



Arts and Creative Activities as Predictors of Physical Skills Development in Pre-Primary Schools in Ilorin South LGA of Kwara State

Sulyman, H.T., & Adetayo, A.O.

Department of Early Childhood and Primary Education, Faculty of Education, Kwara State University, Malete, Nigeria

Corresponding author email: anjolaoluwadetayo@gmail.com

Abstract

The concerns about inadequate exposure of pre-primary school pupils to regular and varied arts and creative activities could limit opportunities for developing essential physical skills. The study therefore investigated arts and creative activities as a predictor of pre-primary school pupils' physical skills development in Ilorin South Local Government Area of Kwara State. The study adopted a cross-sectional descriptive survey design with simple linear regression analysis. The population comprised 15,352 pre-primary school pupils, while the target population was 755 Nursery 3 pupils, from which a sample of 253 pupils was proportionately selected. Two researcher-designed instruments, Arts and Creative Activities Rating Scale (ACARS) and Pupils' Physical Skill Rating Scale (PPSRS), were used for data collection, with reliability coefficients of 0.82 and 0.79, respectively. Mean and standard deviation were used to answer the research questions, while Simple Linear Regression was used to test the hypothesis at 0.05 level of significance. The findings revealed that pupils' engagement in arts and creative activities was moderate ($M = 2.72$, $SD = 0.97$), while their level of physical skill development was also moderate ($M = 2.73$, $SD = 0.96$). Furthermore, arts and creative activities significantly predicted pupils' physical skill development, $R = 0.709$, $R^2 = 0.503$, $F(1, 251) = 253.835$, $p < .001$, with a positive predictive coefficient ($B = 0.533$, $\beta = 0.709$, $t = 15.932$, $p < .001$). The study concluded that arts and creative activity scores were significantly and positively associated with pupils' physical-skill scores. It recommended that schools should provide regular opportunities and adequate materials for pupils to participate in diverse arts and creative activities.

Keywords: Arts And Creative Activities; Physical Skills Development; Pre-Primary School Pupils; Early Childhood Education

Introduction

Pre-primary education represents a critical stage in the holistic development of children, where foundational skills necessary for lifelong learning are nurtured through purposeful and engaging arts and creative activities. Among these, arts and creative activities such as drawing, painting, music, drama, and play have been recognised as useful tools for supporting young learners' growth and development. These activities stimulate children's imagination and self-expression and provide opportunities to practise physical skills. In early childhood settings, active participation in creative tasks may support gross motor coordination, problem-solving abilities, and critical thinking. Given the importance of arts-based learning, its statistical relationship with pupils' physical-skill outcomes warrants empirical investigation.

In Nigeria, the pre-primary school level (ages 3–5 years) is formally recognised as the first stage of the educational system, designed to provide holistic development that encompasses physical, cognitive, social, emotional, and psychomotor domains (Ibrahim, 2023). The National Policy on Education (2014) states that pre-primary education should inculcate in the child the spirit of inquiry and creativity through play, teach the rudiments of numbers, letters, colours, and shapes, and develop both mental and physical abilities (Federal Republic of Nigeria, 2014). This policy

direction acknowledges the importance of appropriate stimulation and instructional practices for children's development (Bello et al., 2017; Sulyman et al., 2024).

Among the various instructional approaches suitable for young learners, arts and creative activities have emerged as useful avenues for supporting holistic development. Arts and creative activities refer to a wide range of expressive, imaginative, and hands-on experiences through which children communicate ideas, feelings, and perceptions of their environment (Bekomson, 2021). These include drawing, painting, colouring, modelling with clay, paper folding, collage work, singing, dancing, storytelling, and dramatization. Unlike traditional rote learning methods that emphasise memorisation and passive reception, arts-based learning is child-centred, process-oriented, and experiential (Shagaya, 2025). According to Kareem (2023), artistic activities allow children to interpret their world in unique and meaningful ways while practising physical skills.

Physical skill development in early childhood encompasses fine motor skills, involving small-muscle movements of the hands and fingers, and gross motor skills, involving larger movements of the arms, legs, and whole body (Adesokan, 2022). Fine motor skills are important for tasks such as writing, cutting, buttoning, and manipulating small objects, while gross motor skills are necessary for walking, running, balancing, and coordinating body movements (Saadu, 2022). Arts and creative activities may provide opportunities to practise physical skills by requiring children to grip pencils and brushes, manipulate clay and scissors, and engage in movement-based activities such as dance and dramatic play (Bekomson, 2021; Shagaya, 2025).

The role of the physical environment in supporting arts and creative activities cannot be overlooked. Kareem (2023) and Bekomson (2021) have shown that the design and organisation of the classroom environment can influence children's engagement in creative activities. A well-designed arts area may include accessible materials, defined spaces for different activities, displays of children's artwork at eye level, and adequate lighting and ventilation (Omotosho, 2020). In contrast, inaccessible materials and cramped spaces may discourage creative engagement (Isbell & Raines, 2020). In the Nigerian context, some pre-primary classrooms are overcrowded, which may make it difficult to organise and manage arts activities (Amali et al., 2012). Such conditions may reduce opportunities for children to work comfortably with creative materials.

Implementation of arts and creative activities in pre-primary schools remains inconsistent in some settings. Amali et al. (2012) reported that pre-primary programme implementation in Kwara State was affected by inadequate funding, insufficient instructional materials, and weak adherence to policy guidelines. Jekayinfa et al. (2020) reported that while instructional materials such as charts, blocks, shapes, and colours were available in many schools, their utilisation was often skewed towards academic readiness rather than creative exploration. Saadu (2021) also reported challenges relating to pupils' attitudes and engagement in Creative Arts, which may affect opportunities for creative skill acquisition.

Regarding arts and creative materials, Obafemi (2023) found that the unavailability and unaffordability of instructional materials constrained caregivers and teachers, limiting opportunities for improvisation and active engagement of learners in hands-on creative activities. Shagaya (2025) identified systemic barriers across Kwara State, including inadequate teacher competence in arts pedagogy, insufficient funding, and the marginalisation of creative subjects in favour of core academic areas. Olisaeke and Olisaeke (2025) observed that although Cultural and Creative Arts are formally embedded in the Nigerian curriculum, teachers encounter practical challenges in implementation, which may limit pupils' active engagement in experiential and skill-based learning.

Although arts and creative activities are recognised as important for the holistic development of young children, the reality in many pre-primary schools remains a source of concern. Rather than providing regular opportunities for children to participate in meaningful drawing, colouring, painting, modelling, cutting, dancing, and other creative activities, some schools face challenges such as inadequate materials, insufficient teacher competence, overcrowded classrooms, inadequate funding, and increasing emphasis on academic achievement. Consequently, arts and creative activities may receive inadequate attention within the pre-primary school programme, thereby limiting children's opportunities to practise and develop important physical skills. Since many creative activities require children to manipulate materials, coordinate their hands and eyes, control body movements, and perform different fine and gross motor tasks, limited participation in such activities may affect the development of their physical skills. Therefore, this

study investigates arts and creative activities as predictors of pre-primary school pupils' physical skills development in Ilorin South Local Government Area of Kwara State.

The development of adequate physical skills among pre-primary school pupils is essential for their effective participation in learning activities and overall growth during the early childhood years. However, concerns exist that many pupils may not be sufficiently exposed to regular and varied arts and creative activities, such as drawing, colouring, painting, modelling, cutting, folding, dancing, and dramatization, which provide opportunities for developing fine and gross motor coordination and other physical skills. In some pre-primary schools, greater emphasis may be placed on academic activities, while creative activities receive limited attention because of reported implementation challenges such as inadequate materials, insufficient time, and limited teacher competence. Consequently, pupils may have fewer opportunities to manipulate materials, coordinate body movements, and practise physical skills. Although the developmental value of arts and creative activities is widely recognised, there is a need for empirical evidence on the extent to which these activities statistically predict pre-primary school pupils' physical-skill development, particularly in Ilorin South Local Government Area of Kwara State. It was against this background that the study examined arts and creative activities as a predictor of pre-primary school pupils' physical skills development in Ilorin South Local Government Area of Kwara State.

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The objectives of the study are to:

1. Assess the extent to which pre-primary school pupils engage in arts and creative activities in Ilorin South Local Government Area of Kwara State.
2. Examine the level of physical skill development of pre-primary school pupils in Ilorin South Local Government Area of Kwara State.
3. Investigate if arts and creative activities predict pupils' physical skill development in Ilorin South Local Government Area of Kwara State.

The study raised and answered the following research questions.

1. What is the extent of pre-primary school pupils' engagement in arts and creative activities in Ilorin South Local Government Area of Kwara State?
2. What is the level of physical skill development of pre-primary school pupils in Ilorin South Local Government Area of Kwara State?

The following research hypothesis was formulated and tested at the 0.05 level of significance

H₀₁: Arts and creative activities do not significantly predict pupils' physical skill development in Ilorin South Local Government Area of Kwara State.

Methodology

The study adopted a cross-sectional descriptive survey design with simple linear regression analysis to examine the statistical predictive relationship between arts and creative activities and pre-primary school pupils' physical-skill ratings in Ilorin South Local Government Area of Kwara State. The study population comprised 15,352 pre-primary school pupils in Ilorin South Local Government Area, consisting of 3,359 pupils in public schools and 11,993 pupils in private schools. The target population comprised 755 Nursery 3 pupils, made up of 118 pupils in public pre-primary

schools and 637 pupils in private pre-primary schools. A sample of 253 pupils was selected from the target population using the Research Advisor Table (2006), comprising 40 pupils from public pre-primary schools and 213 pupils from private pre-primary schools. The pupils were proportionately selected based on their representation in public and private pre-primary schools. For transparency at publication stage, the manuscript should additionally report the number of participating schools, the number of pupils selected from each school, the sampling frame, the randomisation procedure, and the inclusion/exclusion criteria used. Author verification required before resubmission: the final manuscript should report the number of participating schools, pupils selected per school, sampling frame and randomisation procedure, as well as any regression-diagnostic results available from the original analysis. These details cannot be reconstructed from the submitted manuscript alone.

Two research instruments were used for data collection, namely the Arts and Creative Activities Rating Scale (ACARS) and the Pupils' Physical Skill Rating Scale (PPSRS). The ACARS was a researcher-designed 20-item rating scale used to assess pupils' engagement in arts and creative activities such as drawing, colouring, painting, and modelling, while the PPSRS was a 20-item rating scale used to assess pupils' physical skills, including fine motor control, hand-eye coordination, and basic gross motor skills such as holding writing tools, tracing patterns, cutting shapes, and manipulating objects. Both instruments were rated on a four-point scale of Always (4), Sometimes (3), Rarely (2), and Never (1), and were subjected to face and content validity by experts in Early Childhood Education and Test, Measurement and Evaluation at Kwara State University, Malete. Their reliability was established through a test-retest procedure involving 30 pre-primary school pupils in Ifelodun Local Government Area of Kwara State, with reliability coefficients of 0.82 for ACARS and 0.79 for PPSRS obtained using Pearson Product Moment Correlation Coefficient. Data collected were analysed using mean and standard deviation to answer the research questions, while Simple Linear Regression was used to test the null hypothesis at the 0.05 level of significance. For interpretation of the four-point scale, mean scores of 3.50–4.00 were considered very high, 2.50–3.49 moderate, 1.50–2.49 low, and 1.00–1.49 very low. The null hypothesis was rejected where the p-value was less than 0.05 and retained where the p-value was greater than or equal to 0.05. Before final resubmission, the authors should also report the test-retest interval, rater training procedures, and any inter-rater reliability evidence available for the rating instruments.

Results

Table 1: Frequency, Percentage, Mean and Standard Deviation on the Extent of Pre-primary School Pupils' Engagement in Arts and Creative Activities in Ilorin South Local Government Area of Kwara State

Engagement in Arts and Creative Activities in North South Local Government Area of Rivers State								
S/N	Item Statement	Always (%)	Sometimes (%)	Rarely (%)	Never (%)	Mean	SD	Decision
1	The pupil engages in free drawing using pencils, 60 (23.7) crayons, or markers	7 (2.8)	102 (40.3)	84 (33.2)	2.17	1.13	Low	
2	The pupil draws shapes (circle, square, triangle) when 19 (7.5) asked	48 (19.0)	112 (44.3)	74 (29.2)	2.05	0.89	Low	
3	The pupil draws pictures that represent objects or people 128 (50.6) (house, tree, family)	69 (27.3)	40 (15.8)	16 (6.3)	3.22	0.93	Moderate	
4	The pupil attempts to draw lines, patterns, or simple 61 (24.1) designs	111 (43.9)	69 (27.3)	12 (4.7)	2.87	0.83	Moderate	
5	The pupil completes drawing tasks assigned by the teacher 80 (31.6)	64 (25.3)	70 (27.7)	39 (15.4)	2.73	1.07	Moderate	
6	The pupil engages in colouring activities using 84 (33.2) crayons or coloured pencils	67 (26.5)	66 (26.1)	36 (14.2)	2.79	1.06	Moderate	
7	The pupil colours within the lines of printed or drawn 55 (21.7) shapes	118 (46.6)	52 (20.6)	28 (11.1)	2.79	0.91	Moderate	

S/N	Item Statement	Always (%)	Sometimes (%)	Rarely (%)	Never (%)	Mean	SD	Decision
8	The pupil selects and uses different colours appropriately for different objects	91 (36.0)	79 (31.2)	62 (24.5)	21 (8.3)	2.95	0.97	Moderate
9	The pupil completes colouring tasks without excessive prompting	55 (21.7)	71 (28.1)	97 (38.3)	30 (11.9)	2.60	0.96	Moderate
10	The pupil shows preference for certain colours in colouring activities	87 (34.4)	58 (22.9)	62 (24.5)	46 (18.2)	2.74	1.12	Moderate
11	The pupil engages in painting activities using brushes, sponges, or fingers	55 (21.7)	68 (26.9)	69 (27.3)	61 (24.1)	2.46	1.08	Low
12	The pupil uses painting tools appropriately (holds brush correctly)	52 (20.6)	98 (38.7)	79 (31.2)	24 (9.5)	2.70	0.90	Moderate
13	The pupil experiments with mixing colours during painting	71 (28.1)	99 (39.1)	65 (25.7)	18 (7.1)	2.88	0.90	Moderate
14	The pupil paints pictures that represent objects or scenes	75 (29.6)	81 (32.0)	74 (29.2)	23 (9.1)	2.82	0.96	Moderate
15	The pupil participates in group painting projects	66 (26.1)	107 (42.3)	60 (23.7)	20 (7.9)	2.87	0.89	Moderate
16	The pupil engages in modelling activities using clay, dough, or playdough	48 (19.0)	106 (41.9)	61 (24.1)	38 (15.0)	2.65	0.95	Moderate
17	The pupil manipulates clay by rolling, pressing, squeezing, and shaping	58 (22.9)	105 (41.5)	55 (21.7)	35 (13.8)	2.74	0.97	Moderate
18	The pupil creates recognisable objects or shapes from clay or dough	87 (34.4)	77 (30.4)	67 (26.5)	22 (8.7)	2.91	0.98	Moderate
19	The pupil uses modelling tools (rollers, cutters) appropriately	56 (22.1)	103 (40.7)	67 (26.5)	27 (10.7)	2.74	0.92	Moderate
20	The pupil shows persistence in completing modelling projects	81 (32.0)	38 (15.0)	102 (40.3)	32 (12.6)	2.66	1.06	Moderate
Grand Mean						2.72	0.97	Moderate

Table 1 presents the frequency, percentage, mean and standard deviation of respondents' ratings on the extent of pre-primary school pupils' engagement in arts and creative activities in Ilorin South Local Government Area of Kwara State. The result shows a grand mean of 2.72 with a standard deviation of 0.97, indicating that pre-primary school pupils sometimes engaged in arts and creative activities. This suggests that the extent of pupils' engagement was moderate. The highest-rated activity was "The pupil draws pictures that represent objects or people (e.g., house, tree, family)" (Mean = 3.22, SD = 0.93), with 128 respondents (50.6%) indicating Always. Other relatively highly rated activities included selecting and using different colours appropriately for different objects (Mean = 2.95), creating recognisable objects or shapes from clay or dough (Mean = 2.91), experimenting with mixing colours during painting

(Mean = 2.88), attempting to draw lines, patterns, or simple designs (Mean = 2.87), and participating in group painting projects (Mean = 2.87). These findings indicate moderate engagement across drawing, colouring, painting, and modelling activities.

Conversely, drawing shapes (circle, square and triangle) when asked recorded the lowest mean score (Mean = 2.05, SD = 0.89), followed by engaging in free drawing using pencils, crayons or markers (Mean = 2.17, SD = 1.13) and engaging in painting activities using brushes, sponges or fingers (Mean = 2.46, SD = 1.08). These items were rated Rarely, suggesting that pupils participated less frequently in these specific activities. Overall, the grand mean of 2.72 indicates a moderate extent of engagement in arts and creative activities among pre-primary school pupils in Ilorin South Local Government Area.

Table 2: Frequency, Percentage, Mean and Standard Deviation on the Level of Physical Skill Development of Pre-primary School Pupils in Ilorin South Local Government Area of Kwara State

S/N	Item Statement	Always (%)	Sometimes (%)	Rarely (%)	Never (%)	Mean	SD	Decision
1	The pupil holds a pencil or crayon with a functional grasp (tripod or near-tripod grip)	66 (26.1)	80 (31.6)	71 (28.1)	36 (14.2)	2.70	1.01	Moderate
2	The pupil can draw lines, circles, and basic shapes with control	47 (18.6)	108 (42.7)	72 (28.5)	26 (10.3)	2.70	0.89	Moderate
3	The pupil can trace over dotted lines or patterns without significant deviation	44 (17.4)	105 (41.5)	75 (29.6)	29 (11.5)	2.65	0.90	Moderate
4	The pupil can cut along a straight line using child-safe scissors	44 (17.4)	99 (39.1)	68 (26.9)	42 (16.6)	2.57	0.96	Moderate
5	The pupil can cut along curved or zigzag lines with minimal assistance	66 (26.1)	88 (34.8)	75 (29.6)	24 (9.5)	2.77	0.94	Moderate
6	The pupil can paste or glue materials onto paper with accuracy and neatness	48 (19.0)	96 (37.9)	58 (22.9)	51 (20.2)	2.56	1.02	Moderate
7	The pupil can thread beads onto a string or lace without difficulty	54 (21.3)	116 (45.8)	61 (24.1)	22 (8.7)	2.80	0.87	Moderate
8	The pupil can manipulate small objects (buttons, pegs, coins) with precision	85 (33.6)	68 (26.9)	71 (28.1)	29 (11.5)	2.83	1.02	Moderate
9	The pupil can roll, squeeze, and shape clay or dough into desired forms	40 (15.8)	91 (36.0)	88 (34.8)	34 (13.4)	2.54	0.91	Moderate
10	The pupil can tear paper along a straight or curved line intentionally	59 (23.3)	83 (32.8)	69 (27.3)	42 (16.6)	2.63	1.02	Moderate
11	The pupil can fold paper along a line (in half, in quarters)	53 (20.9)	96 (37.9)	62 (24.5)	42 (16.6)	2.63	0.99	Moderate
12	The pupil can fasten buttons, zippers, or snaps on clothing independently	66 (26.1)	57 (22.5)	86 (34.0)	44 (17.4)	2.57	1.06	Moderate
13	The pupil can colour within the boundaries of a shape without going outside	71 (28.1)	35 (13.8)	101 (39.9)	46 (18.2)	2.52	1.09	Moderate
14	The pupil can copy simple shapes (circle, square, cross, triangle) from a model	68 (26.9)	61 (24.1)	76 (30.0)	48 (19.0)	2.59	1.08	Moderate

S/N	Item Statement	Always (%)	Sometimes (%)	Rarely (%)	Never (%)	Mean	SD	Decision
15	The pupil can place small objects into containers with precision and accuracy	128 (50.6)	78 (30.8)	33 (13.0)	14 (5.5)	3.26	0.89	Moderate
16	The pupil can stack blocks or objects without knocking them over	54 (21.3)	138 (54.5)	45 (17.8)	16 (6.3)	2.91	0.80	Moderate
17	The pupil can catch a large ball thrown from a short distance (about 2 metres)	64 (25.3)	93 (36.8)	67 (26.5)	29 (11.5)	2.76	0.96	Moderate
18	The pupil can throw a ball towards a target with reasonable accuracy	73 (28.9)	81 (32.0)	69 (27.3)	30 (11.9)	2.78	1.00	Moderate
19	The pupil can complete puzzles with 4-8 pieces without frustration	62 (24.5)	123 (48.6)	48 (19.0)	20 (7.9)	2.90	0.86	Moderate
20	The pupil can trace shapes or letters without lifting the writing tool excessively	87 (34.4)	93 (36.8)	57 (22.5)	16 (6.3)	2.99	0.91	Moderate
Grand Mean						2.73	0.96	Moderate

Table 2 presents the frequency, percentage, mean and standard deviation of respondents' ratings on the level of physical skill development of pre-primary school pupils in Ilorin South Local Government Area of Kwara State. The results show a grand mean of 2.73 (SD = 0.96), indicating that the pupils sometimes demonstrated the physical skills assessed. This implies that the level of physical skill development among the pupils was moderate. The highest-rated item was "The pupil can place small objects into containers with precision and accuracy" (Mean = 3.26, SD = 0.89), with 128 respondents (50.6%) indicating Always. This was followed by "The pupil can trace shapes or letters without lifting the writing tool excessively" (Mean = 2.99, SD = 0.91), "The pupil can stack blocks or objects without knocking them over" (Mean = 2.91, SD = 0.80), and "The pupil can complete puzzles with 4-8 pieces without frustration" (Mean = 2.90, SD = 0.86), suggesting relatively stronger performance on these assessed coordination and fine-motor tasks. The comparatively lower-rated skills included colouring within the boundaries of a shape without going outside (Mean = 2.52, SD = 1.09), rolling, squeezing and shaping clay or dough into desired forms (Mean = 2.54, SD = 0.91), pasting or gluing materials onto paper with accuracy and neatness (Mean = 2.56, SD = 1.02), cutting along a straight line using child-safe scissors (Mean = 2.57, SD = 0.96), and fastening buttons, zippers or snaps independently (Mean = 2.57, SD = 1.06). Although these items recorded relatively lower mean scores, they remained within the Moderate category. Overall, the grand mean of 2.73 indicates a moderate level of physical skill development among the pupils. The result describes the level observed in the sample and does not by itself establish the causes of the observed performance.

Table 3: Simple Linear Regression Analysis of Arts and Creative Activities as a Predictor of Pupils' Physical Skill Development

Model	R	R ²	Adjusted R ²	Std. Error of the Estimate	
1	0.709	0.503	0.501	0.474	
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	57.079	1	57.079	253.835	< .001
Residual	56.476	251	0.225		
Total	113.555	252			
Model	B	Std. Error	Beta (β)	t	Sig.
Constant	1.286	0.091	—	14.14	< .001
Arts and Creative Activities	0.533	0.033	0.709	15.932	< .001

Table 3 presents the simple linear regression analysis of arts and creative activities as a predictor of pupils' physical skill development in Ilorin South Local Government Area of Kwara State. The result shows an R-value of 0.709, indicating a strong positive statistical relationship between arts and creative activity scores and pupils' physical-skill scores. The R^2 value of 0.503 indicates that arts and creative activity scores explained approximately 50.3% of the variance in pupils' physical-skill scores. The remaining 49.7% of the variance may be associated with other factors not included in the present regression model. The regression model was statistically significant, $F(1, 251) = 253.835$, $p < .001$. This indicates that arts and creative activity scores significantly predicted pupils' physical-skill scores in the sample.

The regression coefficient further shows a positive and statistically significant predictive relationship between arts and creative activities and pupils' physical-skill scores ($B = 0.533$, $\beta = 0.709$, $t = 15.932$, $p < .001$). This means that higher arts and creative activity scores were associated with higher physical-skill scores. Since the obtained significance value ($p < .001$) is less than the 0.05 level of significance, the null hypothesis is rejected. The result therefore indicates that arts and creative activities significantly predicted pupils' physical-skill scores in Ilorin South Local Government Area of Kwara State. Because the study used a non-experimental, cross-sectional design, the finding should be interpreted as statistical prediction/association and not as evidence that arts and creative activities caused improvements in physical skills.

Discussion

The finding of this study revealed that the extent of pre-primary school pupils' engagement in arts and creative activities was moderate, indicating that the pupils participated in activities such as drawing, colouring, painting, modelling, and other creative tasks, but not at a very high frequency. The result suggests that arts and creative activities formed part of the pupils' learning experiences, although the observed level of engagement was moderate. Possible explanations may include inadequate instructional materials, limited time allocated to creative activities, teachers' preference for more academic activities, large class sizes, or insufficient emphasis on practical and play-based learning; however, these factors were not directly measured in the present study and should therefore be regarded only as possible explanations. The finding agrees with Saadu (2021), whose study showed a moderate level of Creative Arts skill acquisition among primary school pupils, providing indirect supporting evidence. It also agrees with Ibrahim (2023), who reported that environmental stability, parental encouragement, and teacher motivation influenced pupils' creativity. However, Oke et al. (2015) reported a higher level of creative engagement among Nigerian children. The difference may reflect differences in age group, setting, type of creative activity and measurement approach. The comparison with these studies should therefore be regarded as contextual rather than direct evidence for the present Nursery 3 population.

The finding of this study revealed that the level of physical skill development among pre-primary school pupils was moderate, indicating that the pupils demonstrated a fair level of ability on the physical-skill tasks assessed. The result suggests that the pupils were developing skills such as coordination, movement control, and manipulation of objects. Possible explanations may include the extent to which pupils were exposed to structured physical, play-based, and creative activities within their school environments, as limited access to suitable materials, space, and teacher-guided activities may restrict opportunities for repeated practice; however, these factors were not directly measured in the present study. The finding is consistent with Sulyman et al. (2024), who examined play-based learning and physical skill development, and Saadu (2022), who examined outdoor sports and preschool children's motor skills. It also has contextual support from Adesokan (2022), whose study examined physical exercise and motor-skill acquisition. These studies provide indirect supporting evidence because their activities, populations, designs, or outcomes differ from the present study. In contrast, Sulyman et al. (2022) reported a different level of physical skill acquisition in a primary-school playground context, indicating that differences in age, school environment, type of activity and measurement may account for variation across studies.

The finding of this study revealed that arts and creative activities significantly predicted pupils' physical skill development, indicating that higher engagement scores in activities such as drawing, colouring, painting and modelling were associated with higher physical-skill scores among the pupils. The result is consistent with the practical nature of arts and creative activities, which require children to hold, cut, draw, manipulate and coordinate materials. The finding agrees with Dagunduro and Adebawale (2022), whose study examined creative arts activities and developmental outcomes among early-childhood pupils, although its outcome focused on social skills and therefore provides indirect evidence. It also aligns conceptually with Saadu (2021) and with studies of play-based and

activity-related physical development such as Sulyman et al. (2024). The present regression result provides evidence of a statistically significant positive predictive relationship between arts and creative activity scores and physical-skill scores. It should not, however, be interpreted as proof that arts and creative activities caused the observed level of physical-skill development.

Conclusion

The study concluded that arts and creative activities were significantly and positively associated with pupils' physical-skill scores. The observed moderate level of engagement in arts and creative activities and the moderate level of physical-skill development indicate that pupils participated in creative activities and demonstrated the assessed physical skills, but neither was at a very high level. The regression analysis further showed that arts and creative activity scores significantly predicted physical-skill scores and explained approximately 50.3% of the variance in the physical-skill scores in the sample. Given the cross-sectional, non-experimental design, interpret this finding as statistical prediction or association rather than evidence of a causal effect. Schools should therefore continue to provide opportunities, materials, and supportive environments for developmentally appropriate arts and creative activities, while recognising that multiple factors influence physical-skill development.

Recommendations

The following recommendations were made based on the findings of the study.

1. School administrators should provide regular opportunities and adequate materials for pupils to engage in arts and creative activities.
2. Pre-primary teachers should incorporate more arts and creative activities that promote pupils' physical skill development.
3. School administrators and teachers should strengthen the integration of arts and creative activities into classroom practices to support pupils' physical-skill development.

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