Psycho-Social Development in Relation to other Developmental Domains of Pre-Schoolers-Kilifi Kenya

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Abstract:

The study explored the cognitive, emotional, psychomotor, social and language development of some sampled pre-school children in Kilifi County Kenya. The data collection tools included observation check list, interview schedules, Focused group discussions and teacher pupil class activities. The children's teachers and parents were also involved in the study. Visitation to the children's homes and schools was made to find out to what extent parents involvement in children's education enhances child academic achievement. The study concurred with other researchers views that educated parent's plays a great role in the learning of their children. The study also found out that most pre-school units have still been left in the hands of the churches, community members, non-governmental organizations and very little still is in the hands of the government. The training of ECD teachers is still not well regularized and the units are integrated into the government primary schools. However various attempts are being under; early childhood education director at the County government, recruitment of the teaching staffs and development of some selected pre-unit schools to spear head the transition. The study recommended the need to focus on teacher competency and learning resources provision to boost the early childhood literacy environment. There is also need to provide conducive growing up and learning environment to help mould the children into holistic personality in their future lives. This realization depends a lot on the sound ecological environment of the psych-social development of the pre-schoolers.

Keywords: *pre-schoolers, developmental domains, cognitive, socio-emotional, psychomotor, language, home-school.*

I. INTRODUCTION

Ecological models point out that we cannot understand the development of the child outside the children's context in which they develop because the unique individual context and genetic component in an individual interconnect with the environment to bring out the totality of the person. Therefore several factors contribute to shape the child to be the person he/ she become. Schools of thoughts of ecological systems theory argues that development is neither controlled by environmental circumstances nor driven by inner dispositions but children become both product and producers of their environments independently as shaped by contributions from significant others. Each child usually experiences unique combinations of genetics and environmental circumstances hence their psycho-social development is strongly shaped by the ecological environment in which they grow in.

1.2 Problem statement

This study was set to find out the extent to which children's developmental domains are shaped by the environment in which they grow up in (home and school) and how these domains interact with each other as the child grows. However, bearing in mind varied environmental conditions that children comes from, certain factors pose threat to pre-schoolers developmental milestones at home and at school. The purpose of this study was to investigate the children's interactions with their immediate environment and their social interactions with those around them.

1.3 These study objectives were to establish;

a) Child's cognitive, socio-emotional, physical and language development abilities and experiences both at home and at schools

b) Risk -benefit factors analysis in children's ecological home and school environment

c) Suggested interactive activities to improve psycho-social development in children

1.4 Methodology

The study was conducted in Kilifi County, Kilifi North Bahari Division. The following schools were sampled considering five radius meters of the schools within the immediate Pwani University surrounding; Sunbean academy, Kibaoni primary, St Patric academy, Kilimo Primary , Sawasawa academy and Devine trust academy school. 6 children were sampled from each class using simple random sampling technique; cluster technique of sampling method was used to categorize schools. Both children's teachers and parents of the sampled children and early childhood education officers participated in the study. Qualitative data analysis method was used to analyze data. The following findings were the presentation from the observation made;

II. RESULTS AND DISCUSSIONS

2.0 Cognitive Development

2.0.1 Methodology used to collect data on children's cognitive development.

The children were put under study for a period of six months. The tools which were used to collect data were;

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i. Observation check lists,
ii. Teachers developed assessment activities,
iii. Interview with the children, teachers and parents of the children.

The sampled pre-unit schools from Kilifi County are shown in Table 1.0. The alphabetical letters are symbolic representation of the schools in the table and graphs drawn in Table 1.0 and Figure 1.0 below.

Table 1.0 Participating Pre-Unit Schools in Kilifi County

No	Pre-Unit Schools	Symbolic presentation
1	Sunbean academy	U
2	Kibaoni primary School	V
3	St.patricks academy	W
4	Kilimo primary school	X
5	Sawasawa academy.	Y
6	Devine trust academy.	Z

The children were tested on their ability to carry out the following tasks to asses cognitive developmental skills.

Table 2.0 Tested Cognitive Abilities

No	*Cognitive activities*	*Symbolic Representation*
1	Counting numbers 1-100	CN
2	Identify and draw different shapes	I& Ds
3	Write down alphabets A-Z	A
4	Matching names with object picture	MN&P
5	Draw the object picture as named	DN

The data was collected and tabulated as shown on Table 3.0 as cumulative scores obtained upon performance of activities.

Table 3.0 Cumulative Cognitive activities results in percentages

School/child	CN	I&DS	A	MN&P	DN
Sunbeam	60%	58%	72%	52%	88%
kibaoni	40%	71%	70%	44%	76%
St Patrick	80%	86%	92%	70%	40%
Kilimo	69%	46%	64%	46%	38%
Sawasawa	45%	39%	52%	68%	66%
Devine trust	60%	60%	51%	54%	48%

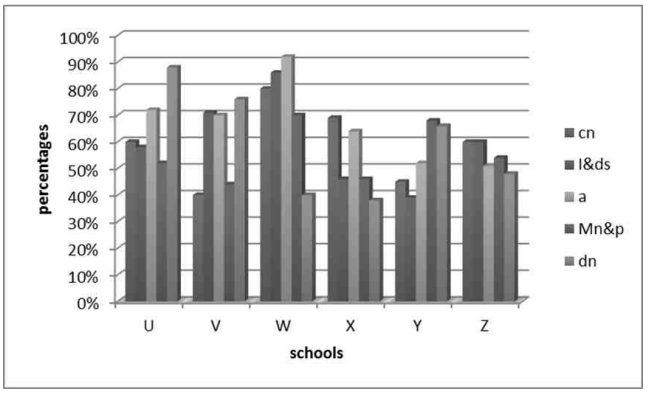

Figure 1: Graphical presentation of children's performance in cognitive activities

2.0.2 Discussions

From Figure 1.0 the graphical presentation clearly revealed that, the child from St Patric Pre- school unit (W) displayed high cognitive development abilities among the other children. This is because he was able to carry out all the activities which were presented to him with the other children without any problem. It was also observed that the child's home and school environment had stimulating learning materials like computers, building blocks, colors for painting, informed and supporting parents. However, on average, all the children under study showed a good progress in cognitive development. Children had an average cognitive development of 50% as shown in their mean score Table 4.0

Table 4:0 Cumulative Scores for the Cognitive activities and their mean score

No	Participating Pre-Unit schools						totals
1	Sunbean academy	Kibaoni primary School.	St.patricks academy.	Kilimo primary school.	Sawasawa academy.	Devine trust academy.	6
School Symbols	U	V	W	X	Y	Z	6
Mean	301	368	263	270	273	330	1800
	1800/6=300						
	300/600*100=50%						

It was also observed that at this level of children's cognitive development, children questioned things around them a lot. They explored their immediate environment without fear. The act of thinking obviously involves higher mental processes: - problem solving, classifying, seriating, creativity, reasoning, conceptualizing, categorizing, remembering, planning, and so on. However, thinking also involves other mental processes which seemed more basic and at which children in pre-school level could perform very well such as perceiving objects, acting skillfully on objects to obtain goals, carrying out instructions and producing language to build vocabularies.

The contributing factor to children's ability to carry out cognitive functionality is attributed to the genetic factors. Genes lead to children eliciting different treatment from other people, which influence cognitive development. For example, infants' physical attractiveness and temperament are influenced considerably by their genetic inheritance (Van den Boom & Hoeksma, 1994). However, parents provide more sensitive and affectionate care to easy going and attractive infants than to difficult and less attractive ones. This can contribute to the infants' later cognitive development (Langlois et al., 1995; van den Boom & Hoeksma, 1994).

Despite the fore going augment, child parent relationship on school matters and the teacher is dictated a lot more by the economic level of income of the parents. This is because Kilifi County poverty index level is 71.4%. Majority of the parents are low income earners and therefore illiteracy, ignorance and poverty is still high. Ramani and Siegler (2008) hypothesized that the mathematical knowledge of children from low-income backgrounds lags far behind than that of children from more affluent backgrounds. This difference is due to the children in middle- and upper-income families engaging more frequently in numerical activities even with computers and other modern technologies such as playing with numerical board games, play games with their parents phones and tabs, count charts, ride bikes. Playing this game seemed likely to teach children about numbers, because in it, larger numbers are associated with their daily experiences of cognitive development (Booth and Siegler, 2006).

They further explains that the spatial, kinesthetic, verbal, and time-based cues children often are engaged in usually provide a broad-based, multisensory foundation for knowledge of numerical magnitudes such as the sizes of numbers. Ramani and Siegler, 2008; Siegler and Ramani, 2009, on the other hand emphasized the use of developed local material available to help reduce cost and affordability of cognitive stimulating materials.

2.3 Socio-emotional development.

Social development is the process through which children acquire ability to form relationships and interact with other children. This involves psychological and physiological feelings of the child. Emotional and social interaction forms the foundation and mental development in enhancing child motivation, self-expression and achievement. Social-emotional development includes the child's experience, expression and management of emotions to acquire the ability to establish positive and rewarding relationships with others (Cohen et al,2005). It encompasses both intra-and interpersonal processes.

Some of the social-emotional activities assessed included;

1. Change in mood
2. Ability to make friends
3. Sharing valuable material
4. Playing initiatives, roles and involvement.
5. Socialize with peers.
6. Fear and aggressiveness.
7. Sympathy and empathy to others.

2.3.0 Methodology which was used to observe socio-emotional development of the preschoolers

The children were observed based on the above factors and the result was tabulated as shown in Table 5 below.

Table 5.0: Socio-Emotional Development Activities Results

School/child	No. of friend	Share materials	Playing together	Socialization with classmates	Fear and aggressiveness	Sympathy and empathy
U	10	Generous	Plays together	Good	Good	Sympathetic and empathetic
V	5	Generous	Plays together	Good	Good	Sympathetic and empathetic
W	3	Egocentric	Introvert	Poor	Average	Careless
X	6	Generous	Plays with others	Good	Excellent	Sympathetic and empathetic
Y	0	Egocentric	Introvert	Poor	Fair	Careless
Z	8	egocentric	Introvert	Poor	Average	Careless

2.3.1 Discussion

The observation drawn from the above data, Table 5.0, revealed that, the child from St Patrick academy pre-unit school did not show interactive social skills well during observations. He displayed egocentric characteristics and therefore presented an introvert personality. This explained his reasons for being non empathetic and poor in socialization. However, care must be taken to understand that these children are still in their early years of developmental stages. Personalities tend to change over time depending on environmental exposition a child finds themselves in. On the other hand, the child from Kilimo pre-unit school was described as generous, fearful but aggressive. Variations in natural reactions may sometimes be controlled by the child's genetic makeup. The core features of emotional development in this aspect included the ability to identify and understand their own feelings to comprehend emotional states in others. The results from observation revealed that children sympathized with their fellow children if the teacher talked to one of them harshly. Some would cry. Such emotional ties helps them to establish and maintain relationships with others. Such expectations was explained by National Scientific Council on the Developing Child, (2004)

As children interact openly with their peers, they learn more about each other, and they begin building a history of interactions. Howes, (1983) suggested that there are distinctive patterns of friendship for preschooler age groups which children develop. The three groups vary. In other words, positive emotions are a particular important contributor to emotional well-being and psychological health as explained by Fredrickson, (2000, 2003) and Panksepp, (2001). Children's ability to regulate their emotions appropriately also contributes to perceptions of their overall social skills and likability by their peers (Eisenberg et al, 1993) while poor emotions regulation can impair children's thinking, thereby compromising their judgment and decision making (National Scientific Council on the Developing Child, (2004).

2.4 Physical Development

This is the development of the psychomotor skills. Physical changes are the basis for rapid development of the child's motor skills. Different skills are locomotors (walking, running, jumping), and postural manipulation (throwing, seizing, grasping). Specific development is influenced by environmental factors (diet and exercise and health). Physical development help children to master and control their bodies while strengthening their bodies and gaining stamina. Children understand the world through the use of their motor skills. This is manifested through play and manipulation of objects around them. That's why it's called motor development.

2.4.0 Method of observation and assessment

The children who were observed were 3 years old in this developmental domain. The following were the activities given to them in physical activities. Observation Check list was used on each child who carried out the following activities

1 Keep legs together while running or walking.

2 Can unbutton his/her clothes 3 Walk upstairs.

4 Brushing teeth 5) Run 6) Jumping 7) Hopping 8) Skipping. 9) Kicking a ball.

10) Throwing and counting the ball.

The first 4 activities were assed based on successful completion of activities while the other 6 activities were assessed based on successful movement and enjoyment of exercises and each movement was awarded 1 mark which equals to 10%. On the other hand, 10 shoots were to be made by each child and a mark was awarded on reaching the goal. A mark was also given on the ability of hands manipulation with the ball when thrown to them. Table 6.0 presents scores of

psychomotor activities while Figure 2.0 presents graphical presentation of their performance.

Table 6.0: Scores of children's psychomotor activities assessment

School/child	jumping	Hoping	skipping	Kicking a ball	Throwing a ball	Catching a ball	Total score	%C.F
U	50%	70%	50%	100%	60%	80%	410	68
V	60%	50%	80%	100%	90%	60%	440	73
W	80%	40%	90%	100%	50%	30%	390	65
X	80%	60%	60%	100%	70%	40%	410	68
Y	60%	30%	70%	100%	90%	70%	420	70
Z	90%	80%	40%	1000%	40%	50%	400	67

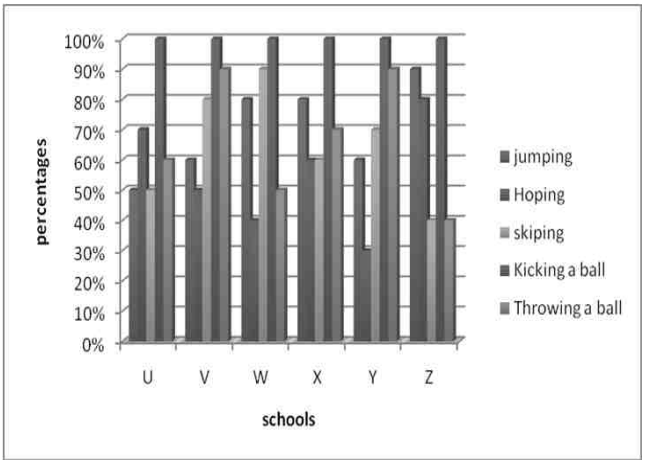

Figure 2: Graphical presentation of children's psychomotor activities assessment.

From Figure 2.0 , the activity liked most by all the children was kicking the ball, followed by throwing a ball and skipping. The child in Sawasaw academy, scored lowest almost 30% but simply because of weight. From home environment, this child is well taken care of by the parents and it was observed that several factors could have contributed to his state of weight such as genetic physique of the parents, diet type and eating habits. This implied that parents need to focus on health training habits to reduce child's inability or discomfort in carrying out physical activities other children of the same age could do. Table 7 revealed that children involvement in psychomotor activities was generally above average 69%.

Table 7.0 : Psychomotor activities average score for participants

No	Participating Pre-Unit schools						totals
1	Sunbean academy	Kibaoni primary School.	St.patricks Academy.	Kilimo primary school.	Sawasawa academy.	Devine trust academy.	6
School Symbols	U	V	W	X	Y	Z	6
Mean	410	440	390	410	420	400	2470
	2470/6= 411.7						
	411.7/6 x100 = 69%						

2.4.1 Discussions

Other studies revealed that environmental factors are a hindrance to appropriate psychomotor development. Literature of other studies reviewed by Fotini and Kambas, (2009) revealed that it is believed that a permissive, accepting family environment contributes to children's motor development (Wil-liams and Scott1953). Lejarraga et al. (2002) examined the psychomotor development of 3.573 boys and girls, aged 0.01–5.99 years in Argentina, the results indicated that higher social class and educational level of the mother was related to the better psychomotor performance in children over 1 year of age. The researchers noted that, the situation of low social class correlating to better scores in developmental tests during infancy was caused by indigenous child-upbringing practices that have a positive influence on development, such as nursing and close contact between baby and its mother. This correlates to the findings of this current study.

2.5 Language Development

Language is a communication system in which limited number of signals i.e. Sound letters and gestures can be combined according to agreed rules and procedure to form communicable words which children use to communicate. Language development is therefore the ability of a child mastering language skills e.g. phonology, syntax, semantics and pragmatics of any language. Piaget (1955) argued that the preschoolers have egocentric speech implying that they carry out monologue speech and appear to drive pleasure from repetition of words. Language is acquired through operant conditioning because children at the early age depend on the reinforcement from their care givers and for pre-schoolers; the teachers, care givers, extended family members and peers. Therefore preschoolers use language to express their needs, desires, emotions and their thought.

The study covered 3 year old preschoolers in language developmental activities in the following areas based on the following abilities

Table 8.0: language developmental activities

Language activities				
No	**Area**	**Symbol**	**Activity**	**Scores Areas**
1	Story telling	S1	Constructing a story	Title Storyline Situation characters Event Real/imagined Pronunciations End
2	Reading	R	Read ten words correctly	10 vocabularies
3	Songs	S	Sing songs	Songs articulation Dance Rhythms Patterns Rhymes
4	Understanding words	U	Saying the meaning of words	10 vocabularies
5	Sentence construction	C	Construct 10 sentences correctly	10 sentences

Assessment criteria; each performance, awarded a child a total score of 10mks in each area

School child	S % s1	R	U	C	Total	%c.f
Sunbeam	100%	100%	80%	80%	360	90
Kibaoni	100%	100%	60%	70%	330	83
St patrick	100%	80%	90%	90%	360	90
Kilimo	100%	100%	100%	60%	360	90
Sawasaw	100%,	80%	70%	40%	290	73
Devine trust	100%	60%	50%	50%	260	65

Below is the graphical presentation of the cumulative scores on language activities.

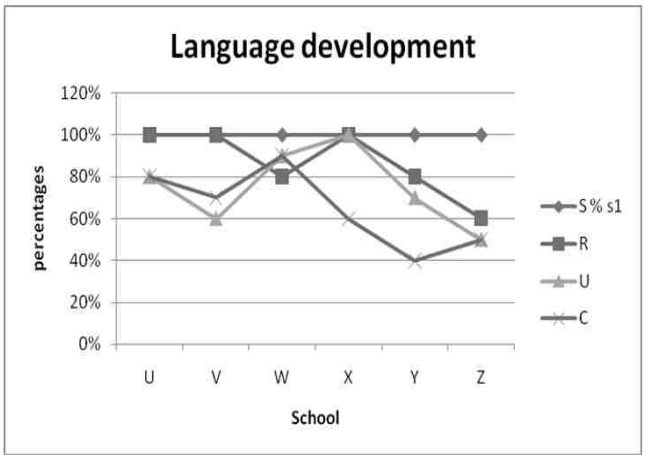

Figure 3.0: Graphical presentation of children's language activities assessment.

From Fig 3.0 graphical presentation of language activities assessment, data analysis shows that generally all the children who participated in the study liked story telling. However when it comes to activities such as reading (R), articulating the meaning of some vocabularies (U) and constructing sentences, the graph started going down. This was clearly observed in Devine academy school (Z), Sawa sawa academy (Y), Kilimo primary school (X) and Kibaoni Primary School. Table 10 reveals children's general language score level.

Table 10.0: Children's Level of Language activities involvement

No	Participating Pre-Unit schools					totals	
1	Sunbean academy	Kibaoni primary School.	St.Patricks Academy.	Kilimo primary school.	Sawasawa academy.	Devine trust academy.	6
School Symbols	U	V	W	X	Y	Z	6
Mean	360	330	360	360	290	260	2470
	1960/6= 326.7						
	326.7/600 x100 = 54%						

The reason behind this could be the sequence in language learning. Usually language learning activities follows the sequence shown in this sequence below.

LISTENING ⇨ SPEAKING ⇨ READING ⇨ WRITING

The results help to prove this language sequence because children found the activities in story telling much more easily than sentence construction which is a higher level language performance. However, St Patrick (W) academy seems to perform commendable job in Language learning. The language development activity of the children was generally average as shown in Table 10.0

3.0 Risk Assesment in the Learning Environment of Pre-schoolers

Children's ecological environment is so varied from house hold to household and from school to school. The significant others around the child helps to form part of the child interaction system in the ecosystem.

To asses areas of risks in the learning environment, the teacher was the key informer and custodian of the children with the care takers or teacher assistant while the parents and the maids or care givers were in charge at home. The following observations were made;

2.0.1 The Home environment;

Home was the place where the children lived and comes from when going to school every morning. It was observed that children, whose parents have gone to school, were more involved in their children education welfare than those whose parents lacked any form of basic education. About 12 parents participated in the study with 3 care takers. However, out of the 12 parents, two families had good formal education (above secondary level) two families had above primary school; the other 2 families had no formal education (See Table 11.0)

Table 11.0: Parents level of Education

No	Parents level of education			
	School Symbols	School	Education Level	Level of parental involvement in child's home work
1	V	Kibaoni primary School. Kilimo	A above secondary level	60%
2	X	primary school.		50%
3	U	Sunbean academy	Above primary school level	60%
4	W	St.Patricks Academy.		60%
5	Y	Sawasawa academy	Lack basic Education	20%
6	Z	Devine trust academy		30%

It was observed that, even though some parent's level of education was very low, from the concept of free primary education, parents encouraged their children to go to school. Their concern was that even though they were disadvantaged from accessing formal education, their children must benefit from the government support.

It is important to note that, even though the two families scored low in their level of involvement with their children's learning, this was because , the parents were either late or did not get involved with the children's school work during the time of visitation. Excuses were that they had been away and they will make a follow up when they get time.

3.0.2 Risk factors;

i) The Homes environment

Where parents were found to have low education level, children were also found to drag behind in second language learning in schools. This was observed in Language activities.

This findings concurred with other studies carried by Fantuzzo, John; Tighe, Erin; Childs, Stephanie,(2000) which revealed that parents with education beyond high school were engaged in higher levels of school-based involvement and home-school conferencing than parents with less than high school education. Other studies Rushton and Larkin, (2001) further emphasizes that 'New research on the growing mind

of learners appears to bear out the value of constructivist approach to early childhood education where environments are designed to gain the learner's attention, foster meaningful connections with prior understanding, and maximize both short- and long-term memory through patterns and active problem solving. Each unique learner needs to feel challenged, but not fearful, so that stimulating experiences result in an exchange of ideas and promote deeper understanding'

ii) The school environment;

The teacher and the assistant teacher were the key informers. The schools varied from tiny little surroundings of privately rented homes or rooms to delimited public schools. Resource material in public schools are hard to come by, unkempt classrooms and washrooms with children running around in the field and during class time, the sitting arrangements was grouping in poorly made little children desks. Some children could be seen sitting on the floor. Private schools observed, lacked children's play ground but learning appeared to be more effective and more organized.

4.0 Suggested Interactive Activities to Improve Psycho-Social Development in Children

Focused group discussion with the teachers and the early childhood education experts suggested the following; Formation of consultative forum with the stake holders to improve the pre -school units, regulate permit awards to private educationists, regulation of the teachers welfare in terms of salaries and working environment and lastly improvement on teachers parents working relationship to improve children's academic achievement.

Further training may be necessary to enhance such skills in pre-schoolers. This is the ideal environment for a child to develop his potential to the maximum in his/her ecosystem.

III. CONCLUSION

i) All the five elements of developmental domains depend on each other. However cognitive development forms the backbone to the rest of developmental domains as mental processes are an integral part of all the domains in human functionalities.

ii) Teachers of pre-schoolers need to work together with parents to help children acquire holistic developmental milestones.

iii) The ecological environment therefore forms the subtotal of human development. It can destroy or build the child. Care must be taken during the early stages of child development because during this time, children's life and future is completely in the hands of teachers and caregivers.

iv) Further studies is required in measurement of children's cognitive abilities, and role of the teachers, care givers and peers in child's personality development.

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