Play And Social Skills Development among Primary Six Pupils in Public Primary Schools Of Calabar Municipality Local Government Area of Cross River State, Nigeria.

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Abstract
This study investigated the impact of play on the development of social skills among Primary Six pupils in public primary schools in Calabar Municipality Local Government Area of Cross River State, Nigeria. The study was guided by four specific objectives and four corresponding research questions, focusing on the relationships between different forms of play—cooperative, imaginative, physical, and solitary—and social skills development. A survey research design was adopted, and data were collected using a structured questionnaire titled Play and Development of Social Skills Questionnaire (PDSSQ). A stratified random sampling technique was used to select a sample of 200 pupils across public primary schools in the study area. Pearson's Product Moment Correlation Coefficient was employed to analyze the data. The findings revealed significant positive relationships between all four types of play and the development of social skills, with physical play showing the highest correlation coefficient ($r = .786$, $p < .05$), followed by cooperative play ($r = .658$),

imaginative play (r = .451), and solitary play (r = .339). These results suggest that various forms of play significantly contribute to enhancing pupils' interpersonal communication, emotional regulation, empathy, and peer relationship skills. The study underscores the importance of integrating structured and unstructured play activities into the school curriculum to foster holistic social development among children. It recommends that educators and policymakers prioritize play-based learning strategies to promote emotional and social competence among primary school pupils.
Keywords: Cooperative play, Imaginative play, Physical play, Solitary play, Social skills, Primary school pupils, Calabar Municipality.

Introduction

Children like to play. Play provides relaxation, evokes pleasure, induces a sense of freedom, and gives children the opportunity to renew their skills without fear of failure. Play begins very early in life and has been argued to be one of the leading sources of children's development by many developmental theorists. Children will almost automatically start playing whenever and wherever they can, and they will play whatever they want to: sometimes children run and chase each other, or construct things, or pretend to be someone else.

From a social perspective, we can see children playing alone, playing with caregivers, playing cooperatively in small or larger groups, and sometimes quietly observing others at play. Although the observation of children playing uncovers significant variation in play behaviors, many play theories and much research have focused on pretend play (Fein, 1981; Lillard, 2017). Yet, what can we observe when observing a playground after the morning classes? What do children do outdoors when the sun rises after a rainy week? How do children play when in a forest or at the beach? They run, jump, chase each other, and wrestle! They laugh and speak in ways that are as powerful and as dynamic as their movements. Indeed, observational studies have shown that children spend a considerable amount of time engaged in physical play—such as running, catching, or wrestling—especially when outdoors (Lindsey, 2024; Veiga, et al., 2017).

For primary school children, especially those in their formative years such as Primary Six pupils, play facilitates the development of communication, cooperation, emotional regulation, empathy, and conflict resolution skills (Frost et al., 2022). Despite its critical importance, structured opportunities for play are often marginalized in formal education systems in Nigeria, including those in Cross River State, where emphasis is often placed on rote learning, test preparation, and curriculum coverage (Obinaju, 2017). This trend poses a

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significant concern, as children deprived of play may struggle with peer relationships, emotional self-regulation, and social integration.

Play is a natural, spontaneous, and voluntary activity that is deeply embedded in the lives of children. It allows for experimentation, imagination, problem-solving, and most importantly, social interaction. Scholars across multiple disciplines have emphasized the developmental benefits of play, particularly in relation to the acquisition of prosocial behavior and interpersonal skills (Bodrova & Leong, 2015; Vygotsky, 1978). Through cooperative and pretend play, children learn how to share, take turns, listen, negotiate, and express their emotions in socially acceptable ways. Vygotsky (1978), in his sociocultural theory of development, argued that play creates a zone of proximal development where children can advance their social and cognitive abilities beyond what they can achieve alone. Piaget (1962), in his theory of cognitive development, also acknowledged play as a crucial activity through which children transition from egocentric behavior to understanding others' perspectives. These developmental theorists collectively underscore the view that play is not separate from learning, but rather an essential vehicle for learning.

In the Nigerian context, however, there exists a persistent undervaluation of play within public school curricula. Public primary schools in Calabar Municipality, like many across the country, are characterized by limited recreational infrastructure, overcrowded classrooms, teacher-centered instruction, and a curriculum that seldom accommodates play-based learning (Ekanem & Ekefre, 2024). This situation has been compounded by pressures to perform well in national examinations, thereby pushing play to the margins of school life. Furthermore, Nigeria is a country marked by socio-economic inequalities, ethnic diversity, and varying parenting styles—all of which shape children's socialization experiences. In public schools, many children may lack structured opportunities at home for social interaction and thus depend on school environments to acquire essential interpersonal skills. In such contexts, play becomes even more critical—not only as a medium for learning, but also as a form of psychosocial support and inclusion (UNICEF, 2018).

Despite anecdotal observations that children who engage more in peer play exhibit higher levels of cooperation and empathy, there is a paucity of empirical studies within the Calabar Municipality specifically linking play to the development of social skills in upper primary classes such as Primary Six and given the pivotal role of social skills in personal and academic success, this study seeks to examine how play activities within the school setting influence the social skill development of Primary Six pupils in public primary schools in Calabar Municipality.

Theoretical frame work

Vygotsky's sociocultural theory of learning (1980).

Social constructivism argues that students can, with help from others, grasp concepts and ideas that they cannot understand on their own. Vygotsky (1980) suggested that the community plays a crucial role in the process of meaning-making. Vygotsky (1967) argues that social development occurs first by observing other people's behaviours, listening to them, and then trying to imitate them. Learning through play provides first-hand experiences for children that are not comparable with other kinds of teaching methods. Through play, children engage in first-hand experiences as opposed to other methods in which students receive guidance from a teacher. This theory is relevant to this study because educators can adapt the best teaching method to help children's skills acquisition. Scaffolding, with its link to Vygotskian sociocultural theory, describes how the adaptive and temporary support provided by a more competent person such as an educator, by using several techniques (e.g., modelling, bridging, developing metacognition) in learning contexts, can help younger individuals reach the zone of proximal development.

Statement of the Problem

While global research highlights the pivotal role of play in social development, the practical integration of play into Nigerian public primary education remains largely underdeveloped and undervalued. In Calabar Municipality, educational practices still lean heavily on rigid, test-oriented instruction, leaving limited room for experiential and play-based learning. As a result, many pupils may complete primary education with inadequate social competencies, manifesting in behavioral problems such as aggression, withdrawal, bullying, and poor peer relationships. Moreover, the lack of empirical data specifically addressing the impact of play on social skill development among Primary Six pupils in public schools of Calabar Municipality raises important questions for educators and policy makers. Are pupils who engage in play activities during school hours more socially competent than their peers who do not? What types of play activities are most conducive to fostering communication, empathy, and teamwork?

The absence of answers to these questions hinders evidence-based educational planning and the development of interventions that could support holistic child development. Without structured efforts to understand and promote the role of play in social learning, pupils may continue to graduate from primary school without the interpersonal skills necessary to thrive in secondary education and beyond. Therefore, this study soughed to fill this gap by exploring the relationship between play and social skill development among Primary Six pupils in public primary schools of Calabar Municipality.

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Purpose of the Study

The general purpose of this study is to examine the impact of play on the development of social skills among Primary Six pupils in public primary schools in Calabar Municipality Local Government Area of Cross River State, Nigeria.

Specifically, the study sought to:

1. Examine the relationship between cooperative play and the development of social skills.
2. Determine the extent to which imaginative play relate to the development of social skills.
3. Investigate physical play and the development of emotional understanding in pupils.
4. Assess solitary play and the development of emotional understanding in pupils.

Statement of hypotheses

The study tested the following null hypotheses at a 0.05 level of significance:

1. There is no significant relationship between cooperative play and the development of social skills.
2. Imaginative play does not significantly relate to the development of social skills.
3. Physical play does not significantly relate to the development of social skills.
4. There is no significant relationship between solitary play and the development of social skills.

Literature Review

Cooperative play and the development of social skills:

Play is widely recognized as a spontaneous, voluntary, and intrinsically motivated activity that is essential for child development. It includes both structured and unstructured activities that children engage in for enjoyment and exploration (Frost et al., 2022). According to Piaget (1962), play supports cognitive development, while Vygotsky (1978) emphasized its role in social and cultural learning. Common types of play include cooperative play, imaginative (pretend) play, physical play, and solitary play.

Numerous studies have supported the positive influence of cooperative play on social skills development. For instance, Daubert et al., (2018) observed that preschoolers who participated in cooperative games developed stronger collaborative and negotiation skills than those who engaged in competitive or solitary play. The study emphasized that structured cooperative plays enhanced children's ability to communicate and regulate their emotions effectively. In a quasi-experimental study conducted by Wahler and Meginnis (1997), it was found that cooperative play interventions in elementary classrooms significantly improved

peer acceptance and reduced social withdrawal among children with mild behavioral challenges. In the Nigerian context, Wilhelmina *et al.,* (2020) investigated cooperative play among early primary school children and found that children who frequently participated in group storytelling, cooperative puzzles, and drama exhibited better interpersonal skills and classroom adaptability.

Tayebeh (2021) examined the effects of group games on female elementary students' cooperation skills. Two classes of elementary female students were assigned as an experimental or a control group. The study used a quasi-experimental method for the evaluation and comparison of cooperation development and administered the Measurement of Competitive-Cooperative Attitudes to gather data. A T-test was done to examine the hypothesis. A pre-test was performed to measure cooperation skills development and see whether they are comparable. Then, the experimental group played the selected group games, while the control group continued the previous curriculum. A middle test was conducted after 6 weeks. There were no meaningful differences between the groups. As it was predicted that time would be a factor that affected the results, the program continued for another 6 weeks. Finally, a post-test was conducted, revealing that group games can increase cooperation skills ($p< 0/05$). The findings build on previous studies, confirming that group games can be used to create a fun and motivating environment for practising and developing cooperation skills. Through group games, children provide insights into their perspectives of rules, routines, and experiences within the school setting. Also, children can learn cooperation skills by observing how other children cooperate through group games. Play provides children with the opportunity to examine their personal preferences within the games.

Hromek and Roffey (2019), argued that play is a powerful method for developing social and emotional learning, such as cooperation, in children. Also, Hildmann and Hildmann (2019) who examined the impact of initiative games in an educational setting on the growth of social and personal competence in children over age 3; they concluded that games as a teaching method promote social and personal skills. Kovess-Masfety et al. (2016) also assessed the association between time spent playing video games and social skills; their study revealed that increased video game usage is associated with decreases in peer relationship problems, which can affect social skills development, including cooperation skills. Problems may arise when video game playing is excessive (Shi et al., 2019). Also, Gao and Hall (2019) argue that "play provides children with safe environments that allow them to learn and practice those important skills such as social and emotional skills, cognitive skills, motor skills, as it fully engages children intellectually, emotionally, physically, verbally, and socially".

Positive cooperation skills are critical for children's success at school and in adulthood; they need to be practiced with others successfully, and group games can provide opportunities for this practice. As Chen and Rubin (2021) argue, social skills development occurs in the context of relationships with others. Group games can provide good opportunities for children to practice their social skills, as they are situations involving only friends and acquaintances, with no strangers being involved. However, there is a counter argument that competition increases motivation for learning more than cooperation (Jones, 2024). Although research indicates that competition among for some high-grades students can increase academic performance, many young students are less motivated under these conditions (Meese et al., 2016).

Moreover, during the school years, children noticeably expand their cooperation skills, as school is the first social community they enter. This time can set the stage for further success in school and life. Educators can create opportunities for practicing these skills by creating a situation in which students can cooperate instead of engaging in individual activities. Furthermore, children learn from imitation through group games. Therefore, the educational experience is greatly significant for children's development, and educational authorities need to employ the most effective teaching methods, such as designing formal group games. Formal games structures are rule-based, and the games are shaped according to what the designer intends to convey, as well as what the player hopes to gain (Reynolds & Chiu, 2023). As Hong et al. (2017) state, the learning group approach facilitates children's development in relationships, cooperation, and play skills.

Imaginative play and the development of social skills:

The early years of a child's life are critical for later development. A child's development is a process of a change in behaviour from being immature to mature, from simple to complex, from being dependent to being self-reliant. There are many critical skills that children need to develop in preparation for later developments, such as exploring, risk-taking, fine motor skills, and gross motor development. These skills can be learned effectively through play-based activities (Johnson et al., 2020). Taking into account the nature of children is "play", the lessons and learning process involving young children should be done through play (Puteh, 2022). Moreover, play offers the best learning experience for children (Moyles, 2015). During children's exploration of the world, they learn to communicate and express naturally. In contrast, Piaget (1951) asserted that children construct knowledge through interaction with others and by acting on their environment. Piaget (1951) highlights the relationship between play and cognitive development; whereby children could reach a higher level of cognitive developments through the process of assimilation of experience through

play. Young children cannot be separated from play. Also, every child has the right to engage in play (Jantan, 2023). More importantly, play is an essential part of a child's development and it is critical for a child to reach their full potential (Ginsburg, 2017). Play contributes to the aspects of cognitive, physical, social and emotional development of children (Rosli & Lin, 2018). However, to elicit social development in children, it can occur when children explore their environment with their peers or adults through social interactions (Dzainudin et al., 2018). This can be done through play, where the adults will have ample opportunities to participate in their children's activities (Jantan, 2023). The process of teaching and learning using play-based activities is a structured approach that provides students with the opportunity to learn in a meaningful and positive way (Loy, 2017). Children will develop cooperative skills and display appropriate social behaviour. The social competence of children will increase as children learn to control themselves, overcoming stress, and talk about emotions (Daubert et al., 2018). Children will display various positive emotions such as joy and happiness. This will lead them building their own experiences through exploration and discovery. On this basis, we describe the developmental trajectories of imaginative play and the components of socio-emotional competence during childhood, especially in the pre-school period. In addition, we review the research literature on the possible link between imaginative play and creativity in children, and on how this type of play is predictive of later life creativity. Finally, we discuss hypothetical mechanisms that may account for the relationship between imaginative play and social competence in the preschool years and beyond.

Physical play and the development of social skills:

Play is an important context for children's emotional and social development. Most play research has been focused on pretend play; however, observational studies have shown that children spend a considerable amount of time engaged in physical play. Although it is thought to be important, little is known about the role of physical play in children's emotion socialization. Physical play can be categorized in two forms: exercise play and rough-and-tumble play (Graham & Burghardt, 2020; Pellis & Pellis, 2019). Both forms involve moderate to vigorous playful body activity, which is accompanied by physiological arousal. In addition, rough-and- tumble play often involves role taking, requiring children to accurately read their partners' emotional and intentional expressions, control their anger impulses, and cope with frustration. Recent research has shown that exercise play, especially when engaged with peers, is related to emotion understanding and emotion regulation; but this is less clear for rough-and-tumble play. Besides, physical play provides an important mechanism for peer interactions that is less dependent on verbal interactions, which is especially relevant for children with communication impairments, and hearing loss in

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particular. Play is a highly rewarding activity that is abundant in developing children (Ginsburg et al., 2017; Lillard, 2017). In humans, play is apparent throughout cultures, and it occurs in most non-human mammalian species, as well as in certain birds and reptiles (Graham & Burghardt, 2020; Pellis & Pellis, 2019). A group of children that is likely to display reduced or different forms of play behaviour are children suffering from a chronic somatic disorder (i.e. cystic fibrosis, auto-immune diseases or congenital heart defect) or who have a (current or previous) condition (e.g. premature birth or childhood cancer) with possible life-long consequences.

Children with these conditions, to which we will refer as 'childhood chronic diseases', are at a significantly increased risk for physical, social, emotional and cognitive problems later in life (Patenaude & Kupst, 2025; Pinquart & Teubert, 2022). It is likely that their developmental problems are not only the direct result of their current or previous situation. Functional impairments in physical, social, emotional and cognitive domains are either due to the disease itself (e.g. fatigue, pain), stressful events (e.g. hospitalization, surgery, medical procedures) and/or environmental changes resulting from the condition (e.g. over-anxious parents, social-attachment issues, social interactions with peers). Play behaviour is also impaired in child and adolescent mental disorders, such as depression, anxiety, autism, disruptive behaviour disorders, attention-deficit/hyperactivity disorder (ADHD) and schizophrenia (Edmiston et al., 2019). Research across the globe has consistently linked physical play to improved social outcomes. For example, Lindsey and Colwell (2023) found that children who participated in play exhibited significantly better conflict-resolution skills. Similarly, a study by Pellegrini (2018) showed that recess play positively influenced peer bonding and reduced classroom aggression. In Nigeria, Ekanem and Ekefre (2024) emphasized that play is essential for holistic development, yet it is often underutilized in public schools due to curriculum pressure. A study by Obinaju (2017) in southern Nigeria revealed that pupils with access to play facilities demonstrated better emotional regulation and fewer social conflicts. A related study in Ghana by Boakye and Asare (2021) found that imaginative play activities improved the social interaction skills of upper primary pupils, particularly in mixed-gender groups.

Ho (2022) examined the influence of play on positive psychological development in emerging adulthood: A serial mediation model. Participants (N = 131, 93.9% women) were full-time undergraduate students between the ages of 19 and 25 (M = 21.28, SD = 1.08). Results showed that play experiences cultivated emotional intelligence and strengthened resilience. Further, the findings supported a serial mediation model in which play was indirectly related to resilience through its effect on emotional intelligence and positive

emotion. Play is recognized as a means to relieve stress and protect psychological wellbeing. Emerging adults who experience pleasure, enjoyment, learning, and the acquisition of new skills will benefit from play. Individuals should enhance positive play experiences, particularly sporting activities, to maintain a healthy work-life balance given the positive relationship between play, emotional intelligence, emotional traits, and resilience.

A recent review found that while much research has been done linking physical play to physical health outcomes, there is little research on its importance in children's emotional socialization (Gibson et al., 2017). Historically, this may be due to the influence of mind–body dualism and the subsequent separation of movement and emotion in popular conceptualization and in academic research. Research has found that boys engage more in rough-and-tumble play than girls (Colwell & Lindsey, 2015; Lindsey & Colwell, 2023; Veiga, et al., 2017). This form of physical play increases during the preschool period, peaks around the age of 6–10 years, and declines in adolescence (Bjorklund, 2019). The frequency of rough-and-tumble play seems to be highly related to the characteristics of the environment. Rough-and-tumble is the most prevalent form of social play in the preschool outdoor playground, accounting for 34% and 62% of preschoolers' social playtime for girls and boys respectively (Veiga, et al., 2017). However, when observed in indoor and more structured environments, these frequencies decline to 19% and 22% respectively (Lindsey, 2024). In early childhood, when language skills are still developing, motor competence is of particular importance for young children's engagement in peer interactions. Improved motor competence makes children more adept and attractive playmates (Pellegrini & Smith, 2018). On the contrary, poor motor competence may limit children's engagement with team physical games and interactions, and it is linked to a lower sense of physical and social competence, and increased experience of anxiety and depression (Cummins et al., 2025; Piek et al., 2018; Schoemaker & Kalverboer, 2024). Furthermore, physical activity modulates hormones, amino acids, and neurotransmitter levels (e.g., dopamine, serotonin, cortisol), stimulating positive mood states and producing a calming environment which may support positive peer relationships (Heijnen et al., 2018). Hence, as a rich opportunity to improve motor competence and to promote positive mood states, physical play seems to contribute to children's establishment of successful peer relationships (Pellegrini & Smith, 2018). As described previously, the physiological arousal (e.g., racing heartbeat, rapid breathing, high muscle tone) present in physical play is an important component of the emotional experience. A girl happily running away from her friend can hear her heart beating quickly; a boy walking on a narrow high wall can feel the tension in his stomach and notice his shortness of breath. Through the opportunity to perceive bodily changes associated with emotional experience,

physical play constitutes an important context for children to become aware of their own and others' emotions, and to learn how to regulate them (Smith, 2020).

On the one hand, research shows that rough-and-tumble play among peers is positively associated with preschool boys' emotion-regulation skills, both concurrently and longitudinally (Lindsey & Colwell, 2023). Interestingly, such associations have not been observed for girls. Rough-and-tumble play has also been found to be associated with school-aged children's and adolescents' social competence (Pellegrini, 2018). On the other hand, other studies have found that preschoolers' rough-and-tumble play at school recess is positively related to physical aggression (Smith, 2020) and to negative indicators of social competence, such as being disliked by peers (Hart et al., 1992; Ladd & Price, 2017). Such equivocal findings could suggest that the functions of rough-and-tumble play may change across children's development (Hart et al., 2022). It is possible that such play may be too demanding for preschoolers, given that the frequency of this form of physical play peaks at an older age (Pellegrini & Smith, 2018). This explanation would tell with the extensive theoretical framework arguing that this form of play has the immediate function of practicing social-signaling skills (Bjorklund & Pellegrini, 2020).

Furthermore, engaging in rough-and-tumble play requires children to accurately distinguish play from aggression, which might be extra demanding within an arousing atmosphere (Smith & Boulton, 2020). Therefore, regulating arousal during rough-and-tumble play might be especially challenging for a preschooler, who might misinterpret the situation, given that cooperative behaviors, theory of mind, and emotion-regulation capacities are only just emerging in children of this age group.

Solitary play and the development of social skills.

Solitary play doesn't mean complete isolation:

Children engaged in solitary play often coexist with others who may be doing the same. This teaches them the importance of respecting others' personal space and boundaries, a valuable social skill. Solitary play is a form of independent play where children engage in activities without interacting with others. It typically emerges in early childhood, particularly between the ages of 0 to 2 years, and is considered a natural developmental phase (Parten, 1932). During solitary play, children explore their environment independently, often through imaginative or manipulative activities such as stacking blocks, drawing, or engaging in pretend scenarios alone. According to Piaget's cognitive development theory, solitary play is common in the sensorimotor and preoperational stages, as it allows children to process experiences and build mental schemas independently (Piaget, 1951). Vygotsky (1978),

however, emphasized the social context of learning and proposed that even in solitary play, internalized social interactions (private speech, self-talk) support later social competence. Solitary play provides opportunities for the development of cognitive functions such as attention, memory, imagination, and problem-solving. Singer and Singer (1990) argued that children who frequently engage in imaginative solitary play tend to develop stronger emotional regulation and empathy, as their internal narratives reflect a deep understanding of human interaction, even without immediate social engagement.

Furthermore, research by Pellegrini and Smith (2018) suggests that solitary play enhances focus and self-directed learning, laying a foundation for independent thought—a precursor to autonomous social decision-making. The relationship between solitary play and social skills is complex. While solitary play can foster creativity and self-awareness, excessive or maladaptive solitary behavior may be associated with social withdrawal or peer rejection (Coplan & Rubin, 2020). Children who persist in solitary play beyond the typical developmental period may exhibit signs of shyness, anxiety, or poor peer interaction skills (Coplan et al., 2021). However, it is important to distinguish between adaptive and maladaptive solitary play. Adaptive solitary play, such as purposeful engagement in solitary tasks, can promote self-confidence and internal motivation. In contrast, maladaptive solitary behaviors, such as anxious solitude or reticent behavior, are linked to negative social outcomes (Coplan & Rubin, 2020). Solitary play is not monolithic. Researchers identify subtypes such as functional solitary play (repetitive motor actions), constructive solitary play (building or creating something), and pretend solitary play (imaginative role-playing). Among these, pretend play is the most positively associated with social understanding and emotional intelligence (Lillard et al., 2023). Children who engage in solitary pretend play demonstrate greater theory of mind—the ability to understand others' thoughts and feelings—which is essential for successful social interaction (Astington & Jenkins, 1995). This suggests that certain forms of solitary play can indirectly enhance social skills by strengthening empathy and emotional regulation. Gender differences have also been noted in solitary play patterns. Boys are more likely to engage in functional or constructive solitary play, while girls often engage in imaginative or narrative-based play, which may have stronger social-emotional outcomes (Fabes et al., 2023). Culturally, some societies value independence and self-reliance more than others. In such contexts, solitary play is often encouraged and not necessarily viewed as a sign of poor social development (Chen et al., 2016).

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Methodology

This study utilized a survey research design. The area used for the study was Calabar Municipal Local Government area. Cross River State. It is situated in the Southern Senatorial district of the State. The study area is located on latitude 07^0 North and Longitude 08^0 East of the Equator. Calabar Municipal Local Government Area is bound in the North by Odukpani Local Government Area, the South by Calabar South, in the East by Odukpani Local Government Areas and in the West by Akpabuyo Local Government Area respectively. The population of people in is estimated at 2, 021, 783 according to Cross River State Bureau of Statistics (CRSBS). The people are predominantly business people, civil and public servants, farmers and engage in subsistence farming. The major language of the people is Efik and English Language while Pidgin is used to break communication barrier among people. The study area is situated in the tropical rainforest belt of Cross River State with considerable amount of rainfall which spans between April and October each year which characterizes the agricultural practices of the people in the area. The people of the area practice three main religions – Christianity, Islamic and African traditional religion. The people of Calabar Municipal have a very rich cultural heritage which have endured for several centuries, and is characterized by beautiful dance and colorful festivals. This is the very reason why the study area stands out for her rich tourism potentials such as beach, hotels, festivals, carnivals, museum, cultural display, artifacts, etc. which has contributed meaningfully to the extent that Cross River State is recognized as tourism state in Nigeria.

The projected population of this study consists of all the 998 pupils in six public primary schools of Calabar South LGA of Cross River State (State Universal Basic Education Board (SUBEB, 2025). The age range includes 9-12 years' residents in the study area. A stratified random sampling technique was used to select a representative sample of schools and pupils, ensuring inclusion across different wards in the municipality. Simple random sampling technique was adopted in the selection of 200 respondents for the study.

One instrumentation was used for data collection in the study. It is a four-point Likert scale questionnaire tagged: Play and Development of Social Skills Questionnaire (PDSSQ). It has one section that handled the respondents' demographic and personal data such as Age, and Gender, educational level of parents, income level. The Section B contained 20 questions on the four sub-independent variables while Section C contained 10 items measuring the dependent Variable-Social Skills. The content validity of the instrument was considered by making sure that the 30 items instrument is developed to reflect the content of the variables under study. Three experts and professional in the field of Education and Test/Measurement, Faculty of Vocational and Entrepreneurship Education scrutinized the items to certify that

the instrument has face validity and could be used for the study. The data collected was presented for the purpose of analysis, having restated each hypothesis, identifying the dependent and independent variables and stating the appropriate statistical techniques for testing the hypotheses to check if the statement of the hypotheses should be accepted or rejected. All hypotheses were subjected to testing at 0.05 level of significance with critical values and degree of freedom.

Result

This study is on the impact of play on the development of social skills among Primary Six pupils in public primary schools in Calabar Municipality Local Government Area of Cross River State, Nigeria. The independent variable in this study which is play was sub-divided into four sub-variables, namely, cooperative play, imaginative play, physical play and solitary play. The dependent variable for this study is the development of social skills. Pearson's product moment correlation was used for data analysis. The result is presented in hypothesis by hypothesis.

HO_1: There is no significant relationship between cooperative play and the development of social skills.

The independent variable is play while the dependent variable is the development of social skills. Pearson's Product Moment Correlation Coefficient Analysis test statistic was employed in testing the hypothesis for this study. The result is presented in Table 1.

The result of the analysis in Table 1 revealed that cooperative play produced a mean score of 19.32with a standard deviation of 5.89 while the development of social skills produced a mean score of 30.02 with a standard deviation of 5.91. The result further revealed that the calculated r-ratio of .658 obtained with a p-value of .000 at 198 degrees of freedom met the condition required for significance at .05 level. Based on this, the null hypothesis which stated that There is no significant relationship between cooperative play and the development of social skills was rejected indicating that there is a significant relationship between cooperative play and the development of social skills.

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Table 1: Pearson's Product Moment Correlation Coefficient Analysis of the relationship between cooperative play and the development of social skills (N= 200)

Variables	$\bar{X}$	SD	r	p-value
Cooperative play (x)	19.32	5.89		.000
			.658	
Development of social skills (y)	30.02	5.91		

*Significant at 0.05 level; df= 198

HO_2: Imaginative play does not significantly relate to the development of social skills. The independent variable is imaginative play while the dependent variable is the development of social skills. Pearson's Product Moment Correlation Coefficient Analysis test statistic was employed in testing the hypothesis for this study. The result is presented in Table 2.

The result of the analysis in Table 2 revealed that imaginative play produced a mean score of 16.22 with a standard deviation of 4.89 while the development of social skills produced a mean score of 30.02 with a standard deviation of 5.91. The result further revealed that the calculated r-ratio of .451 obtained with a p-value of .001 at 198 degrees of freedom met the condition required for significance at .05 level. Based on this, the null hypothesis which stated that imaginative play does not significantly relate to the development of social skills was rejected indicating that imaginative play significantly relate to the development of social skills.

Table 2: Pearson's Product Moment Correlation Coefficient Analysis of the relationship between imaginative play and the development of social skills (N= 200)

Variables	$\bar{X}$	SD	r	p-value
Imaginative play (x)	16.22	4.89		.001
			.451	
Development of social skills (y)	30.02	5.91		

*Significant at 0.05 level; df= 198

HO_3: Physical play does not significantly relate to the development of social skills. The independent variable is physical play while the dependent variable is the development of social skills.

Pearson's Product Moment Correlation Coefficient Analysis test statistic was employed in testing the hypothesis for this study. The result is presented in Table 3.

The result of the analysis in Table 3 revealed that physical play produced a mean score of 17.52 with a standard deviation of 4.01 while the development of social skills produced a mean score of 30.02 with a standard deviation of 5.91. The result further revealed that the calculated r-ratio of .786 obtained with a p-value of .000 at 198 degrees of freedom met the condition required for significance at .05 level. Based on this, the null hypothesis which stated that physical play does not significantly relate to the development of social skills. was rejected indicating that physical play does not significantly relate to the development of social skills.

Table 3: Pearson's Product Moment Correlation Coefficient Analysis of the relationship between physical play and the development of social skills (N= 200)

Variables	$\bar{X}$	SD	r	p-value
Physical play (x)	17.52	4.01	.786	.000
Development of social skills (y)	30.02	5.91		

*Significant at 0.05 level; df= 198

HO_4: There is no significant relationship between solitary play and the development of social skills.

The independent variable is physical play while the dependent variable is the development of social skills. Pearson's Product Moment Correlation Coefficient Analysis test statistic was employed in testing the hypothesis for this study. The result is presented in Table 4.

The result of the analysis in Table 4 revealed that solitary play produced a mean score of 15.87 with a standard deviation of 3.23 while the development of social skills produced a mean score of 30.02 with a standard deviation of 5.91. The result further revealed that the calculated r-ratio of .339 obtained with a p-value of .001 at 198 degrees of freedom met the condition required for significance at .05 level. Based on this, the null hypothesis which stated that there is no significant relationship between solitary play and the development of social skills was rejected indicating that there is a significant relationship between solitary play and the development of social skills.

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Table 4: Pearson's Product Moment Correlation Coefficient Analysis of the relationship between Solitary play and the development of social skills (N= 200)

Variables	$\bar{X}$	SD	r	p-value
Solitary play (x)	15.87	3.23		.001
			.339	
Development of social skills (y)	30.02	5.91		

*Significant at 0.05 level; df= 198

Discussion of Findings

Cooperative play and the development of social skills;

The statistical analysis revealed a strong positive relationship between cooperative play and the development of social skills among primary six pupils in public primary schools in Calabar Municipality. This finding implies that increased participation in cooperative play activities is significantly associated with improved social skills in children. This finding aligns with a wealth of prior research indicating that cooperative play contributes meaningfully to social skills acquisition: Parten (1932), in her seminal study on stages of play, identified cooperative play as the most socially advanced form, where children engage in organized activities with shared goals, fostering collaboration, communication, and mutual support. This is also supported by Ladd &Price (2017) that through cooperative play, children practice negotiation, turn-taking, empathy, and conflict resolution, which are foundational components of social competence. While the majority of literature supports the beneficial relationship between cooperative play and social skills, a few studies suggest that the relationship may be context-dependent or moderated by individual and environmental factors: Coplan and Rubin (2020) note that some children may struggle with cooperative play due to underlying social anxiety, behavioral inhibition, or lack of social experience. In such cases, forced participation in group activities may not immediately lead to improved social outcomes. This is in line with Hart et al. (2022) who also caution that unstructured or poorly supervised cooperative play may sometimes lead to dominance behaviors, exclusion, or peer rejection—especially in competitive environments—potentially harming the development of inclusive social skills. In settings with limited teacher support or overcrowded classrooms, such as many public primary schools in Nigeria, the quality of cooperative play may be compromised, leading to uneven or negative peer interactions (Ogunyemi & Henning, 2021).

Imaginative play and the development of social skills;

The result of hypothesis two reveals a moderate positive relationship between imaginative play and social skills development. The significant relationship between imaginative play and social skills suggests that imaginative play should be deliberately integrated into the

school curriculum, especially in upper primary classes. Activities such as role-playing, storytelling, puppet shows, and dramatic reenactments can be used to teach empathy, communication, and cooperation. The finding of this study is in line with Daubert et al., (2018) who emphasized that sociodramatic play (a form of imaginative play) promotes cooperation, negotiation, empathy, and role-taking—skills that are critical for social development. Vygotsky's sociocultural theory (1978) places pretend play at the heart of early learning, suggesting that children internalize social norms and practice complex interactions in imaginative scenarios. Through imaginative play, they learn to take on different perspectives, enhancing theory of mind, a key predictor of social competence.

The finding of the study also supports Lillard et al. (2023) who found that pretend play supports the development of emotional understanding and regulation, which are essential aspects of social interaction and relationship-building. Ginsburg et al. (2017) noted that imaginative play allows children to simulate real-life social situations in a low-stakes setting, helping them understand social rules, expectations, and the consequences of various social behaviors. While the findings are consistent with much of the literature, a few researchers offer cautionary perspectives: Lillard et al. (2023) questioned the direct cognitive and social benefits of pretend play in some contexts, arguing that outcomes may be overstated when play is not supported or guided by adults or peers. According to this view, without social scaffolding, imaginative play may remain isolated and lack the depth needed to influence real-life social behavior. Edmiston et al., (2019) observed that not all children engage meaningfully in pretend play—particularly those with limited exposure, trauma histories, or developmental disorders. In such cases, imaginative play may not significantly translate into improved social outcomes unless interventions are targeted. Singer and Singer (1990) found that media-influenced or highly scripted play can reduce creativity and limit the social negotiation typically seen in free imaginative play, thus potentially weakening its social development benefits.

Moreover, contextual constraints in many Nigerian public schools—such as limited time for unstructured play, large class sizes, and lack of teacher training in play facilitation—could affect the quality and impact of imaginative play (Ogunyemi & Henning, 2021).

Physical play and the development of social skills;

The result of hypothesis three yielded a very strong positive relationship between physical play and social skills development. This indicates that physical play significantly and strongly relates to the development of social skills among Primary Six pupils in public primary schools in Calabar Municipality, Cross River State. The finding of this study is in

consonance with Pellegrini & Smith (2018) emphasized that physical play, including both exercise play (e.g., running, jumping) and rough-and-tumble play, helps children learn to cooperate, compete fairly, resolve conflicts, and manage aggression. These experiences shape peer relationships and social maturity. The finding of this study further supports Lindsey & Colwell (2023) found that rough-and-tumble play among preschool boys was significantly associated with improved emotion-regulation skills, which are closely tied to social competence.

This result is also in line with Bjorklund and Pellegrini (2020) who argued that physical play acts as a biological training ground for social signaling, where children practice interpreting facial expressions, body language, and peer feedback, all of which are foundational to effective social interaction. Smith, (2020) showed that physical play, especially on playgrounds, accounted for a large portion of social interaction time among boys and girls and was significantly linked to peer bonding and inclusion. Heijnen et al. (2018) further explain that physical play positively affects neurochemical processes by regulating hormones like dopamine and serotonin, which improve mood and support peer connection, cooperation, and communication. Smith (2020) suggests that physiological arousal during active play helps children become more aware of their emotions and bodily states, which in turn supports emotional literacy and social regulation.

While most findings support the value of physical play in social development, some studies offer nuanced or cautionary perspectives: Hart et al. (1992; 2022) found that rough-and-tumble play, when unstructured or not well-regulated, may correlate with physical aggression and social rejection, particularly in preschool and early school-aged children. This suggests that context and supervision are critical for positive outcomes. Smith, (2020) reported that some children who frequently engage in physical play at recess showed higher levels of peer conflict or were disliked by peers, suggesting that not all physical play promotes prosocial outcomes.

Smith & Boulton (2020) argue that young or emotionally immature children may struggle to distinguish between playful aggression and real aggression in physical play, potentially leading to misunderstandings and social friction. In the Nigerian public school context, infrastructural limitations, overcrowded playgrounds, and minimal adult supervision can sometimes reduce the benefits of physical play or allow negative behaviors like bullying to go unchecked (Ogunyemi & Henning, 2021).

These contradictory findings do not dispute the value of physical play but rather highlight the importance of adult guidance, emotional maturity, and structured environments in ensuring that the outcomes are positive and socially enriching.

Solitary play and the development of social skills;

The result of hypothesis four revealed a moderate positive relationship between solitary play and social skills development. This suggests that solitary play is significantly related to the development of social skills, albeit to a lesser extent compared to cooperative, imaginative, or physical play. Although solitary play is often considered less socially interactive, some studies suggest that it indirectly contributes to social development, especially when balanced with other play types: Parten (1932) categorized solitary play as an early stage of social play development, where children engage independently but may still be aware of and influenced by the social environment. She noted that solitary play helps children build autonomy and self-awareness, which are foundational to later social participation.

Veiga et Al., (2017) argue that solitary play, particularly solitary-active or constructive play, allows children to rehearse social behaviors, problem-solving skills, and emotional responses internally, before applying them in group settings. Coplan et al., (2021) found that some children who engage in solitary play are not socially withdrawn but are socially competent introverts who benefit from alone time to reflect and self-regulate. Such self-regulation is a key component of emotional and social competence.

Ho (2022) noted that personal enjoyment, reflection, and skill acquisition, which can occur during solitary play, contribute to emotional intelligence and resilience indirectly influencing social adaptability and relationship building. These studies suggest that solitary play is not inherently detrimental to social development. When voluntary and not due to social anxiety, it can promote self-directed learning, emotional maturity, and preparation for social interaction.

However, several researchers emphasize the limitations or potential risks associated with excessive or maladaptive solitary play: Coplan et al., (2021) found that high levels of solitary-passive or reticent play in older children may be associated with social anxiety, peer rejection, or poor social competence, particularly when it is a coping mechanism for social avoidance. Roopnarine and Mounts (1985) warn that children who consistently isolate themselves during group play opportunities may miss out on critical social learning experiences, including sharing, turn-taking, and conflict resolution.

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Rubin and Coplan (2024) point out that the developmental context matters—solitary play is more acceptable and even beneficial in early childhood but may become problematic in middle childhood or later if it prevents social engagement. In the context of overcrowded Nigerian public schools, as reported by Ogunyemi & Henning, (2021), children who are withdrawn may go unnoticed or unassisted, potentially reinforcing social exclusion or delaying social skills acquisition. Thus, the quality, motivation, and frequency of solitary play are essential to determine whether its effects are positive or negative.

Summary of the study

This study investigated the impact of play on the development of social skills among Primary Six pupils in public primary schools in Calabar Municipality Local Government Area of Cross River State, Nigeria. The forms of play examined include cooperative play, imaginative play, physical play, and solitary play. The primary objective was to determine whether and how these types of play significantly relate to the development of social skills among children aged 9–12 years.

The study adopted a survey research design and used a structured questionnaire titled Play and Development of Social Skills Questionnaire (PDSSQ). A total of 200 respondents were selected using a stratified random sampling technique across different wards in the municipality. Data collected were analyzed using Pearson's Product Moment Correlation Coefficient to test four null hypotheses at a 0.05 significance level.

The results revealed the following:

1. A strong and significant positive relationship between cooperative play and the development of social skills.
2. A moderate but significant relationship between imaginative play and social skills.
3. A very strong and significant relationship between physical play and social skills development.
4. A moderate but significant relationship between solitary play and the development of social skills. All null hypotheses were rejected, indicating that all four types of play contribute significantly to the development of social skills among the pupils.

Conclusion

The findings from this study underscore the critical role of play in fostering social competence among primary school pupils. Each type of play—whether interactive like cooperative and physical play, or more individualistic like imaginative and solitary play—contributes uniquely to a child's ability to engage, communicate, cooperate, and empathize with others. The study provides empirical evidence that supports the inclusion of structured

and unstructured play in educational settings to nurture emotional intelligence, empathy, problem-solving, and relationship-building skills.

In particular, physical and cooperative play emerged as the most impactful in promoting social development. This suggests that peer interactions through play are essential components of childhood education, not merely extracurricular activities. Schools, therefore, must move beyond academics to incorporate play-based strategies that enhance children's holistic development.

Recommendations

Based on the findings and conclusions, the following recommendations are made:

1. Incorporate Play into Curriculum: Educational planners and school administrators should integrate various forms of play—especially cooperative and physical play—into the school timetable to enhance pupils' social skills development.

2. Teacher Training: Teachers should be trained to recognize the value of different types of play and how they can facilitate social and emotional learning through structured play activities.

3. Create Play-Friendly Environments: Schools should develop safe and inclusive playgrounds and learning environments where all types of play—physical, imaginative, and solitary—can occur naturally and effectively.

4. Parental Involvement: Parents should be educated on the importance of encouraging diverse forms of play at home, especially imaginative and cooperative play that stimulate social and emotional growth.

5. Balance Between Structured and Free Play: While guided play is essential, children should also be allowed to engage in free and imaginative play, fostering independence, creativity, and internalized social norms.

6. Support for Solitary Play: Although solitary play may be seen as non-social, it should be recognized as beneficial, especially for self-regulation, reflection, and preparation for peer interactions.

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