EXTENT TO WHICH CLASSROOM PLAY INFLUENCE SOCIAL INTERACTIONS OF CHILDREN IN PUBLIC PRE-SCHOOLS IN RACHUONYO NORTH SUB-COUNTY, HOMABAY COUNTY, KENYA

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Abstract

Play is a crucial part of any child's social behavior and development. It helps children develop self-determination, self-control, and identity. These skills are primarily learned through interactions with other children. Specifically, the study focused on the extent to which classroom play influence social interactions of children in public pre-schools in Rachuonyo North Sub-County, Homabay County, Kenya. The information provided by this research will benefit policymakers, community members and academicians. It adopted a descriptive survey research design, with a target population of 492 persons. The sample size of 217 persons was determined using the Krejcie & Morgan table (1970). The researcher collected data using questionnaires. Reliability of the instruments was determined through a pilot study where Spearman's rank correlation coefficient (r) was analyzed for the two scores and found to be 0.78, thus, the instruments were reliable. Quantitative data was analyzed using descriptive statistics, and presented in tables. The study established that classroom play, playground play and field trip play had a statistically significant association with social interactions of children in public pre-schools.

Key words: Behavior, play, preschool, interaction.

Background to the Study

Social interaction is of great importance for 7 to 12 age group. At the age of 7 to 12, children are interested in social plays and communicating via game play. At this stage, children's social interaction is of great importance as they go to primary school and enter the society. Interpersonal communications is the process of interaction between humans, and Social skills provide the context for the selection of proper behaviour and communication. For example, the implementation of physical education activities can cause social skill improvement (Tsangaridou, Zachopoulou, Liukkonen, Gråstén, & Kokkonen, 2013).

Play as well is a means of enhancing social skill-related activities and stimulates children to cooperate (Cartledge & Milburn, 2006). There are some social skills for instance, that can be improved via an analogue toy are: effective initiation of interactive social play, sharing limited resources, offering and demanding help, social patterning, exchanging information, non- verbal communication, self-control, team working, negotiation and compromise, cooperation during competitive play, following the rules, turn-taking, responsibility, and leadership (Sepahpour, Shahabi Haghighi, & choopankareh, 2015).

The environment affects the people, or users, that interact with it; this is especially true in children who are susceptible to the influences of their surroundings (Watkins & Durant, 1992). The physical environment in the preschool setting influences a child's behavior (Read et al., 1999). According to Isbell & Exelby (2001), the environment is a good indicator of

how children should respond or act. Room arrangement and materials determine where children focus their attention. Children learn through exploration and investigation of their surroundings. A learning environment should be attractive, exciting, and a place where a child can learn and play using suitable resources (Isbell & Exelby, 2001). Most of the characteristics in the physical setting can have an effect on the way the occupants behave and on their mental health. This includes the interaction with the environment, which aids children in their development (Bailey, 2002). How children interact with their environment and its occupants should influence the arrangement of objects and activities in the space (Isbell & Exelby, 2001).

In a study by Read et al.(1999), children were exposed to different variations in ceiling height and color. They found that the behavior of the children was significantly changed by the alterations in ceiling heights. This study demonstrates that changes made to the physical setting may have an impact on children's behavior. In addition, a study by Teets (1985) found that modifications to the overall organization of the room had positive changes in the ambiance of the room; consequently improving the children's behavior. These two studies support the theory that there is a relationship between the physical environment and children's behavior.

Early childhood learning environments are important because of their impact on the learning behavior of children. A study conducted over a period of fifteen years focused on 1539 children who attended a variety of preschools. This study showed the positive long-term benefits of attending preschool at an early age. Of the participants, 49.7% vs. 38.5% had a higher rate of completing high school, 46.7% vs. 55.0% were less likely to drop out and more likely to complete a larger number of years in education. These participants also showed a lower rate of arrests, a lower rate of grade retention and a lower rate of years spent in special education (Reynolds, Temple, Robertson, & Mann, 2001). A child's school has become the primary environment for learning and discovery, suggesting that early childhood school environments require special attention.

As humans, we begin learning at the earliest stages of our lives. Our early childhood is not only one of these important stages, but it is also when we develop our future characteristics and beliefs as adults, which are based on the environments we experience during our early childhood. The number of children spending anywhere from one-half to a whole day in the care of people other than their parents, and in places other than their homes has increased over the years Rachuonyo North sub-county. Oyando (2016) state that in 2015, 8 out of the 36 percent of children under the age of five who were in the care of someone other than their parents, were in child care facilities. This implies that there the need for preschools or early childhood learning environments. The care facilities due to their inability to take the children to private pre-schools they are forced to take them to public pre-school. The pre-schools are supposed to nature the children to have good social interactions through play. Despite this, no study had been carried out to establish the extent to which classroom play influence social interactions of children in public pre-schools in Rachuonyo North Sub-County, Homabay County, Kenya.

Literature Review
Play is as a vehicle for enhancing young children's development, has been studied across the decades. According to Bailey and Wolery (1989), play can take on many forms; thus, it is not fonn specific. Play occurs in almost all settings; thus, it is not setting specific. A behavior

may be interpreted at one time and not at another. Rather than a category, property, or stage of behavior, play is a relative activity (Fromberg, 1992). Defining play has been difficult because it occurs in such variety. There is some consensus that "play is voluntary, meaningful, active, symbolic, rule bound and usually pleasurable, even when dealing with serious matters" for young children (Fromberg, 1990, p.226).

In this line of studies, researchers have considered the child as solitary, playing with objects or imagination; as well as a social player with one or more peers, children of varied ages, parent figures, and other adults (Fromberg, 1992). They have considered the immediate contexts in which play occurs. Some researchers have attempted to define play by setting some criteria (Krasnor & Pepler, 1980; Rubin, et al., 1983; Saracho, 1991; Smith, Takhvair, Gore, & Vollstedt, 1985; Smith & Vollstedt, 1985; Takhvar & Smith, 1990). Based solely on speculation, these criteria tend to be intangible. For instance, Rubin et al. (1983) developed criteria to detenmine when observed behavior is play. Their six criteria for defining play as dispositional factors are; (a) intrinsic motivation; (b) orientation toward means rather than ends; (c) internal rather than external locus of control; (d) noninstrumental actions rather than instrumental actions; (f) freedom from externally imposed rules; and (g) active engagement. In addition, they suggest that motives for engaging in an activity provide clues to determine play. Rubin et al., (1983) claim that 'applied additively, the features function to progressively restrict the domain of play" (p. 752).

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Recent reports have suggested that young children' attendance in classroom-based preschool programs has dramatically increased, with nearly 1.1 million children attending public preschool programs during the 2007–2008 school year. Preschool is viewed as an important way to prepare young children for elementary school (Reynolds, Temple, Robertson, & Mann, 2001). Previous research has emphasized the importance of children's early

competencies for later school success, including social relationships, self-regulation during interactions with materials, and language development (Wasik, Bond, & Hindman, 2006). It is now well-established that these important early childhood skills and abilities develop within interactions between the child and context, including interactions with adults, peers, and learning activities/materials within early education classrooms (Downer, Booren, Lima, Luckner, & Pianta, 2010).

Young children learn through a wide range of interactions across the school day, and their competence or adjustment is best indicated by the nature and quality of these interactions, underscoring this as an important indicator children's readiness or ability to successfully transition to school environments (Lara-Cinisomo, Fuligni, Ritchie, Howes, & Karoly, 2008). One component of children's classroom experiences that is not well understood is the extent to which activity settings (e.g., large group, free choice, meals, etc.) may support or constrain certain patterns of interactions. It is important to understand the connection between activity settings and children's interactions to shed light on the classroom as a context for learning opportunities.

The link between the classroom context and specific children's behavior is complex in part because it is not always unidirectional. Early learning occurs within dynamic contexts that are interconnected and mutually dependent, and through social processes that include resources and people (Tseng & Seidman, 2007). In other words, children's behaviors are contextually-bound, and may be better understood by considering the educational contexts in which they occur. The organization of activity settings (e.g., large group, free choice, meals, etc.) is largely a classroom feature that teachers use intentionally to structure children's time throughout the preschool day, and can play a major role in how children practice skills, develop, and successfully transition into elementary school (Piantaet al., 2005). Previous research suggests that children who have difficulty engaging in structured classroom tasks and interacting with their peers have later social difficulties and poorer achievement scores. Furthermore, children's experiences in certain classroom activities have been linked to academic performance and behavior several years later (Montie, Xiang, & Schweinhart, 2006).

In preschool, classroom activity settings are an important aspect of the learning environment for young children. Together, these findings emphasize the importance of examining the structure (i.e., organization of activity settings) of early childhood classrooms and underscore the need to understand the situational demands of the environment in relation to children's interactions. The purpose of the current study is to take a naturalistic view of the classroom in order to provide detailed information about children's interactions in activity settings, which teachers could then use to be thoughtful and intentional about what types of support and opportunities to provide that can meet the individual needs of children across the array of classroom contexts. The current study examined the extent to which children's preschool classroom interactions with teachers, peers, and tasks vary across activity settings (i.e., large group, free choice, meals, etc.) and whether patterns of variation differ based on child gender and basic teacher behavior.

A child's behaviors and social interactions are affected by environmental factors such as programmatic or environmental differences (Guralnick, 1986). The activities and sensory experiences encountered during play also differ between indoor and outdoor environments (Mawson, 2010). This is due in part to the type of play area and the corresponding toys and equipment found in that area. In studies comparing an environment containing gross-motor-

type equipment such as slides and jungle gyms to a setting containing fine-motor-type equipment such as crayons and pencils, it was found that more social play occurred in the gross-motor area while there was more solitary and parallel play in the fine-motor setting (L'Abate, 2009). Another aspect of the environment that has been found to affect social interactions is the amount of physical space available to the children, or the spatial density (Driscoll & Carter, 2010). In a study by Driscoll and Carter (2010), it was found that children with language delays had more social interactions in a more spatially dense play area than in an area with less spatial density.

Methodology

The study used Morgan and Krejcie (1970) Table for sample size determination to arrive at 217 respondents. The participants in data collection were then be randomly sampled. The researcher observed child play in all the preschool children in the sampled schools. A summary of the sample size is as shown in Table 1

Table 1: Sampling Frame

Respondents category	Population size	$n_i = (N_i \times n)/N$	Sample size
Public primary school Head Teachers	123	(123x217)/492	54
Pre-School Deputy Head Teachers	123	(123x217)/492	54
Pre-School Teachers	123	(123x217)/492	54
Pre-School parents representative	123	(123x217)/492	54
Total	**492**	(492x217)/492	**217**

Source: Researcher, 2019

Questionnaires were used as instruments of data collection. Validity of instruments of data collection was observed. For content validity, the researcher critically considered each item to see if it contains a real representation of the desired content and seek if it could measure what it is supposed to measure. The developed instruments were then presented to the supervisors of the project, other lecturers in the department and research experts to evaluate the applicability and appropriateness of the content, clarity and adequacy of constructs of the instrument from a research perspective. Lastly, the researcher piloted the research instruments to validate them, determine their accuracy, clarity and suitability. Piloting helped in checking how far the measuring instruments are a representative of the full content of the variables being studied. Based on the analysis of the piloting, modification and removal of ambiguous, irrelevant or unclear items were done.

The analysis of the data was conducted using descriptive and inferential statistical analysis. Thus, the researcher used Chi-square to establish the association between play environments and social interactions of children in public pre-schools.

Findings

A total of 217 questionnaires were sent out to the respondents to fill. Of these questionnaires, 207 were returned for analysis. The returned 207 questionnaires accounted for 95.4% response rate. According to Mugenda and Mugenda (1999) a response rate of 70% and above is adequate and therefore, a response rate of 95.4% was acceptable for data analysis. Table 2 shows the response rate.

Table 2: Response rate

Category	Frequency	Percentage
Administered	217	100.0
Returned	207	95.4

Source (Researcher, 2019)

The study adopted descriptive and inferential statistical analysis. This helped to establish the extent to which classroom play influence social interactions of children in public pre-schools in Rachuonyo North Sub-County, Homabay County, Kenya. For analysis, descriptive statistics (frequency, percentage and mean distribution) for the level of agreement on a five point Likert scale of the variable, classroom play was established and summarized in Table 3.

Table 3: Descriptive statistics for extent to which classroom play influence social interactions of children in pre-schools.

Statements		SD	D	U	A	SA	MEAN
Activity setting in the classroom determines social interactions of children in pre-schools	F	19	12	15	86	75	**3.90**
	%	9.2	5.8	7.2	41.5	36.2	
Children behaviour in the classroom determines social interactions of children in pre-schools	F	3	32	13	84	75	**3.95**
	%	1.4	15.5	6.3	40.6	36.2	
Children who have difficulty interacting with their peers in classroom have later social difficulties.	F	6	6	35	62	98	**4.16**
	%	2.9	2.9	16.9	30.0	47.3	
Children who have difficulty engaging in structured classroom tasks have later social difficulties and poorer achievement scores	F	5	23	9	63	107	**4.18**
	%	2.4	11.1	4.3	30.4	51.7	

Source (Researcher, 2019)

Table 3 shows that 86(41.5%) of the respondents agreed with the statement that activity setting in the classroom determined social interactions of children in pre-schools, 75(36.2%) strongly agreed, 19(9.2%) strongly disagreed, 15(7.2%) were undecided and 12(5.8%) disagreed with the statement. The study findings suggested that the respondents tended to agree (Mean=3.90) that activity setting in the classroom determined social interactions of

children in pre-schools. This implies that activity setting in the classroom determines social interactions of children in pre-schools. This is in line with the findings of Lara-Cinisomo, Fuligni, Ritchie, Howes and Karoly (2008) that activity setting in the classroom determined social interactions of children in pre-schools. It is important to understand the connection between activity settings and children's interactions to shed light on the classroom as a context for learning opportunities.

Similarly, 84(40.6%) of the respondents agreed with the statement that children behaviour in the classroom determined social interactions of children in pre-schools, 75(36.2%) strongly agreed, 32(15.5%) disagreed, 13(6.3%) were undecided and 3(1.4%) strongly disagreed with the statement. It emerged from the study that the respondents tended to agree (Mean=3.95) that children behaviour in the classroom determined social interactions of children in pre-schools. This implies that children behaviour in the classroom determines social interactions of children in pre-schools. This supports the findings of Tseng and Seidman (2007) that children behaviour in the classroom determines social interactions of children in pre-schools. In other words, children's behaviors are contextually-bound, and may be better understood by considering the educational contexts in which they occur.

Additionally, 98(47.3%) of the respondents strongly agreed with the statement that children who had difficulty interacting with their peers in classroom had later social difficulties, 62(30.0%) agreed, 35(16.9%) were undecided, 6(2.9%) disagreed and another 6(2.9%) strongly disagreed with the statement. The study findings suggested that the respondents agreed (Mean=4.16) that children who had difficulty interacting with their peers in classroom had later social difficulties. This implies that children who have difficulty interacting with their peers in classroom later have social difficulties. This is in line with the findings of Downer, Booren, Lima, Luckner and Pianta (2010) children who have difficulty interacting with their peers in classroom later have social difficulties.

Lastly, 107(51.7%) of the respondents strongly agreed with the statement that children who had difficulty engaging in structured classroom tasks later had social difficulties, 63(30.4%) agreed, 23(11.1%) disagreed, 9(4.3%) were undecided and 5(2.4%) strongly disagreed with the statement. It emerged from the study that the respondents agreed (Mean=4.18) that, children who had difficulty engaging in structured classroom tasks later had social difficulties. This implies that children who have difficulty engaging in structured classroom tasks later have social difficulties. This is in agreement with the findings of Montie, Xiang, & Schweinhart (2006) that children who have difficulty engaging in structured classroom tasks have later social difficulties and poorer achievement scores.

These descriptive statistics of objective one was followed by a Chi-square test of association. The Chi-square test at $p \leq 0.05$ significance level illustrating statistically significant association between classroom play and social interactions of children in public pre-schools in Rachuonyo North Sub-County, Homabay County, Kenya is as summarized in Table 4.6. To achieve this, the hypothesis below was tested;

H_{01}: There is no significant association between classroom play and social interactions of children in public pre-schools in Rachuonyo North Sub-County, Homabay County, Kenya. The chi-square test of the variables is shown in table 4.

Table 4: Chi-square test of association between classroom play and social interaction of children in public pre-schools

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	769.191[a]	144	.000
Likelihood Ratio	410.930	144	.000
Linear-by-Linear Association	133.387	1	.000
N of Valid Cases	207		

a. 162 cells (95.9%) have expected count less than 5. The minimum expected count is .02.

Source (Researcher, 2019)

Table 4 shows that the p value (p=0.000) for classroom play was less than 0.05. Therefore the hypothesis, "there is no significant association between classroom play and social interactions of children in public pre-schools in Rachuonyo North Sub-County, Homabay County, Kenya" was rejected. This implies that there is statistically significant association between classroom play and social interactions of children in public pre-schools in Rachuonyo North Sub-County, Homabay County, Kenya.

Conclusion

From the findings, the study concludes that different environment plays influence social interactions of children in public pre-schools. It is concluded that there is statistically significant association between classroom play and social interactions of children in public pre-schools. Therefore, activity setting in the classroom and children behaviour in the classroom determines social interactions of children in public pre-schools. Besides, children who had difficulty interacting with their peers in classroom and engaging in structured classroom tasks later have social difficulties.

Recommendations

In reference to the findings, conclusions and the guidance from the literature review, it was clear that different environment plays influence social interactions of children in public pre-schools. Therefore, the head teachers, administration, policy makers and other stakeholders should consider different environment plays such as classroom play, playground and fieldtrips plays as this will enhance social interactions of children in public pre-schools.

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