

Effect of Preterm Birth on Learning Readiness of 3-6 Year Old Children in Nyando Subcounty, Kenya

¹Millicent Ondiegi, ²Rose Atieno Opiyo, ³Mary Kipmerewo

^{1,2,3}Masinde Muliro University of Science & Technology, Kenya

Abstract - The central theme of this paper was motivated by the fact that when children are born preterm their language, psychomotor and social developments are affected since they have not undergone full growth and development stages. These learning competencies manifests in domains of children's development to which children are prepared for learning readiness based on language, social and psychomotor development. However, this area has been neglected by studies in Kenya especially in Nyando Sub County. The study aimed to; determine the effect of preterm birth on learning readiness of 5-6 year old children. The study adopted comparative case study research study design. The target population was 40 Pre-schools, 72 pre-school children (36 Full term and 36 preterm). A sample of 40 Pre-school teachers, 72 parents and 20 hospital administrators were sampled using purposive sampling technique in the study. The study used questionnaire, interviews, document analysis and observation guide as research instruments. Data was analyzed descriptively using means, standard deviation and frequencies by statistical package of social sciences (SPSS) version 21.0. Results indicated that preterm birth affected learning readiness of preterm children adversely and in the view of the results, the hypotheses were rejected. The study concluded that learning competencies of preterm children is lower compared to full term children.

Keywords: Preterm birth, full term birth, learning competencies, Nyando Subcounty, Kenya.

I. INTRODUCTION

1.1 Background of the study

Full term birth enables mother and baby to bond immediately after delivery, as the infant does not have to be separated to attain full growth and development thus aids children's development. Tucker (2004) contends that the brains of preterm children are not fully developed because a baby's brain gains 1/3 of its size between 35 weeks and full-term. They do not suck and swallow better as babies born term since their muscles are not more developed. Term children are

able to undergo various growth and developmental milestones like movement milestones, language milestones, cognitive milestones and social emotional milestones better than preterm counterparts.

In 2010 an estimated 14.9 million babies were born preterm worldwide, there was also a range of preterm births of about 5% in several European countries to 18% in some African countries. More than 60% of preterm babies were born in South Asia and Sub-Saharan Africa where 52% of the global live births occur. The burden of preterm birth is substantial and is increasing in those regions with reliable data. A report by Culhane (2012) contends that 1 in 10 babies born around the world in 2010 were preterm which translates to an estimated 15 million preterm births.

A report about the global toll of premature birth by March of Dimes Foundation (2012) and the World Health Organization (WHO), provides the first-ever estimates of preterm birth rates by country. This report also found that 15 million babies worldwide are born preterm. The report further ranked the United States 131st in the world in terms of its preterm birth rate. This study conducted by March of Dimes (2019), preterm children also tends to demonstrate more generalized learning problems rather than specific learning readiness (i.e. only a reading problem). This supports the theory that preterm children's learning problems are caused by a global processing deficit rather than difficulties with isolated skills. Once children reach school, greater demands are placed on them with regard to logical reasoning and processing of higher-level visual, spatial, and verbal information which is more evident in term rather than the preterm (Adams,2000).

The prevalence of preterm birth in the United States constitutes a public health problem says Kramer (2012) but unlike many health problems, the rate of preterm birth has increased in the last decade (Olsen,1995). Since 1981, the rate has increased more than 30 percent (from 9.4 percent) (Beck, 2002). The birth of a preterm infant results in significant health consequences to the infant and emotional and economic costs for families and communities (Alexander, 2001). Although advances in perinatal and neonatal care have improved the survival for preterm infants, those infants who

do survive have a greater risk of developmental disabilities, learning readiness health, and growth problems than infants born at full term (Abdel, 2013). Whereas the group of infants with the greatest risk of morbidity comprises those born at less than 32 weeks of gestation, infants born between 32 and 36 weeks represent the greatest number of infants born preterm. The latter group of infants also experiences a greater risk for learning readiness, health and developmental problems compared with the risk for infants born at term (Oksman, 2004).

Preterm children demonstrate deficits in visual-motor and visual-spatial skills and perform significantly worse than full-term controls on the Beery Test of Visual Motor Integration which requires children to copy line drawings, design blocks, spatial relations, shape rotation, and line (Myra, 2017). It has been suggested that these visual-motor and visual-spatial deficits may be the result of small brain lesions in the cerebellum, parietal cortex, or basal ganglia. These complications are caused by medical conditions such as poor oxygen intake (i.e. hypoxia, asphyxia, and chronic lung disease), intra ventricular hemorrhage, and seizures, as well as physiological stress in the extra uterine environment.

Preterm birth is when a baby is born too early, before 37 weeks of pregnancy have been completed. In 2015, preterm birth affected about 1 of every 10 infants born in the United States. Kramer (2012) contends that an estimate of 13 million babies is born before 37 completed weeks of gestation annually. Rates are generally highest in low and middle income countries, and increasing in developed countries like the USA. More than 60% of preterm births occur in Africa and South Asia. In low income countries, an average of 12% of babies are born preterm compared with 9% in high income countries.

Andrew. et al (2016) assessed school readiness in 6 years old children born prematurely and determine risk factors associated with the low school readiness scores. Case-control retrospective study covered assessment of school readiness in 188 children aged 6 years+2 months using adopted multi-dimensional School Readiness Test. According the gestational age and weight study group was divided into 3 subgroups (I group -46 late preterm, II group 34 early preterm and III group 54 SGA children), control group include 54 term born children. Groups were homogenous based on child age, gender, maternal health, maternal education, household income, family structure. Statistical analysis was based on SPSS 19. The results showed that children born preterm and small for gestational age have significantly lower cognitive school readiness.

A report by Allen (2002) revealed significant poor learning readiness outcomes in children born preterm as compared to children born full term. Preterm infants exhibit early learning readiness problems that present as to expressive language delays, behavioral problems, social and psychomotor deficits and attention difficulties during the first few years of life (Med, 2007).

These early deficits are believed to be associated with learning readiness and later academic achievement (Robert, 2011). When preterm born children reach school age, they exhibit a higher rate of learning disabilities and lower scores on tests of reading, writing, math, spelling, and executive functioning.

Bhutta (2002) reports a meta-analysis of studies examining school-age children born preterm which reveals that preterm children exhibited significantly lower IQ scores than full-term controls. However, there is no research that has been conducted on the effects of term birth on learning readiness of 5-6 year old children, It therefore necessitates this study to find out the effect of term birth on learning readiness of 5-6 year old children in Nyando sub county Kenya.

A review of data from the Ministry of Health (2012) and the UN agencies and International organization working on maternal and child health (IOWMCH), reveal that one out of eight babies in Kenya are born premature(UN, 2014). These statistics place the country among 15 countries that account for two thirds of all preterm births. Ministry of Health (MOH) in Kenya indicate that of the 1.5 million live-births in Kenya annually, 188 thousand are of babies born preterm (below 37 weeks).Based on these statistics, one out of every eight children born in the country is preterm born children. This is worrying and it implies that Kenya is one of the countries with the highest number of preterm born children. Estimate 193,000 children in Kenya are born prematurely every year as noted in Business Daily Africa (2014).

In Nyando sub county Kenya according to Demographic and Health Survey 2009, preterm born have been reported in health units and dispensaries, some preschool teachers have also been concerned about the learning readiness of these children especially when they are admitted in final class to class one within the sub county.

Research has consistently demonstrated a greater risk for learning-related problems in preterm born progress through infancy to preschool and elementary school (Albertsen, 2003). However, little research has explored the long-term effects of preterm on cognitive, psychomotor, social and language outcomes into children's learning readiness.

1.2 Learning Readiness

This study was based on Maturational Theory of child development which was developed beginning in 1925 by Arnold Gesell, an American educator and a child psychologist whose studies in child psychology is primarily concerned with biological maturation and how it is related to overall development of children. Gesell and his colleagues constructed a set of behavioral norms that illustrate sequential and predictable patterns of growth and development. He asserted that all children go through similar stages, although each child may move through these stages at their own rate which depends on how they were born.

Maturation theory believed that a child's growth, development and learning readiness is influenced by the environment (which can be conditions of the mother during pregnancy, health status and even nutritional factors) and heredity, but he largely investigated the children's physiological development. He called this process maturation, that is, the process by which development is governed by intrinsic factors, principally the genes.

According to Gesell, the rate at which children develop primarily depends on the growth of their nervous system, consisting of the complicated web of nerve fibers, spinal cord, and brain which is not fully developed in preterm children. As the nervous system grows, their minds develop and their behaviors change accordingly. This theory also observed that children language development depends on the intrinsic factors governed by their birth term. Babies first gain control over their lips and tongues, then their eye movements which generally depends on how the child perceives information at a tender age and whether children's language is fully developed depending on the birth term hence can communicate back making learning readiness easy.

Concerning retarded development, Gesell (1991) came to the conclusion that an understanding of normal infant and child development was indispensable to understanding childhood abnormality. He then began his studies of the mental growth of babies, and by 1919 he was addressing himself chiefly to the development of normal infant mentality. He found new methods for observing and measuring behavior by using controlled environments and precise stimuli. Children born of various ages and levels of development were filmed candidly through a one-way mirror, and eventually records of children from the stage of birth through their late children were compiled.

From these observations Gesell concluded that children must reach specific maturational stages in development before their learning influences their behavior; there appeared to be

retarded scheme for development in preterm children in the four areas of motor skills, adaptive behavior, language development, and personal and social skills.

Gesell noted children psychomotor development that as they grow, they learn to sit up properly, play, stand, walk, and run. These capacities develop in a specific order with the growth of the nervous system, even though the rate of development may vary from child to child according to their birth term. Gesell believed that individual differences in growth rates are a result of the internal genetic mechanisms which can fail to develop in preterm because they are born earlier and therefore should be assisted because it affects their learning readiness.

He opposed efforts to teach children things ahead of their developmental schedule, asserting that a child's social and cultural environments also play a role in their development, these socializing once the nervous system had matured adequately which is only evident in full term children, a child would begin interacting with others freely in class and during play hence they share and socialize without fear.

The extremely preterm infants for example those born below 25 weeks are at a greater risk of developing complications of prematurity such as growth deficit (UNICEF, 2015). Growth of these infants is influenced by different biological and environmental factors of both mother and the infant. These children have feeding problems, breathing difficulties and unstable body temperatures Speer, (2009). Preterm children in Kenya are close to 80 per cent of these preterm births are largely helped through low cost interventions that have already been scientifically proven to work effectively. An example, he states, is the Kangaroo Mother Care (KMC) technique where the tiny infant is held skin-to-skin on the mother's chest. This keeps the baby warm, facilitates breastfeeding and wards off infection according to (Tessier, 2003).

1.3 Statement of the Problem

New report by the Nuffield Foundation (2014) warns that eight out of 10 teachers have had no training in dealing with preterm children and most of them just treat them as other members of the class who were born full term. Due to these, preterm born children are at high risk and disadvantaged and both their language, cognitive and even psychomotor are adversely affected.

Up to date there has been limited information of the relationship between term birth of 5-6 year old children and there are no preschool guidelines in Kenya that mentions anything regarding children born preterm in Nyando Sub

County Kenya. Preschool teachers have raised concern on the reluctance of preterm children, in the participation on most activities enjoyed by term children in preschool.

Despite many preschool teachers and parents concern in the sub county about the level of preparedness of these children to learn there is still no guideline or research that has been undertaken to document learning readiness competencies or skills of preterm children. this study therefore aimed at investigating the effect of term birth on 5-6 year old learning readiness among preterm and full term in Nyando sub county Kenya.

1.4 Study Objective

To determine effect of preterm birth on learning readiness of 5-6 year old children in Nyando sub county Kenya.

1.5 Research Hypothesis

Hol Preterm birth has no significant effect on learning readiness of 5-6 year old children in Nyando sub county Kenya.

1.6 Conceptual Framework

Figure 1 shows the independent variable preterm birth and the aspects of learning readiness that is language, social and psychomotor as dependent variables.

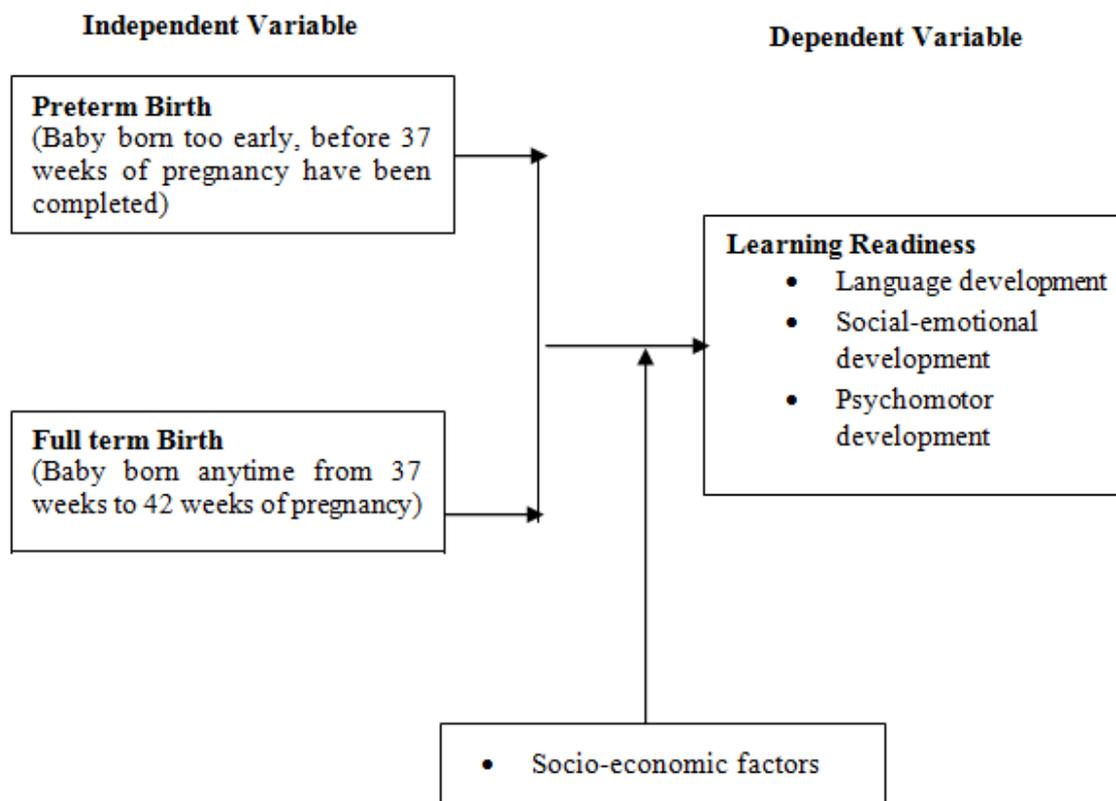


Figure 1: Conceptual Framework

Source: Researcher’s Own Conceptualization, 2019

II. RESEARCH DESIGN AND METHODOLOGY

2.1 Research Design

The use of mixed research methodology for my study included secondary analysis of an existing statistical data set (Kisrat tool for preschool) and collection of primary qualitative data obtained by means of semi-structured interviews, collection of quantitative data by means of score

marks for observed events and actions for children alongside a review of empirical and theoretical literature.

It is the triangulation of such information, notes Yin (2009) that contributes to the rigour of research and this was allowed for enhancing the validity and reliability of my findings whilst by helping to gain a deeper understanding of the phenomenon under study Gomm, (2009).Qualitative data

was obtained through interactive sessions with participants. The choice for the mixed method design was guided by Bazeley, (2004) who noted that the usage of numbers and description of words which anchors both quantitative and qualitative research paradigms are mutually complementary and the strength of both can produce a research synergy in which the whole collective benefits are greater than what is obtained from either designs alone.

2.2 Study Location

The study site was Nyando sub county, Kisumu County Kenya. Nyando Sub County is inhabited by Luo community. Nyando sub county is located in an area of 101.9 sq. Km with a population of 17 334 as per population (2009, National Census). Children under study were those currently preschool children in pre-unit and were born preterm in 2014.

2.3 Study Population

The study on the effect of term birth on learning readiness in preschools was conducted in 40 preschools in Nyando sub county, kisumu county Kenya and targeted 72 children (36 preterm and 36 full term). The study used 40 preschool teachers (20 female and 10 male), 72 parents and 20 hospital administrators as a representation of the entire population. The research population was drawn from preschools in Nyando sub county, Kisumu County. The population of interest for this study comprised parents, teachers, medical practitioners, the administrators of preschools and the children.

2.4 Sample and sampling techniques

Both Purposive sampling and stratified random sampling techniques were used to select the study participants 40 preschools, 72 parents and 20 hospital administrators were sampled purposively as Kothari (2004) asserts that purposive sampling ensures that those selected as participants are rich in the required information and knowledge of the study. This kind of sampling was used since it gives each participant equal chances of being selected as part of sample to locate and recruit for the study.

This study used purposive sampling and stratified random sampling to pick interviewees from every sub county. Stratified random sampling design facilitated sample selection that is representative of all the categories in the target population that is dividing preschool children into homogeneous sub groups and then taking a simple random sample in each sub group (Daniel,2012). Teachers from the research preschools were selected using stratified sampling technique from a sampling frame prepared with the support of the school administration.

The researcher adopted these techniques because specific respondents (teachers, parents and hospital administrators) were viable for this study, the researcher went to preschools and with the help of preschool practitioners, preterm children were identified from the records that parents had given and the hospital administrators. There are 40 preschools centers in Nyando Sub County where the research was carried out, from a sampling frame of 120 preschools; a sample size was determined by using the formula prescribed by Kombo (2002).

2.5 Research Instruments

Structured questionnaire was used to source for information from parents and head teachers. The questionnaire had two sections: section A with information on demographic characteristics of respondents which included their age, gender and education level. Section B had information on language and development, social emotional development, and psychomotor development and learner readiness. The questions were put on a five point Likert scale where excellent (5), very good (4), good (3), satisfactory (2) and fair (1). The information sought from respondents was important in answering the specific objectives of the study.

Hospital administrators and teachers were interviewed as per the research objectives. Face-to-face interviewing assisted the process of information gathering by allowing for the building of rapport and interaction with each participant, gauging how deep questioning might go, and the direction it might take (Creswell, 2006).

The researcher used semi-structured interviews due to the flexibility such method allowed the researcher to respond to interviewees' particular area of knowledge and further exploration of additional themes that may arise (O'Leary, 2002). Face-to-face interviews were conducted in which the researcher, who was the interviewer, asked hospital administrators and teachers questions designed to obtain answers pertinent to the research problem (Kerlinger& Howard, 1999). The instrument contained items that sought information on the demographic data of the respondent on enrollment of preschool children, and the learning readiness of preterm children.

Document analyses were used to obtain information on the trend of enrollment of preterm children in Nyando Sub County schools. Some of the documents that were used in the study included children health record, admission register, class register and teacher academic records.

The observation guide was used by the researcher to obtain data during visits in the preschools; this was used to assess the availability and adequacy of facilities and physical

infrastructure in the centers that aids growth and development of preterm children in Nyando Sub County. Observation guide consisted of list of items to be observed in the project preschools which helped the researcher to collect data. It also assisted in obtaining valuable information on the physical structures in the schools that promoted holistic growth and development of preterm children.

2.6 Pilot study

Before the actual data of the study was collected, the researcher conducted a pilot study within the county on a sample that was not included in the final study population. The purpose of the pilot study was to pre-test the instruments of data collection to enable the researcher improve efficiency as well as ascertain their reliability and validity, adjust strategies and approaches to maximize response rate and to familiarize with their administration (Oso & Onen, 2009).

2.7 Validity and reliability

Validity is the degree to which a test measures what it is intended. To enhance validity of instruments, a pre-testing (pilot study) was conducted in the sampled schools which are not among the sampled schools that were to be used for the study. Reasons behind the pre-testing were to assess the clarity of the instrument items so that those found to be inadequate in measuring the variables were to be either discarded or modified to improve the quality of the research instruments thus increasing their validity.

Reliability is the ability of research instruments to yield consistent results after repeated trial. Mugenda and Mugenda, (1999). In this study, it was important to ensure the level of the internal consistency with which an instrument measures what it intends to measure (Jarvinen, 2001). In order for the study results to be reliable, test-retest method was employed to establish the reliability of the instruments. The technique involved administering the same instrument twice to the same pilot group of respondents at different times Kerlinger & Howard (1999).

The reliability test was carried out and the results were as presented in Table 1.

TABLE 1

Reliability test

Cronbach's Alpha	Number of Items
.749	18

From the results, Cronbach Alpha coefficient value was 0.749 for all the 18 questionnaire items. This implied that data collected was reliable since the alpha value was above the recommended 0.7 in social science. Thus the questionnaire was suitable for further analysis.

Quantitative data collected was analyzed on the computer using the Statistical Package for Social Sciences (SPSS) software version 21.0 package to run descriptive analysis. The data collected was summarized in tables. Quantitative statistics was employed to establish the relationship among the variables. ANOVA was used to establish the significant relationship between the independent and dependent variable.

III. STUDY RESULTS

The study used questionnaire to get response from sampled parents of 72 pre-school children and 40 teachers. A total of 102 questionnaires were issued to the respondents out of which all the questionnaires were correctly filled and returned. This constituted 100% of which was considered adequate and in line with Kothari (2004) who recommended that a return rate of more than 70% was acceptable in social science research.

The specific objective of the study was to establish effect of preterm birth on learning readiness of 5-6 year old children in Nyando Sub County, Kenya. To achieve this, the respondents were asked to give their opinion showing the level of their agreement or disagreement with the statement provided in a Likert scale of 1- 5 where: Excellent (E)=5, Very Good(VG)= 4, Good (G)= 3, Satisfactorily(S)= 2 and Fair (F) = 1. The statement on learning readiness were divided into; language and literacy competencies, social-emotional competences and Psychomotor development.

Table 2 shows correlation statistics of preterm birth on language and literacy competencies, social emotional competencies and psychomotor competencies.

TABLE 2
Regression of Preterm Birth and Learner Readiness of 5-6 Year old Children

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	-.675 ^a	.456	.454	4.45191	

a. Predictors: (Constant), Preterm birth

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	5897.893	1	5897.893	297.581	.000 ^b
1	Residual	7035.911	355	19.819		
	Total	12933.804	356			

a. Dependent Variable: Learner Readiness

b. Predictors: (Constant), Preterm Birth

Source: Researcher (2019)

From Table 2, the correlation coefficient (R) or the beta value β_1 of $-0.675 \neq 0$ at $p=0.00$ indicates there exist statistically significant negative linear relationship between preterm birth and Learner readiness of 5-6 year old children. The coefficients of determination, R-square (r^2) of 0.456 implies 45.6% of the variance in learner readiness of preterm birth of 5-6 year old children. The significance value is 0.000 which is less than 0.05 means the model is statistically significant in predicting how preterm birth influence learner readiness of 5-6 year old children. Further, an F-significance value of 297.581 at $p = 0.000$ was established showing that there is a probability of 0.00% from the regression model to accept the hypothesis. In view of the results, the null hypothesis was rejected. The study concluded that there exists a statistically significant negative effect of preterm birth on the Learners' readiness of a 5-6 year old children.

The outcome of this study is in agreement with Carvalho (2009) who showed that extremely premature children at six years of age had the worst results in neurocognitive functions and more disabilities than their term classmates and in standard normative references. Data from this study indicated that 72% had disabilities in the cognitive domain, 24% in the neuromotor domain, 10% presented hearing loss, and 36% visual loss, such that 80% of the sample had some minimal, average, or severe disability. The study is in agreement with Jansson (2006) who noted that when children are born

prematurely, phoneme discrimination skill is affected due to the lack of neural development. The lack of neural development can cause the premature infant to inadequately discriminate between speech sounds and non-speech sounds therefore, delaying the process of language development. There is a delay in language skills when premature children reached five years of age (Allin, 2004). This could be due to the fact that premature group had significant delays in the recognition of phonemes at the age of five years.

The interview schedule carried out on hospital administrators depicted the following scenario.

“Children born before 37 months have a problem when it comes to playing with other children of his/her age. They show signs of withdrawal and are not comfortable to bond with others. The eating habits are poor right from breastfeeding when their mothers are held at medication center as directed by the nurses in charge. Our evaluation from the patients we have heard at our facilities is that the growth of such children is not good as compared to other children born after 37 weeks. This is a major challenge to us and especially the parents whom we take for guiding and counseling at all cost to accept the will of God”.

Table 3 shows correlation statistics of Full term birth on language and literacy competencies, social emotional competencies and psychomotor competencies.

TABLE 3
Regression coefficient of Full Term Birth and Learner Readiness of 5-6 Year Old Children

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.872 ^a	.761	.760	1.08162

a. Predictors: (Constant), Full Term Birth

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	1181.769	1	1181.769	1010.145	.000 ^b
1	Residual	372.028	318	1.170		
	Total	1553.797	319			

a. Dependent Variable: Learner Readiness

b. Predictors: (Constant), Full Term Birth

Source: Researcher (2019)

From Table 3, the correlation coefficient (R) or the beta value β_1 of 0.872 $\neq 0$ at $p=0.00$ indicates there exist statistically significant positive linear relationship between full term birth and Learner readiness of 5-6 year old children. The coefficients of determination, R-square (r^2) of 0.761 implies 76.1% of the variance in learner readiness of full term birth of 5-6 year old children. The significance value is 0.000 which is less than 0.05 means the model is statistically significant in predicting how preterm birth influence learner readiness of 5-6 year old children. Further, an F-significance value of 1010.145 at $p = 0.000$ was established showing that there is a probability of 0.00% from the regression model to accept the hypothesis. In view of the results, the null hypothesis was rejected. The study concluded that there exists a statistically significant positive effect of full term birth on the Learners' readiness of a 5-6 year old children.

The study findings are similar to those of Ritchie, 2015, who posit that preterm children's interaction difficulties are

reported to be manifold findings derived from a systematic review of 23 studies dealing with social development in children between 3 and 6 years of age revealed 16 out of 21 studies reporting more peer problems and social withdrawal in preterm children compared to full-term children (Ritchie, 2015). In a separate study by Reijneveld (2016), considering preterm children between 3 and 6 years of age have reported a persistence of social problems into school age underlining the relevance of preterm birth. Preterm children were not as accepted by peers as full-term children, and were more likely to withdraw from social situations; they were also verbally victimized more often and rated as socially immature.

The study carried out a comparative analysis of both preterm and full term children on language and literacy competencies, social emotional competencies and psychomotor competencies. The summary of the findings are as presented in Table 4.

TABLE 4
Model coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	1.049	.0259			40.482	.001
Pre-term	-0.0232	.0140	.473		-1.658	.102
Full-term	.213	.0064	.239		33.159	.001

a. Dependent Variable: Type of birth

Source: Researcher (2019)

From the table 4, letting Y be type of birth, X_1 be preterm, and X_2 be full-term, using the regression coefficients in Table 4 X., we have;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2$$

$$Y = 1.049 - 0.0232 * X_1 + 0.213 * X_2$$

From the equation above when preterm is increased by one unit influence of type of birth will decrease by 0.0232, and a unit increase in full-term birth will result in 0.213 increase influence of type of birth. The null hypothesis was therefore rejected.

IV. CONCLUSION AND RECOMMENDATION

The study concluded that there exist statistically significant negative linear relationship between preterm birth and Learner readiness of 3-6 year old children. Full term birth influences Learner readiness to learn of 5-6 year old children. It was also noted that there is statistically significant difference in learning readiness between 5-6 year old full term and preterm.

The following recommendations were made from the study findings; Preterm birth children need to be given a lot of attention in their early years of life to help them improve on their learning readiness; Schools need to play a key role in modelling preterm children by offering extra attention to them; Children care givers need to play an active role in modelling preterm children and Preschool Teachers need to give extra attention to preterm children for a holistic growth and development.

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