SCHOOL PHYSICAL LEARNING ENVIRONMENT AND THE PSYCHOMOTOR DEVELOPMENT OF PRESCHOOLERS IN EARLY CHILDHOOD EDUCATION CENTRES IN RIVERS EAST SENATORIAL DISTRICT OF RIVERS STATE

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Abstract

The study examined the relationship between the school's physical learning environment and the psychomotor development of preschoolers in Early Childhood Education Centres in Rivers East Senatorial District of Rivers State. Three specific objectives are as follows: To determine the extent to which classroom arrangement relates to preschooler's psychomotor development in public early childhood centres in Rivers East Senatorial District, to determine the extent to which playgrounds in the school physical environment relate to the preschooler's psychomotor development in public early childhood education centers in Rivers East Senatorial District and to determine the extent to which school facilities relates to preschooler's psychomotor development in early childhood education centers in Rivers East Senatorial District. The study employed a correlational research design. The study population was 3,102 preschool children, out of which 620 were sampled using cluster and simple random sampling techniques. The researcher designed a "School Physical Environment and Preschoolers' Psychomotor Development Questionnaire (SPEPPDQ)" questionnaire for data collection. Data was analyzed using the Pearson product-moment correlation coefficient. The findings revealed that there is a significant relationship between classroom arrangement and preschooler's psychomotor development in public early childhood education centres in Rivers East Senatorial District in Rivers State; there is a significant relationship between the playground and preschooler's psychomotor development in public early childhood education centres in Rivers East Senatorial District in Rivers State; there is a significant relationship between the school facilities and preschooler's psychomotor development in public early childhood education centres in Rivers East Senatorial District in Rivers State. Based on the findings of the study, recommendations were made which include that the government through the MOE needs to make proper and adequate provision of facilities according to the developmental stages of children that will enhance the overall development of the children in public early childhood centers.

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Introduction

From the time the fetus is in the mother's womb until the infant is born, the most evident thing to see is usually the child's movement. Humans are always moving; this includes our hands, necks, feet, waists, jaws, and so forth. Exercise involving bodily movement is as old as the body itself. Moving and using motor abilities are all that is involved in the psychomotor domain. This covers posture and coordination. The mental events that precede, occur during, and follow physical movement are included in the psychomotor component of body movement. The psychomotor domain includes reading music while playing the saxophone and hand-eye coordination.

According to Laws (2015), psychomotor development is defined by Elizabeth J. Simpson's taxonomy as learning that is manifested in physical skills. Coordination, dexterity, manipulation, grace, strength, and speed are some of these abilities. Preschoolers' psychomotor development is notably influenced by acts that show off their big motor skills, such as using their bodies for dance or sports performance, or their fine motor skills, such as using tools or precise instruments.

According to Angerra, psychomotor development encompasses both mental and physical movement (2004). It is the mentality connected to an activity or motion. For instance, someone may find it difficult to remember to sit correctly, which makes it difficult to keep the right posture. An environmental cue that reminds people to sit up straight can be included, though. The idea of the psychomotor domain is useful for enhancing both mental and physical well-being.

The changes in a person's physical characteristics, ability to communicate, cognitive abilities, and social skills throughout the course of their lifetime are referred to as psychomotor development. The development of cognitive, emotional, symbolic, and sensory-motor interactions that influence children's ability to express themselves in a psychosocial context is known as psychomotor development, which is crucial to preschoolers' overall development (Cueto, Mariga, Xavier, Marth, 2017). According to Larrey, López-García, Mozos, and López-Baena (2009), psychomotor development is a crucial and intricate process where physical change is is influenced by social-cognitive development.

Preschoolers are becoming more autonomous in their exploration of the world, which helps them develop as learners and improves their psychomotor abilities. This entails enhancing their motor skills and taking on more independent tasks. Preschoolers acquire psychomotor skills in a variety of ways related to their fine and gross motor (movement) abilities. In the middle of a child's natural tendencies, motor skills are an essential requirement that emerges from birth and takes time to give an individual identity.

According to Uribe (2010), a preschooler's motor abilities are essential for adapting to their surroundings, forming relationships, and interacting with other kids. According to Rigal (2006), the term "motor skills" also refers to the collection of abilities that guarantee a living thing's self-generated motions. The coordination of physical and cognitive abilities is required for these voluntary motor activities, and it gets better with age for the learner.

The preschooler's noteworthy psychomotor development is contingent upon the caliber of psychomotor abilities to which the learner is exposed and able to adjust. One of the main locations where a preschooler can receive the nurturing they need to build psychomotor skills is the Early Childhood Education Center. It lays the groundwork for learning that influences the learner's psychomotor, emotional, and cognitive domains. Preschoolers respond to their physical learning environment in Early Childhood Education centers in different ways depending on their developmental stage. ECE centers need to be able to help children develop their psychomotor skills. School physical environments have been recognized as important components of both qualitative and quantitative preschool education. The effects of teaching and learning are significant.

The French word "Environia," which means to surround, is where the word "environment" originated. The term "environment" can be used to refer to anything that is directly influencing an object at a certain moment and place. Both live and non-living objects can be found in the environment, both in micro and macro forms. It has also been shown to regulate all living things, including humans. The environment is defined as the general conditions, objects, and structures that surround an individual. Agusigbe (2004) proposed that the environment is confirmed by all elements that exist around an individual and that these elements exert some influence on him. These elements may possess biological, physical, or social qualities. Okoro (2004) defined the environment as a structure in which living organisms interact with physical elements.

The environment, with which humans interact, offers all the means of living a comfortable life. There are two categories for the macro environment: the biotic and physical environments. The macro environment refers to all of the biotic and physical circumstances that surround the organism from the outside, whereas the micro environment refers to the organism's immediate surroundings. The biotic environment is made up of all living things, such as plants, animals, and microorganisms, whereas the physical environment is made up of all abiotic elements.

The term "school physical environment" refers to a particular school's overall layout and design. The physical attributes of a school, including its location, size, floor, walls, desks, lighting, structure, climate, computer lab, and other materials that can impact learning and the development of psychomotor skills, are collectively referred to as the school's physical learning environment. According to Suleman and Hussain (2014), the physical part of the learning environment is the school. The classroom layout, playground, open space within the school, and school amenities are some of the elements that make up the physical school environment in early childhood education. Furthermore, as they influence the skill development of preschoolers in early childhood education, the physical amenities and material resources in the school play a critical part in forming a strategic factor in the operation and functioning of the teaching/learning process. One of the important stimulating aspects that improves the development of abilities like psychomotor in the school system, particularly for preschoolers, is the presence of physical facilities. Preschoolers' ability to acquire abilities like psychomotor development has been shown to be strongly impacted by the quality of the physical environment in schools. The researcher has observed that, as students tend to gain more in-depth information from their teachers in a well-facilitated classroom, the physical resources and materials in the schools might guarantee an efficient and successful teaching and learning process. Without these resources, the classroom environment will not be conducive to effective teaching and learning, which will cause preschoolers to become uncomfortable and divert their attention from their studies (Tapia-Fonllem, Fraijo-Sing, Corral-Verdugo, Garza-Teran, & Moreno-Barahona, 2020).

According to Amissah-Essel, Hagan Jr., and Schack (2020), a child's early exposure to a supportive environment shapes their brain's architecture and lays the groundwork for success throughout their life. beneficial early experiences therefore increase the likelihood of beneficial consequences. On the other hand, bad experiences are more likely to result in

unfavorable outcomes. A child's physical environment is one of the primary factors influencing his or her holistic development, according to several educational theorists and practitioners like Werner, Piaget, and Montessori. These individuals have consistently recognized the importance of physical space in an early learning setting.

Preschoolers' learning and engagement with the material they are being taught are influenced directly and indirectly by their learning environment. Additionally, it affects the preschooler's interests, sense of belonging, willingness to study, and sense of personal safety. The physical setting, context, and cultural backgrounds in which students learn are referred as the learning environment. It comprises the tools, technology, instructional strategies, and learning modalities that are linked to the local, national, and international contexts.

The actual setting in which a student studies and engages with resources and peers is called the school's physical learning environment. According to Lawrence (2014), the school's physical environment is a typical building that is inconsistent with noise, local air temperature, and ambient light. The preschooler receives messages about safety, order, comfort, and peace from the physical learning environment of the school. It creates a conducive learning environment in schools for students. There are two ways to view the learning settings in schools: physically and socially. The rooms and items in which students interact make up the physical environment of schools, which is the subject of this study; in contrast, social groups make up the social environment. The classrooms and open areas inside the school's walls serve as the physical learning environment. The buildings hold the school's library, media center, ICT room, sick bays, offices, and playground equipment.

The classroom is often a brightly designed space with good ventilation. The preschoolers are meant to be excited by this and prepared for learning. The classroom's furnishings should be practical and comfortable for the younger students. Preschoolers benefit academically from the room's lighting and temperature adjustments as well. The classroom's seating arrangement, which consists of rows and columns, allows both the caregiver and the students to move around easily. Additionally, the classroom encourages activity-based learning, which gives students the chance to engage with one another and participate in class activities. These benefits contribute to the development of students' psychomotor abilities. The classroom should be set up in a way that is safe, tidy, and adaptable, with ample room for various regions, such creative and natural corners, and a well-kept school setting. The classroom fosters a healthy psychosocial environment, and its structure can improve student and staff well-being and academic performance by increasing school production.

Children play and practice their learning skills at the school's playground area. A seesaw, swing set, slide, jungle gym, sandbox, spring rider, trapeze rings, playhouses, and other leisure items are included. As a physical learning environment in schools, the playground promotes social and emotional growth, enjoyment, and the development of physical coordination, strength, and flexibility in students. Free areas of land that are unoccupied are known as open spaces. This area promotes both planned and unplanned physical play among students. It provides space for outdoor education. In this area, students can participate in sports and physical education

programs. Open spaces are appropriate for social gatherings between students, teachers/caregivers, and parents, as well as recreational activities like school parties and learner career days.

To create a physically conducive learning environment, schools must be designed with the understanding that effective teaching and learning occur in well-designed learning environments that prioritize the physical environment of the school. These environments are structured to support the learning of all students, including those with special needs and impairments, and to support educators and caregivers in carrying out their duties in the classroom. Thus, this study seeks to investigate the school physical learning environment and the psychomotor development of preschoolers in Rivers State's early childhood education centres in Rivers East senatorial district.

Statement of the problem

The physical learning environment in schools significantly impacts the psychomotor development of preschoolers. In the context of early childhood education centers in the Rivers East Senatorial District of Rivers State, Nigeria, several problems can arise from inadequacies or deficiencies in the physical learning environment. These problems which include inadequate play playgrounds/facilities, unsafe learning environments and untrained staff can adversely affect the psychomotor development of young children, which is crucial for their overall growth and future learning capabilities.

Learners' psychomotor skills, which begin at conception, persist beyond birth. Learners begin to develop their motor skills in preschool. Their coordination, perception, and fine gross motor skills are enhanced by these abilities. These motor abilities support their learning both inside and outside of the classroom. Preschoolers engage in many activities such as eating and writing with their hands, kicking or catching a ball, creating games with bricks, running, and so forth. As the learner becomes older, the psychomotor skills they have developed become more robust due to consistent application. Some preschoolers and primary school students struggle to write, eat independently, kick, catch, throw, play a minimal amount of music, and construct a Lego set, to name a few. It is noted that the student lacks clarity in these skills. The availability of suitable materials and facilities for psychomotor activities is crucial for the development of motor skills in preschoolers. However, many schools in the Rivers East Senatorial District may not have the necessary resources, leading to a lack of opportunities for children to engage in these activities. Inadequate facilities can also lead to poor muscle development, coordination issues, and reduced physical fitness.

Poorly maintained or unsafe environments pose physical risks to children. The preschooler should be situated in an atmosphere that supports the development of his psychomotor skills. Also, Overcrowded classrooms and limited outdoor spaces restrict physical activities. Limited space hampers activities that require movement, leading to a sedentary lifestyle. This can negatively affect children’s physical health and psychomotor skills, including balance, agility, and coordination. The physical surroundings of the public preschools and early childhood education centers in the Rivers East Senatorial District serve as the preschoolers' classroom learning environment, among other things. The school setting gets pupils ready for and makes it easier for them to engage in educational

activities. This context can be social, physical, or any combination of these. Among other things, the physical learning environment in schools is the observation that sparked the concern for this study. Therefore, one can question the impact of Rivers East Senatorial District public early childhood education institutions on preschoolers' psychomotor development in the area of classroom management, playground, and school facilities.

Purpose of the study

In this study the aim is to examine the relationship between school's physical learning environment and the psychomotor development of the preschooler in Rivers Senatorial District. In specific term, the study intends to:

- Determine the extent to which classroom arrangement relates to preschooler's psychomotor development in public early childhood centres in Rivers East Senatorial District .
- Determine the extent to which playgrounds in the school physical environment relates to the preschooler's psychomotor development in public early childhood education centers in Rivers East Senatorial District.
- Determine the extent to which school facilities relates to preschooler's psychomotor development in early childhood education centers in Rivers East Senatorial District..

Hypotheses

The following hypotheses were formulated and tested at 0.05 level of significance:

- There is no significant relationship between classroom arrangement and preschooler's psychomotor development in the public early childhood education centres Rivers State East Senatorial District.
- There is no significant relationship between the playground and preschooler's psychomotor development in public early childhood education centres in Rivers East Senatorial District.
- There is no significant relationship between the school facilities and preschooler's psychomotor development in public early childhood education centres in Rivers State East Senatorial District.

Methodology

The study adopted the correlational research design. 3,102 respondents consisting of 2,399 preschool children and 703 Caregivers in the 521 Early Childhood Care Centre in Rivers East Senatorial District of Rivers State constitute the population of the study. 620 respondents consisting of 480 preschool children and 140 caregivers formed the sample for the study which is approximately 20% of the entire population. (Villegas, 2023). The cluster and simple random sampling techniques were used to select the preschool children. The instruments that were used for data collection in the study were the researchers-designed questionnaire. The reliability index of the instruments was 0.76 and 0.68. The administration of the instruments was carried out by the researchers with the help of trained research assistants. The caregivers in the various classrooms were used as the research assistants who observed the children in the different environmental areas and entered their observations. The data collected was analyzed using Pearson Product Moment correlation coefficient to test the null hypotheses at a .05 level of significance.

Results and findings

Null hypothesis one: There is no significant relationship between classroom arrangement and preschooler's psychomotor development in the public early childhood education centres Rivers State East Senatorial District.

Table 1: Summary of Relationship Test between classroom arrangement and preschooler's psychomotor development

		Psychomotor development	Classroom arrangement
Psychomotor development	Pearson Correlation	1	.058**
	Sig. (2-tailed)		.001
	N	620	620
Classroom arrangement	Pearson Correlation	.058**	1
	Sig. (2-tailed)	.001	
	N	620	620

**. Correlation is significant at the 0.01 level (2-tailed).

Table 1 showed the Correlation coefficient between classroom arrangement and preschooler's psychomotor development in Rivers East Senatorial District in Rivers State. The correlation between classroom arrangement and preschooler's psychomotor development was significant at (r=.058, p<.000). Therefore, the null hypothesis is rejected. This means that there is a significant relationship between classroom arrangement and preschooler's psychomotor development in public early childhood education centres in Rivers East Senatorial District in Rivers State.

Null hypothesis two: There is no significant relationship between the playground and preschooler's psychomotor development in public early childhood education centres in Rivers East Senatorial District.

Table 2: Summary of Relationship Test between playground and preschooler's psychomotor development

		Psychomotor development	Playgrounds
Psychomotor development	Pearson Correlation	1	.226**
	Sig. (2-tailed)		.000
	N	620	620
Playgrounds	Pearson Correlation	.226**	1
	Sig. (2-tailed)	.000	
	N	620	620

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2 showed the Correlation coefficient between playground and preschooler's psychomotor development in Rivers East Senatorial District in Rivers State. The correlation between playground and preschooler's psychomotor development was significant at (r=.226, p<.000). Therefore, the null hypothesis is rejected. This means that there is a significant relationship between playground and preschooler's psychomotor

development in public early childhood education centres in Rivers East Senatorial District in Rivers State.

Null hypothesis three: There is no significant relationship between the school facilities and preschooler's psychomotor development in public early childhood education centres in Rivers State East Senatorial District.

Table 3: Summary of Relationship Test between school facilities and preschooler's psychomotor development

		Psychomotor development	School facilities
Psychomotor development	Pearson Correlation	1	.516**
	Sig. (2-tailed)		.000
	N	620	620
School facilities	Pearson Correlation	.516**	1
	Sig. (2-tailed)	.000	
	N	620	620

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows the Correlation coefficient between the school facilities and preschooler's psychomotor development in Rivers East Senatorial District in Rivers State. The correlation between the school facilities and preschooler's psychomotor development was significant at (r=.516, p<.000). Therefore, the null hypothesis is rejected. This means that there is a significant relationship between the school facilities and preschooler's psychomotor development in public early childhood education centres in Rivers East Senatorial District in Rivers State.

Discussion of Findings

The result in Table 1 shows that there is a significant relationship between classroom arrangement and preschooler's psychomotor development in public early childhood education centres in Rivers East Senatorial District in Rivers State. The findings of the study support the views of Rands (2017) suggested that the pod or pair seating arrangement where seats are arranged in a circular, rectangular or trapezoidal desk arrangement is effective for group work and motor development. The preschoolers are expected to sit in pairs and work collectively in-class tasks. One learner can sort out colours of a particular building block while the other stacks the blocks to build a tower. This finding is also in agreement with the views of NAEYC (1997) which asserts that arrangement of classroom where learning areas are set up in the classroom in such a way that children may go to one learning area after another to work and play with the materials provided in each area which allow children move around. Having learning areas in classrooms provides many benefits for children. Centers encourage to use their hands for motor development, and children can talk and verbalize freely which encourages critical thinking and cognitive development in children.

The findings in Table 2 reveal that there is a significant relationship between playground and preschooler's psychomotor development in

public early childhood education centres in Rivers East Senatorial District in Rivers State. The finding of the study corroborates the views of Cook, Goodman and Schulz (2011) who posits that play in the playground helps the child learn social and motor skills and cognitive thinking. Also, the finding of supports the views of Gokhale (1995) who observes that activities in playgrounds help with that development by stimulating the brain through the formation of connections between nerve cells and that this process helps with the development of fine and gross motor skills.

The result in Table 3 reveal that there is a significant relationship between the school facilities and preschoolers' psychomotor development in public early childhood education centres in Rivers East Senatorial District in Rivers State. The finding of the study is in consonance with the findings of Ekundayo (2019) who found that there is a significant relationship between school facilities and students' achievement in the psychomotor domain of learning.

Conclusion

1. The study found a significant relationship between classroom arrangement and preschoolers' psychomotor development. This implies that the way classrooms are organized can impact the development of motor skills in young children.
2. There is a significant relationship between the availability and quality of playgrounds and preschoolers' psychomotor development. Playgrounds provide essential opportunities for children to develop physical coordination, strength, and flexibility through play.
3. The study revealed a significant relationship between the overall school facilities and the psychomotor development of preschoolers. Well-equipped schools with adequate facilities support better physical development in children.

Implications

Importance of Classroom Arrangement: The arrangement of classrooms should be considered carefully to support the physical activities that aid in the development of motor skills. Arrangements that allow free movement and activity-based learning are beneficial for children's psychomotor development.

Role of Playgrounds in Early Childhood Education: Schools should ensure that they have adequate and safe playgrounds. These playgrounds are crucial for children to engage in activities that develop their motor skills. Investments in good playground equipment can have a positive impact on children's physical development.

Provision and Maintenance of School Facilities: Schools need to have adequate facilities that are regularly maintained. Proper facilities contribute significantly to the holistic development of preschoolers, including their psychomotor skills. This implies a need for consistent funding and resources from the government and educational authorities.

Recommendation

1. Government Provision of Facilities: Through the Ministry of Education (MOE), the government should ensure proper and adequate provision of facilities according to the developmental stages of children. This will enhance the overall development of children in public early childhood centers.
2. Classroom Arrangement by Caregivers: Caregivers should arrange classrooms to encourage activities promoting motor skills and holistic development. This includes creating spaces where children can move freely and engage in various physical activities.

3. Funding for Maintenance of School Environments: There is a need for the government to provide funds for the upkeep of the school environment at the end of every term. This will enable headteachers to provide materials for the playground and properly maintain the school learning environment, ensuring it is conducive for the development of children's psychomotor skills.

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