdoor environment as "Excellent" (Grand Mean = 4.45), with natural elements and materials receiving the highest rating. Teachers rated learners' development as "Highly Developed" (Grand Mean = 4.24), with socialization as the strongest domain, while approaches to learning (4.15) and imagination (4.19) remained "Developed." A significant but weak positive correlation ($r = 0.380$, $p < 0.05$) was found between the two variables. The null hypothesis was rejected. An action plan was proposed to enhance sustained attention, problem-solving, and make-believe dialogues. The study concluded that while the outdoor environment significantly contributes to development, it explains only 14.4% of the variance, necessitating multi-pronged interventions.

Keywords: Outdoor learning environment, early childhood development, physical fitness, approaches to learning, socialization, imagination, kindergarten learners

Introduction

Outdoor learning is globally recognized as critical to holistic child development, fostering improvements in physical, cognitive, and socio-emotional domains (Al-Thani, 2022). Natural environments encourage physical activity and reduce childhood obesity (Laely et al., 2023), countering sedentary lifestyles that limit exposure to nature (Ne'matullah et al., 2024). In contrast to technology-dominated indoor environments,

outdoor play provides joyful learning experiences (Ghazali et al., 2023), and access to nature improves health, well-being, and learning abilities (Kiviranta et al., 2023). Contextual factors influence the provision of outdoor learning across cultural settings (Yim & Yunus, 2024). However, the benefits of outdoor learning warrant its integration into educational frameworks globally (Fermin et al., 2024). More playtime activities enhance student health and learning efficiency offer movement and attention necessary for engagement reduce sedentary time, and enhance physical literacy (Lannoy et al., 2025; Ne'matullah et al., 2022). Free play outdoors is beneficial for children's physical and mental health and has positive effects on mental health, cognitive development, and academic achievement (Lee et al., 2022; Patchen et al., 2024). Outdoor learning is a basic requirement for holistic development as it addresses "nature-deficit disorder" that is common in Western societies (Collins et al., 2025; Delores et al., 2024). Indigenous cultures have long acknowledged nature-based education for holistic development (Plessis & Postlewaigh, 2024). Researchers advocate for outdoor learning in primary schools to enhance motor skills like balance, coordination, and endurance (Frances et al., 2024).

Within the context of the Philippines, the decline in physical activity and rise in sedentary behaviors among children pose a public health issue (Campoamor-Olegario et al., 2025). Only 15.4% of Filipino youth meet international physical activity recommendations (Cordero, 2025). This indicates the need for outdoor learning interventions (Verma et al., 2024). The Early Years Act of 2013 promotes the cognitive and physical development of the young learners (Alvarez & Galman, 2025). Unfortunately, one in every four Filipino children below the age of five suffers from chronic malnutrition, which hinders development (Moraleta et al., 2025). Urban poor communities lack child-centered green spaces that help prevent obesity and the focus on academic achievement overshadows active play, a problem amplified by the COVID-19 pandemic (Alejandre et al., 2022; Cordero, 2024). The majority of children do not meet activity levels, even with the directives of DepEd for Physical Education to improve motor skills (Santiago & Ibarra, 2023). Physical activity of adolescents has declined from 14% in 2011 to 7% in 2019 (Reilly et al., 2022). This inactivity results in obesity, hypertension, diabetes and burden on the healthcare system (Palad et al., 2023; Tagare, 2022).

In Banilad Elementary School, Cebu City, kindergarten learners spend most of their time in traditional classrooms with limited unstructured outdoor playtime locally. "Children are often sitting down or using gadgets instead of running, jumping or climbing during recess and lunch. There are no outdoor areas for gross motor development, such as climbing structures, balance beams or loose natural materials. Teachers report that many learners aged five to six struggle with basic motor skills, such as balancing, catching balls and engaging in high-energy play. Parents are concerned about children preferring screen-based activities over outdoor play and having difficulty with social negotiation and imaginative play. The study's findings demonstrate that these issues emerge in learners' "Developed" rather than "Highly Developed" ratings in approaches to learning and imagination. It is important to

investigate these issues because early childhood (ages 5–6) is a critical window for development, and deficits can persist into later childhood and adulthood. School administration can't make evidence-based decisions about resource allocation, facility improvements, or pedagogical reforms without empirical data. Developmentally appropriate outdoor play opportunities are mandated by the Kindergarten Education Act (RA 10157) and the Expanded ECCD System Act (RA 12199), but compliance does not guarantee quality. Studying these problems will show the missing environmental features and spheres of development that should be addressed. The weak positive correlation ($r = 0.380$) found in this study indicates that the outdoor environment is not the only factor that determines development, thus a thorough investigation of other contributing factors such as home environment, teacher practices and nutrition is necessary. The research will produce a localized action plan that can be replicated in other public elementary schools in Cebu City and the wider Philippines. Hence, this study will investigate the specific effect of the outdoor learning environments of Banilad Elementary School towards the early childhood development of its kindergarten learners to provide empirical data for a targeted action plan.

Literature Review

Research on early childhood settings has increasingly emphasized the outdoor environment as an important context for children's development. Well-designed outdoor spaces provide varied physical features, open areas, vegetation, loose materials, and opportunities for movement and exploration that can support children's active engagement with their surroundings. Herrington and Brussoni (2015) explained that nature-based play spaces offer developmental benefits that extend beyond physical activity by encouraging exploration, creativity, and social interaction. Similarly, Bento and Dias (2017) emphasized that outdoor play environments allow young children to experience movement, autonomy, discovery, and interaction with natural elements. Safety and accessibility are also important because children benefit most when outdoor settings permit age-appropriate challenge while minimizing unnecessary hazards. Brussoni et al. (2015) found that opportunities for adventurous outdoor play may contribute positively to children's physical activity, social competence, and well-being when risks are appropriately managed. Sando and Sandseter (2020) further showed that the affordances available in early childhood outdoor environments influence children's physical activity and well-being. In addition, Dankiw et al. (2020) concluded that unstructured nature play can support multiple aspects of early childhood health and development. These findings support examining parents' assessments of physical environment features, safety and accessibility, natural elements and materials, and play opportunities and affordances.

Outdoor learning environments are likewise associated with several dimensions of early childhood development, including physical fitness, approaches to learning, socialization, and imagination. Regular outdoor play provides opportunities for

running, climbing, balancing, and other whole-body movements that can strengthen physical activity and motor competence. Tremblay et al. (2015) emphasized the developmental importance of active outdoor play for children's physical and psychosocial health. Beyond physical outcomes, contact with nature can support attention, engagement, curiosity, and learning behaviors. Kuo et al. (2019) synthesized evidence showing that experiences with nature may promote learning through improved attention, reduced stress, greater engagement, and increased opportunities for self-directed activity. Mygind et al. (2019) also reported that immersive nature experiences may benefit children's physical, mental, and social health. Fyfe-Johnson et al. (2021) found that nature exposure is associated with a range of positive health and developmental outcomes among children, while Becker et al. (2017) reported that outdoor educational experiences can contribute to learning, social development, and health. Collectively, these studies suggest that enriched outdoor environments may strengthen children's physical fitness, willingness to explore and learn, peer interaction, cooperation, creativity, and imaginative play, thereby supporting holistic early childhood development.

Methodology

This study employed a descriptive-correlational research design to assess the outdoor learning environment and determine its relationship with the early childhood development of kindergarten learners at Banilad Elementary School, Cebu City. The descriptive component examined learners' age and gender, parents' assessment of the outdoor learning environment in terms of physical environment features, safety and accessibility, natural elements and materials, and play opportunities and affordances, as well as learners' development in physical fitness, approaches to learning, socialization, and imagination. The correlational component determined the strength and significance of the relationship between the outdoor learning environment and early childhood development. The study involved 96 kindergarten learners and three teachers during School Year 2025–2026. The learners served as subjects of observation, while parents evaluated the outdoor learning environment and teachers assessed the children's developmental behaviors.

Data were gathered using an adapted questionnaire based on the Outdoor Free Play Scale for Children–Preschool Version developed by Li, Jiang, and Yang in 2022. The instrument consisted of two parts, a 20-item Outdoor Learning Environment Assessment for parents, and a 20-item Developmental Observation Scale for teachers. The parent questionnaire used a five-point Likert scale ranging from Strongly Disagree to Strongly Agree, while the teacher observation scale ranged from Never to Always. Teachers observed learners during regular outdoor play sessions over one to two weeks, while parents completed the environmental assessment. Data collection was conducted after securing administrative approvals and informed consent. Responses were coded and analyzed using frequency, percentage, weighted mean, standard deviation, and Pearson Product-Moment Correlation at the 0.05 level of

significance. Outdoor environment scores were interpreted from Poor to Excellent, while developmental scores ranged from Not Developed to Highly Developed. Ethical standards on voluntary participation, confidentiality, anonymity, and compliance with the Data Privacy Act of 2012 were observed throughout the study.

Results

Table 1. Level of Assessment of the Parents on the Outdoor Learning Environment of Learners in Terms of Physical Environment Features

Indicators	WM	SD	Verbal Description
The outdoor space has enough open area for running, jumping, and chasing activities.	4.69	0.49	Excellent
There are climbing structures or natural elements such as trees, hills, or logs that challenge the child's balance and coordination.	4.23	0.89	Excellent
The ground surface includes natural terrain such as grass, sand, or dirt that encourages varied movement.	4.19	0.86	Very Good
There are balls, throwing toys, or objects that promote kicking and catching skills.	4.44	0.59	Excellent
The outdoor equipment allows children to swing, hang, or pull themselves up.	4.42	0.76	Excellent
Aggregate Mean	4.39		Excellent
Aggregate Standard Deviation		0.72	

The findings show that parents assessed the outdoor learning environment in terms of physical environment features as Excellent, with an aggregate mean of 4.39 and an aggregate standard deviation of 0.72. The highest-rated indicator was the availability of enough open area for running, jumping, and chasing activities, with a weighted mean of 4.69. This suggests that the outdoor space provides sufficient room for active movement and energetic play. The availability of balls, throwing toys, and other objects that promote kicking and catching skills also received a high rating, with a weighted mean of 4.44. Similarly, equipment that allows children to swing, hang, or pull themselves up was rated Excellent, with a weighted mean of 4.42. The lowest-rated indicator was the presence of natural terrain such as grass, sand, or dirt that encourages varied movement, with a weighted mean of 4.19, interpreted as Very Good. The findings imply that the school's outdoor environment generally provides strong physical opportunities that support children's movement, coordination, and

gross motor development. However, the comparatively lower rating for natural terrain suggests that the outdoor area could be further enriched with more varied natural surfaces. Enhancing these features may provide children with broader sensory and movement experiences that can strengthen balance, agility, confidence, and physical fitness during outdoor play.

Table 2. Level of Assessment of the Parents on the Outdoor Learning Environment of Learners in Terms of Safety and Accessibility

Indicators	WM	SD	Verbal Description
The outdoor area is safely enclosed and free from hazards.	4.38	0.55	Excellent
Children of all ability levels can easily access and move through the outdoor space.	4.43	0.66	Excellent
There is adequate adult supervision without restricting children's free movement.	4.64	0.53	Excellent
The outdoor space has shaded areas to protect children from too much sun exposure.	4.54	0.54	Excellent
Pathways are clear and allow children to move freely between different activity areas.	4.55	0.56	Excellent
Aggregate Mean	4.51		Excellent
Aggregate Standard Deviation		0.57	

The findings show that parents assessed the outdoor learning environment in terms of safety and accessibility as Excellent, with an aggregate mean of 4.51 and an aggregate standard deviation of 0.57. The highest-rated indicator was the presence of adequate adult supervision without restricting children's free movement, with a weighted mean of 4.64. This suggests that the school provides close monitoring while still allowing children to explore and move independently. Clear pathways that allow children to move freely between activity areas followed with a weighted mean of 4.55, while the availability of shaded areas received a weighted mean of 4.54. Accessibility for children of different ability levels was also rated Excellent with a weighted mean of 4.43. The lowest-rated indicator was the outdoor area being safely enclosed and free from hazards, with a weighted mean of 4.38, although it was still interpreted as Excellent. The findings imply that the outdoor environment is generally safe, accessible, and supportive of active participation among young learners. Strong supervision, clear pathways, and shaded spaces help create a secure setting for outdoor activities. However, continuous monitoring of hazards and maintenance of enclosures remain important to sustain safety and ensure that all children can

participate confidently and independently in outdoor learning experiences.

Table 3. Level of Assessment of the Parents on the Outdoor Learning Environment of Learners in Terms of Natural Elements and Materials

Indicators	WM	SD	Verbal Description
There are plants, gardens, or natural features that children can explore.	4.69	0.49	Excellent
Loose natural materials such as sticks, stones, leaves, and pinecones are available for creative play.	4.55	0.52	Excellent
There are sources of water such as puddles, small streams, or water tables for sensory play.	4.54	0.52	Excellent
Animals or insects such as birds, butterflies, and worms can be observed in the outdoor space.	4.48	0.68	Excellent
The outdoor environment changes with the seasons, offering new exploration opportunities.	4.36	0.85	Excellent
Aggregate Mean	4.53		Excellent
Aggregate Standard Deviation		0.61	

The findings show that parents assessed the outdoor learning environment in terms of natural elements and materials as Excellent, with an aggregate mean of 4.53 and an aggregate standard deviation of 0.61. The highest-rated indicator was the presence of plants, gardens, or natural features that children could explore, with a weighted mean of 4.69. This indicates that the outdoor environment provides rich opportunities for direct interaction with nature. The availability of loose natural materials for creative play followed with a weighted mean of 4.55, while water sources for sensory play obtained a weighted mean of 4.54. Opportunities to observe animals or insects also received an Excellent rating with a weighted mean of 4.48. The lowest-rated indicator was the changing outdoor environment across seasons, with a weighted mean of 4.36, although it remained within the Excellent category.

The findings imply that the school offers a nature-rich outdoor environment that can support exploration, sensory engagement, creativity, and curiosity among young learners. The presence of natural materials and living elements may also encourage imaginative play and experiential learning. However, the comparatively lower rating for seasonal changes suggests that the school may further enhance varied nature-based experiences throughout the year to sustain children's interest and deepen their connection with the natural environment.

Table 4. Level of Assessment of the Parents on the Outdoor Learning Environment of Learners in Terms of Play Opportunities and Affordances

Indicators	WM	SD	Verbal Description
The environment encourages climbing, balancing, and other gross motor challenges.	4.41	0.64	Excellent
There are open spaces that invite group games, chasing, and dramatic play.	4.44	0.54	Excellent
The outdoor setup includes quiet areas where children can rest or observe.	4.38	0.73	Excellent
There are loose parts and materials that children can move, build, and transform.	4.39	0.67	Excellent
The overall outdoor environment makes the child want to move, explore, and play actively.	4.23	0.69	Excellent
Aggregate Mean	4.37		Excellent
Aggregate Standard Deviation		0.65	

The findings show that parents assessed the outdoor learning environment in terms of play opportunities and affordances as Excellent, with an aggregate mean of 4.37 and an aggregate standard deviation of 0.65. The highest-rated indicator was the presence of open spaces that invite group games, chasing, and dramatic play, with a weighted mean of 4.44. This was followed by the environment encouraging climbing, balancing, and other gross motor challenges, with a weighted mean of 4.41. The availability of loose parts and materials that children could move, build, and transform obtained a weighted mean of 4.39, while quiet areas for resting or observing received 4.38. The lowest-rated indicator was the overall outdoor environment making the child want to move, explore, and play actively, with a weighted mean of 4.23, although it was still interpreted as Excellent. The findings imply that the school provides varied outdoor opportunities that support active play, social interaction, creativity, and physical development. However, the comparatively lower rating for overall motivation to move and explore suggests that the environment may still be enhanced through more stimulating, flexible, and child-centered play features to further encourage sustained participation and active exploration.

The findings show that the learners' early childhood development in terms of physical fitness was Highly Developed, with an aggregate mean of 4.26 and an aggregate standard deviation of 1.04. The highest-rated indicator was the ability to run, jump,

hop, or skip vigorously across the outdoor space, with a weighted mean of 4.45.

Table 5. Level of Early Childhood Development of the Learners in Terms of Physical Fitness

Indicators	WM	SD	Verbal Description
Runs, jumps, hops, or skips vigorously across the outdoor space.	4.45	0.97	Highly Developed
Climbs, balances, or navigates uneven terrain with confidence.	4.18	1.11	Developed
Throws, catches, or kicks objects like balls with coordination.	4.21	1.09	Highly Developed
Swings arms or legs energetically while moving or manipulating items.	4.27	1.01	Highly Developed
Engages in sustained high-energy actions like chasing or dodging.	4.22	1.02	Highly Developed
Aggregate Mean	4.26		Highly Developed
Aggregate Standard Deviation		1.04	

This suggests that the learners were highly capable of performing energetic gross motor movements. Swinging the arms or legs energetically while moving or manipulating objects followed with a weighted mean of 4.27, while sustained high-energy actions such as chasing or dodging received 4.22. Throwing, catching, or kicking objects with coordination obtained 4.21. The lowest-rated indicator was climbing, balancing, or navigating uneven terrain with confidence, with a weighted mean of 4.18, interpreted as Developed. The findings imply that the learners generally possess strong gross motor abilities and physical endurance during outdoor activities. However, balance and confidence in navigating uneven terrain appear comparatively less developed. This suggests the need to provide more structured opportunities for climbing, balancing, obstacle courses, and movement across varied surfaces to further strengthen coordination, stability, agility, and confidence in outdoor physical activities.

The findings show that the learners' early childhood development in terms of approaches to learning was Developed, with an aggregate mean of 4.15 and an aggregate standard deviation of 1.05. The highest-rated indicator was demonstrating initiative by starting new play ideas independently, with a weighted mean of 4.27, interpreted as Highly Developed. This suggests that many learners were confident in initiating activities and exploring their own ideas during play. Organizing play materials or a sequence before beginning an activity followed with a weighted mean of 4.20, while persistence after a play setback received 4.17. Experimenting with different ways to solve play challenges obtained 4.09. The lowest-rated indicator was

maintaining steady focus on a play activity without frequent distractions, with a weighted mean of 4.00, although it was still interpreted as Developed.

Table 6. Level of Early Childhood Development of the Learners in Terms of Approaches to Learning

Indicators	WM	SD	Verbal Description
Maintains steady focus on a play activity without frequent distractions.	4.00	0.99	Developed
Experiments with different ways to solve a play challenge such as building or crossing.	4.09	1.16	Developed
Organizes play materials or a sequence before starting an activity.	4.20	1.04	Developed
Shows persistence by trying again after a play setback.	4.17	0.99	Developed
Demonstrates initiative by starting new play ideas independently.	4.27	1.05	Highly Developed
Aggregate Mean	4.15		Developed
Aggregate Standard Deviation		1.05	

The findings imply that learners generally demonstrate positive learning behaviors such as initiative, organization, persistence, and problem-solving during outdoor play. However, sustained attention appears to be comparatively less developed.

Table 7. Level of Early Childhood Development of the Learners in Terms of Socialization

Indicators	WM	SD	Verbal Description
Uses words to describe actions, needs, or ideas during group play.	4.41	0.97	Highly Developed
Joins peers' activities or invites others to join their own.	4.49	0.95	Highly Developed
Shares play items or take turns without adult prompting.	4.38	0.99	Highly Developed
Negotiates rules or solutions during peer conflicts verbally.	4.20	1.06	Developed
Responds positively to peers' suggestions in collaborative play.	4.31	1.02	Highly Developed
Aggregate Mean	4.36		Highly Developed
Aggregate Standard Deviation		1.00	

The findings show that the learners' early childhood development in terms of

socialization was Highly Developed, with an aggregate mean of 4.36 and an aggregate standard deviation of 1.00. The highest-rated indicator was joining peers' activities or inviting others to join their own, with a weighted mean of 4.49. This suggests that learners were generally confident and willing to engage with others during outdoor play. Using words to describe actions, needs, or ideas during group play followed with a weighted mean of 4.41, while sharing play items or taking turns without adult prompting obtained 4.38. Responding positively to peers' suggestions received a weighted mean of 4.31. The lowest-rated indicator was verbally negotiating rules or solutions during peer conflicts, with a weighted mean of 4.20, interpreted as Developed. The findings imply that outdoor play provides valuable opportunities for children to interact, communicate, cooperate, and build positive peer relationships. However, conflict negotiation appears to be comparatively less developed. This suggests that teachers may provide more cooperative games and guided social situations that encourage children to express viewpoints, negotiate rules, resolve disagreements, and practice respectful communication during shared play experiences.

Table 8. Level of Early Childhood Development of the Learners in Terms of Imagination

Indicators	WM	SD	Verbal Description
Transforms everyday objects into pretend items such as using a stick as a tool.	4.35	1.05	Highly Developed
Creates original stories or roles within play scenarios.	4.15	1.08	Developed
Combines materials in novel ways to invent games or structures.	4.29	1.04	Highly Developed
Engages in make-believe dialogues with self or objects.	3.94	1.25	Developed
Expands play themes with imaginative twists or extensions.	4.27*	1.03*	Highly Developed*
Aggregate Mean	4.20		Developed
Aggregate Standard Deviation		1.09	

The findings show that the learners' early childhood development in terms of imagination was Developed, with an aggregate mean of 4.20 and an aggregate standard deviation of 1.09. The highest-rated indicator was transforming everyday objects into pretend items, such as using a stick as a tool, with a weighted mean of 4.35. This was followed by combining materials in novel ways to invent games or structures, with a weighted mean of 4.29, and expanding play themes with imaginative twists or extensions, with a weighted mean of 4.27. Creating original stories or roles within play scenarios obtained a weighted mean of 4.15. The lowest-

rated indicator was engaging in make-believe dialogues with self or objects, with a weighted mean of 3.94, interpreted as Developed. The findings imply that learners generally demonstrate strong imaginative abilities during outdoor play, particularly when using available objects and materials creatively. However, make-believe dialogue appears to be comparatively less developed. This suggests that teachers may provide more dramatic play activities, storytelling opportunities, role-playing situations, and open-ended materials that encourage children to express ideas verbally, create characters, and develop richer imaginative play experiences.

Table 9. Test of Relationship Between the Outdoor Learning Environment and the Early Childhood Development Among the Learners

Variables	r-value	Strength of Correlation	p-value	Decision	Result
Outdoor Learning Environment and Early Childhood Development	0.380*	Weak Positive	0.000	Reject Ho	Significant

The findings show a weak positive relationship between the outdoor learning environment and early childhood development, with an r-value of 0.380. The p-value of 0.000 was lower than the 0.05 level of significance, leading to the rejection of the null hypothesis. This indicates that the relationship between the two variables was statistically significant. The positive direction of the correlation suggests that more favorable outdoor learning environments tended to be associated with higher levels of early childhood development among the learners. Although the strength of the relationship was weak, the result still indicates that the quality of the outdoor environment may contribute to children's physical, cognitive, social, and imaginative development. The findings imply that improvements in the outdoor learning environment may help support broader developmental outcomes among young learners. Features such as safe and accessible spaces, natural elements, varied play materials, and opportunities for active and imaginative play can provide meaningful experiences that support development. However, because the relationship was weak, other factors may also influence early childhood development. Thus, the school may continue improving outdoor learning spaces while also strengthening classroom experiences, family support, teacher guidance, and other developmental opportunities.

Discussions

The findings indicate that parents generally viewed the outdoor learning environment as highly supportive of young children's development. Physical environment

features, safety and accessibility, natural elements and materials, and play opportunities and affordances were all rated at an excellent level. This suggests that the school provides outdoor spaces that encourage active movement, exploration, interaction with nature, and varied forms of play. The presence of open areas, gross motor equipment, natural materials, shaded spaces, clear pathways, and opportunities for group and creative play reflects an environment that is responsive to the developmental needs of young learners. However, some aspects received comparatively lower ratings, particularly natural terrain, children's motivation to move and explore, and opportunities linked to seasonal environmental changes. These areas may still be improved to make outdoor experiences more varied, stimulating, and developmentally enriching.

The learners also demonstrated generally strong developmental outcomes. Physical fitness and socialization were highly developed, while approaches to learning and imagination were developed. The learners showed particular strengths in vigorous movement, peer participation, verbal interaction, and independent play initiation. On the other hand, relatively lower ratings were observed in balance and navigation of uneven terrain, sustained attention, verbal conflict negotiation, and make-believe dialogue. These findings suggest that while the learners already demonstrate many positive developmental behaviors, targeted opportunities are still needed to strengthen attention, problem-solving, social negotiation, imaginative expression, and motor confidence. The significant weak positive relationship between the outdoor learning environment and early childhood development further suggests that better outdoor environments tend to be associated with stronger developmental outcomes. Although the relationship was not strong, it supports the value of maintaining and improving outdoor learning spaces as one of several important factors that may contribute to children's holistic development.

Conclusion

Based on the findings, the study concluded that the outdoor learning environment played a significant but limited role in promoting early childhood development among kindergarten learners. While parents rated the outdoor environment as "Excellent" and teachers rated the learners' overall development as "Highly Developed," the weak positive correlation indicated that the outdoor learning environment suggests that the majority of developmental outcomes were influenced by other factors, such as home environment, parental involvement, genetic predispositions, nutrition, and teacher-child interactions. The highest parental rating for natural elements and materials indicated that the school had successfully incorporated biophilic design principles into its outdoor space, yet the "Developed" ratings for imagination and approaches to learning revealed specific areas requiring targeted intervention, particularly in make-believe dialogues and sustained attention. Thus, while the outdoor learning environment was a positive and statistically significant contributor, it was not a dominant determinant of early childhood

development, necessitating a multi-pronged approach that integrates environmental enhancements with teacher professional development, family engagement, and individualized support.

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