

**EFFECT OF PLAY EQUIPMENT ON PRESCHOOL CHILDREN'S  
PARTICIPATION IN OUTDOOR PLAY ACTIVITIES IN SUBA EAST  
DIVISION, MIGORI COUNTY**

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**A research project submitted in partial fulfilment of the requirements for the award  
of the degree in Master of Education in Early Childhood Education in the  
Department of Educational Communication and Technology, University of Nairobi.**

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## DECLARATION

This research project is my original work and has not been presented for an award of degree in any other university.

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## **DEDICATION**

I would love to dedicate this research project to my loving, caring and ever supportive mother, Beryl Rawago. Her perspective on life has taught me patience, resilience and being focused in life.

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First of all I start by thanking the Almighty God for his amazing grace and love that has brought me this far. My deepest appreciation goes to my research methods lecturer Prof. Jane Gatumu and Prof. Digolo whose professional guidance and support have enabled me to write this project. My gratitude goes to my brother: Andrew together with his family who have been of great help to me through the study. Your support has been instrumental in shaping my destiny. Most sincere appreciation goes to my sister Naomi together with her family for sacrificing their time and resources to support me through this study. I am also indebted to my dear mother: Beryl Rawago for her unfailing support and prayers that has enabled me to realize success throughout the study. Finally all thanks to Judie of Hyslops cyber café for neat typing and printing of the research project.

## ABSTRACT

The central problem of this study is that despite the critical role of play equipment in promoting of children's participation in outdoor play activities and holistic development, provision of these play equipment have been ignored over time. Factors leading to inadequate provision of play equipment have not been adequately investigated and well understood, hence hindering the participation of children in outdoor play activities and eventual holistic development which could only be achieved through play with opportunity to manipulate a variety of play equipment. To this end, the purpose of this study was to determine the effect of play equipment on preschool children's participation in outdoor play activities in Suba East, Division Migori County. The study sampled nine schools using stratified random sampling technique to ensure representativeness. From the nine sampled schools 3(33%) were public schools where as 6(67%) of them were private schools. From the sampled schools five children were selected to take part in the study and three teachers per school yielding a total of 45 children, 18 teachers and 9 head teachers. A questionnaire was used to collect data from teachers and head teachers on their role in provision of play activities, safety of play equipment as well as on availability of play equipment. Interview guides were also used to collect data from teachers and preschool children. Observation schedules were used to collect first hand data on availability of play equipment, types of play equipment, safety of play equipment as well as to check on the level of participation by children in outdoor activities. The research design used in the study was descriptive survey design. The main technique used to analyse data was through test retest in order to ascertain reliability of data collected. The major finding was that children were engaged in outdoor play with inadequate play equipment and without the supervision of teachers. Frequent repair and replacement of worn out play equipment was also lacking. Based on these finding it is recommended that preschool teachers should supervise children during play to ensure that the play equipment they use are safe, age appropriate and adequate. If possible teachers should improvise play equipment in cases where by the school is unable to install or buy commercial play equipment as a way of improving participation by children in outdoor play activities. Preschool teachers should be in serviced in the use of play equipment in outdoor play activities.

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## **ABBREVIATIONS AND ACRONYMS**

ECD	Early Childhood Development
ECDE	Early Childhood Development Education.
KIE	Kenya Institute of Education
UNCRC	United Nations Convention on the Rights of the Child
ACEI	Association for Childhood Education International.
NACECE	National Centre for Early Childhood Education
CRC	Convention on the Rights of the Child
HPPS	Handbook of Public Playground Safety
CPSC	Consumer Product Safety Commission
ACRWC	African Charter on the Rights and Welfare of the Child.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the problem

The child has the right to rest and leisure, to engage in play and participate in cultural and artistic activities (ACRWC Article 12) Right to relax and participate in recreational activities appropriate for their ages is an important aspect of a child's right to development. However, some of the reactions to the statement "children have a right to play" tell us about the attitude teachers have towards play. A teacher: "Right to play?" they play all the time anywhere. "They better get down to doing serious work". Only few months are left for them to join class one. No more play, no outdoor activities. They must concentrate on their studies and only studies. This view seems to contradict the African charters view on the need to respect and promote the right of the child to play. (ACRWC Article 12, 1999)

Several research on play indicate that the playful nature of children makes play the most natural technique of teaching which would, if properly used by teachers, ensure smooth transition from home environment to school environment. To emphasise the need of play as a teaching method in early childhood, centres, the guide for early childhood advocate that young children are curious, active and learn, by doing. In early childhood children learn spontaneously through play. (Ministry of Education Guide, 1984).

Time has come to advocate strongly in support of play equipment for all children. Play is to the child as work is to adult. It is crucial activity during childhood years. Play is pleasurable, spontaneous; activity that has an end in itself and has no extrinsic goal (Christine, 2001) play has a role in children's development of social and emotional development. Children pass through different stages as they develop and that this is

reflected in their play. Every child has a subconscious force shaping his or her personality. Children are only interested in things that provide pleasure to them in order to satisfy their id. Playing games with rules enables them to acquire knowledge of right and wrong. (Sigmund Freud, 1856, 1939).

Play allows children to explore their environment on their own terms and to take in any meaningful experiences at their own rates and on their own levels. Children play can be seen as practice for tasks that will be useful to them as adult, (Uzgiris and Raeff, 1995). It is during the early years that children construct their own knowledge and interpret their own experiences through manipulation and observation. Early childhood centres should therefore aim at producing children who are physically, socially, emotionally and orally ready for the formal school education through provision of numerous physical play facilities and experiences. (Maria Montessori, 1869, 1952)

Today children are not given the time to play because of various reasons which include parental commitment to their professional work. Many parents leave their children with house helps who do not allow the children to play. Again due to high population growth especially in urban areas, many preschools do not have play grounds and children are left to play in their classroom. Play equipment in some schools are not available at all. They are also expensive to buy and to improvise (Mwaura, 1989). In addition, some schools have facilities which are old and are poorly maintained thus making them a health hazard to the children some of the facilities like swings are not properly fixed thus exposing children to danger of falling during outdoor play. The work load in school is too much since the syllabus requires the children to cover so much. With that, the teachers do not see the need of providing children with facilities to play. Instead they spend the playtime

in teaching number work and reading which they consider to be more important in equipping children to join class one. (Lillian, 2010).

## **1.2 Statement of the Problem**

In Suba East Division, public schools have high population such that the play equipment available is over stretched. As a result of this not all children in public preschools are getting opportunity to participate in outdoor play with opportunity to manipulate a variety of play equipment. Preschool head teachers also claim that E.C.E. is run in partnership with the community members who are of low socioeconomic status hence not able to equip the schools within Suba East Division with the necessary play equipment. As a result there has been poor participation of children in outdoor play activities due to lack of play equipment in E.C.E centres in Suba East Division, Migori County. (Lillian, 2010). It is therefore important to carry out research on the effect of play equipment on children's participation in outdoor activities in order to find out the influence of availability of play equipment on children's participation in outdoor activities in preschools in Suba East Division, Migori County.

There is laxity of head teachers and teachers to ensure maintenance of play equipment as they view play as a waste of time and a lot of emphasis is put on academic rather than learning through play. (Millicent, 2000) This has resulted into less effort by the teachers to ensure safety of the play equipment in most preschools in Suba East Division Migori County. Therefore there is need to carry out this study in order to ascertain whether there is a relationship between safety of the play equipment and children's participation in outdoor play activities in Suba East Division, Migori County.

### **1.3 Purpose of the Study**

The purpose of this study was to investigate the effect of play equipment on preschool children's participation in outdoor play activities in Suba East Division, Migori County.

### **1.4 Research objectives**

- i. To find out whether the availability of play equipment influence children's participation in outdoor play activities.
- ii. To establish the extent to which different types of play equipment affects children's participation in outdoor play activities.
- iii. To examine the impact of safety of play equipment on children's participation in outdoor play activities.
- iv. To establish whether the role of teachers in provision of play equipment affect children's participations in outdoor play activities.

### **1.5 Research questions**

- i. How does availability of play equipment influence children's participation in outdoor play activities?
- ii. How does the use of different types of play equipment affect children's participation in outdoor play activities?
- iii. How does the safety of play equipment impact children's participation in outdoor play activities?
- iv. In what ways does the role of teachers in provision of play equipment affect children's participation in outdoor play activities?

### **1.6 Significance of the study**

This study will be of great help to children since their lives revolve around play and play is children's work. The research findings will be important in many ways. First, the findings will benefit various institutions such as the ministry of Education so that they can develop a curriculum related to play equipment, secondly the findings will also benefit DICECE officers who can use it to sensitize educators, parents and care givers on the importance of play equipment to children, the findings will also be important to the school administrators in identifying the importance of play equipment and hence provide adequate and safe play equipment for their schools. The findings will also be important to the ECDE teacher as it will make them see the necessities of providing children with play equipment during outdoor activities.

### **1.7 Limitations of the study**

The limitations of the study was based on the design of the study, this was a descriptive survey. This design describes the situation as it is at one given point in time. The design also relied on the opinions, views and attitudes of the respondents. The design used did not allow the researcher to manipulate any variable. The study was conducted in Suba East which means the results were only relevant to preschools in Suba East division and cannot be generalized to the entire population of preschools in Migori country.

### **1.8 Delimitations of the study**

The study was delimited to the preschools in Suba East Division, Migori County. The study was conducted in Suba East Division and therefore its findings and recommendations were not generalized to preschool children in other counties due to regional differences, socio economic factors, political influence and religiosity. Therefore the result findings were only to be generalized on other children in the same division



within the same age brackets. The research also targeted the preschool head teachers and teachers because they are the ones that are involved with the children and are able to provide information concerning their participation in outdoor activities.

### **1.9 Basic assumptions of the study**

The study assumed that: all preschool teachers are trained and therefore know their roles in provision of play equipment for children to use during outdoor play activities. The study assumed that all preschools in Suba East division are well equipped with different types of play equipment for use in outdoor activities. Study assumed that preschools in Suba East division have safe play equipment for children to use during outdoor play. The researcher also assumed that the respondents were willing to cooperate by giving correct information on the questionnaires as well as during interview sessions which might not be the case.

### **1.10 Definition of key terms**

**Activity:** Interacting with play equipment and materials.

**Effect:** Impact experienced in a child's participation after interacting with play equipment and materials.

**Influence:** Refers to the effect one has or something has on the way a child thinks or behaves.

**Parent:** Individual tasked with a responsibility of guardianship over a child either by birth or adoption.

**Participation:** Refers to being involved in an activity or with interaction or manipulation of play equipment.

**Play:** Any pleasurable activity for the purpose of generating amusement which is voluntary and has no external rewards.

**Preschool:** Refers to a learning institution for young children.

**Play equipment:** All tangible item or objects used by a child while playing such as: swings, slides, sea saw, sandpit, ladders, ropes, tyres, balls and bean bags among others.

**Pre scholar:** A child who is in preschool and of the age between 2 and 5 years.

**Equipped:** Sufficiently enough supply of play materials.

**Outdoor play:** Refers to activities for pleasure done outside the classroom in the playground such as: swinging, sliding, tyre racing, jumping, skipping, hide and seek, balancing and swimming among others.

**Provision:** It means making something available for use.

**Physical:** That which is visible and tangible.

**Safety:** The state of being safe from harm or danger.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents the literature review on the subject under study. It was guided by the objectives of the study as outlined in chapter one; namely literature on: availability of play equipment and children's participation in outdoor play activities, types of play equipment and children's participation in outdoor play activities, safety of play equipment and children's participation in outdoor activities, role of teachers in provision of play equipment and children's participation in outdoor activities, theoretical framework and the conceptual framework of the study.

#### **2.2 Importance of outdoor play to children**

The Association for Childhood Education International (1998) recognises the need for all children of all ages to play and affirms the essential role of play in children's lives, ACEI believes that as today's children continue to experience pressure to succeed in all areas, the necessity for play becomes more critical. ACEI supports all adults who respect, understand and advocates legitimizing play as an essential pathway to learning for all population of children; adults should use their knowledge about play to guide their practice. The ACEI position on play "play is a necessity for all children"

When children are involved in play they become interested rather than doing nothing because play increases their level of activity and arousal. Docket and Feer (1991) asserts that children play has some phases which reflect a continuation of theme or reputation of an occasion or it may be an example of fleeting interest. Bellyne (1960) confirms that play is pleasurable experience children normally engage in because it is a pleasurable

experience. Children do not set out to play with a goal of learning something or improving skills but rather engage in play for the pleasure it affords them.

Piaget (1951) on the other hand viewed play as an active process which involved a lot of activities whether physical like tug of war or at times mental activity like: playing with words, imaginative play where children build houses using blocks therefore arrange blocks to form a picture of a house. Limbo (1986) seems to support Piaget's idea. Limbo views play as being symbolic. He sees children's play to be involving a lot of make believe. Where people and objects may be treated differently. These can be seen when children use dolls as babies and imitate the cry of babies as they pretend to be the mother in the family. Stanley Hall (1844, 1924) observed children playing and saw that their play behaviours changed with age. He saw children play as a reflection, as a process of evolution and suggested that play was the mechanism through which the child expelled the surplus energy that build up a normal healthy nervous system. He suggested for survival purposes such as hunting play was its outlet.

Karl Groos (1901) view was that play allowed children to practice the skills needed in adulthood. He believed that through play children would practice skills needed in adulthood without guidance from an adult and suggested that if children did not have opportunity to play the result would be lack of intellectual progress. Froebel (1752, 1885) used carefully planned play materials which were applicable to family life so as to create meaningful learning situations. He discovered that play prepares a child into a real life activity so his view supports Karl Groos view. In agreement with this view is Maria Montessori (1912) who said that each child possessed a capacity to develop and the development in them progressed in stages. Therefore play is an integral part of learning because as children play the thought capacity is developed through training the senses

(seeing, hearing, smelling, touching and tasting) she argued that play promoted physical development and body coordination. That the small and large motor skills are refined and developed during play.

NACECE (1993) states that play helps children to discover their bodies and know how they function. Play also assists in personality and emotional development. As children try out different rules during free play, they release feelings and express themselves in non-threatening atmosphere thus developing holistically. Play helps children develop schemes of how things work and therefore lay foundation of cognitive growth.

Smith (1917) states that play enhance language development as an integral part of learning. That outdoor play gives children opportunity to interact with various play equipment as well as other children forcing them to communicate and through communication children acquire knowledge from each other. Play promotes socialization among children. It also enables children to learn how to live with others harmoniously by thanking others for what they have received waiting for one's turn so as to accomplish an activity.

According to Margaret McMillan (1860, 1931) outdoor activities such as climbing frames is important to children since it develops their finger muscles so that they can grip and hold equipment firmly. It also gives children the opportunity to exercise their large muscles thus promoting motor development of the children. In agreement with this view is Folio (1983) who states that play activity such as skipping ropes helps children to develop coordination of the arms and legs which is more systematically and in position. The skipping helps a child to develop both the fine and large motor muscles which become stretched and enlarged thus motor development of the child. However, findings from the recent explosion research on the brain and learning also delineate the importance of play.

Jensen (2000) states that active brain makes permanent neurological connections critical to learning. Inactive brains do not make permanent neurological connections. Research on brains demonstrates that play is scaffold for development, a vehicle for increasing neural structures and a means by which all children practice skills they need in later life.

### **2.3 Availability of play equipment and participation in outdoor activities**

According to Margaret McMillan (1860, 1931) outdoor environment is as important as indoor environment. McMillan recognized that children could learn a lot from the outdoor environment if a variety of physical play equipment were provided for children to manipulate at the outdoor environment. She believed that first-hand experience supports learning, which is free play with opportunity to use various materials. However research done by Millicent (2010) on influence of play materials on preschool children's performance found that most teachers put more emphasis on equipping the indoor environment with play materials as opposed to the outdoor environment as they viewed the classroom to be more important as opposed to the playground.

According to Pestalozzi (1746, 1825) children's learning should progress from concrete to abstract. Their mental and physical as well as other aspects of development change as they grow. Therefore they should be allowed to build concept through play activities with opportunity to use a variety of facilities rather than direct teaching. Children's environment should be that which enhances active participation in learning process rather than passive participation. A responsible learning encourages participation and supportive attitude towards the same. Piaget (1936) echoed the idea of Pestalozzi that physical play facilities make learning real and enjoyable. He argued that children who are 6 to 11 years are in the concrete operational stage where learning is practically based on the use of concrete materials. At this state children need direct experience rather than verbal

description. Therefore when teachers want to introduce the skill of balancing, there should be a sea saw at children's disposal so that they can use the facility in participation in balancing. Where children participate they discover, explore and manipulate thus making their learning more concrete and real.

NACECE (2004) explains that when children play nothing suits them better than gathering different materials, examining their differences and similarities. Play facilities set situation where children learn through trial and error. Children who watch the teacher demonstrate a skill during directed play activities will later on want to try to perform the skill during free play and imitate exactly what the teacher did thus learning will have taken place. Play materials enhance creativity among children because they will want to create own ways of doing an activity using the materials and facilities apart from the ones shown by the teacher. Play facilities make the outdoor environment at school supportive to children's participation in play. Adequate play facilities enable children to learn in a relaxed manner. When the facilities are available children take part in play and in so doing develop a sense of independence and mastery of materials and equipment being used. Play facilities also enables children to acquire skills of sharing, respect to each other, taking turns, cooperation, following instructions as well as obeying rules.

#### **2.4 Types of play equipment and participation in outdoor activities**

According to Hymes (2004) Toys and play materials are meant to stimulate the total growth and development of the children. Play materials can be grouped into two broad categories namely; fixed equipment such as swings, slides, sea saw, rocket framed, tunnels, tyres climbers and step ladders and movables or loose materials such as tyres, balls, bean bags, containers, ropes and hopes. Children should have two classrooms one indoors and one outdoors. The outdoor play environment should be an extension of the

indoor classroom. It should be a learning environment as carefully planned as the outdoor activity centre and should encourage motor and social skills as well as help children refine existing cognitive structures and construct new ones.

According to KIE (2003) play materials are meant to stimulate the total growth and development of a child. Therefore materials used in outdoor should cater for the following areas; manipulation skills, visual, perception, motor skills, auditory perception, language development, exploration through feelings and social emotional needs. Some educational researchers at KIE assert that those children who are exposed to a variety of toys at an early stage develop higher levels of intellectual functioning than those who receive little or no stimulation and have no toys to play with. Play equipment also enhance a high degree of socialization and develop creativity as they play. Therefore play equipment provided to children for play should be those that promote socialization whereby children interact with each other in process of play. They should also be versatile in that they offer children a variety of play opportunities which in turn leads to their holistic development.

According to Waithaka (2009) there are points to consider when selecting or improvising play materials for young children. These are safety, appropriateness, durability, aesthetic, adequate and sufficient. This is paramount in all aspect of children's play. Children are naturally eager to explore and experiment their play materials and equipment. Therefore the equipment should be challenging enough to invite children to use them in attempt to explore. However, they should not be too challenging as this can make them dangerous. To cite a few of the safety measures there should be no sharp edges that can cause injuries, any paint used on the play equipment should be non-toxic, wooden materials like the climbing frame should be free of splinters and metal toys should be free from sharp



edges. Waithaka asserts that the play materials should be age appropriate. That is they should suit the child's stage of development. The materials should be attractive enough to make the child want to use them to play. They should be of the correct size and weight depending on the age of the learner. The materials should be durable enough to allow children to explore and discover. The materials should have aesthetic value with a variety of shapes, colour, and texture and constructed in aesthetic manner such that it can be appealing and attractive to the children.

According to Childcare Service Act (2007) there is no definite list of toys and equipment that a child care service must purchase. However services must ensure that play equipment and materials are suitable for the child's developmental stages. For instance loose materials should not be too small that the child can swallow. They should neither be too big that the child's hand cannot hold. Materials should be enough for all children to avoid fighting for them. The materials for play must be safe for use and children must be supervised at all time. Play materials must be suitable to all children attending the outdoor activity that is they should take into consideration learners with special needs play materials used should offer children opportunity across several developmental areas thus being versatile and value for money not to forget the endless opportunities to play provided. Play materials should be those that are friendly, safe for the childcare setting as well as protect children from injury by ensuring furniture has no sharp edges and rough surfaces. This view of child care service act supports Waithaka's view on the types of play equipment that are required in a preschool set up. In essence; safety, age and developmental stages must be taken into account when designing and selecting play equipment for children.

Janie (1998) argued that children who sit with nothing to do and no one to play with exhibit some social incompetence which is essential for learning. Janie asserts that children need a variety of play equipment in order for their mind to be stretched by playing with equipment and other children too.

Rose Mary Wallnages (1992, 1997) suggested that there should be two small huts constructed for playing home and family. One small shelter can be made for constructive play. Sand play and water play. A preschool should have its own garden as well as outdoor equipment like: Swings, sliders, tunnels, sea saw etc. This clearly shows that when setting a preschool one has to consider the size of the land which will accommodate all the necessary requirements of preschool facilities.

According to Njoki (2007) activities offered to pre scholars offered a variety of skills. Such as locomotive skills, manipulative skills and stumbling skills. However she did not establish how play materials influences participation in outdoor activities hence this study aims at filling the gap.

## **2.5 Safety of play equipment and participation in outdoor activities**

According to article 31 of CRC (1989) children have a right to engage in play and recreational activities appropriate to their ages. McCarthy (1980) states that scaling down the physical world makes it a little easier for the children to practice necessary skills, such as discoveries that are more practical than the statements made in the classroom during activities. In the same context, the hand book of public playground safety (HPPS, 2010; pg.325) recommends that a playground should allow children to develop gradually and test their skills by providing a series of graduated challenges in age appropriate manner. Failure to provide age appropriate experiences for children during formative years can inhibit the acquisition of motor perceptual skills.

The most important aspect of safety is appropriate play equipment and materials that provide appropriate levels of challenges for pre-schoolers at various ages within acceptable limits of safety. The consumer product safety commission (CPS, 2010) recommends that young children's playground should be composed of age appropriate equipment scaled to their sizes, ability and developmental level for instance, handles should be smaller, bridges and platforms should be low and have guard rails and hand rails, slides should be short (under 4 feet), and stairs should have gradual (not steep) incline. A playground of this nature provides opportunity for children to engage in activities that satisfy their inquisitive nature and innate desire to discover and be creative.

According to Malone and Tranter, (2003) children always feel safe when play equipment and materials are appropriate and able to challenge their physical and intellectual capacities to meet their individual needs. Play equipment include play structures like bars, domes for climbing, sliding boards, ladders and parallel boards, knotted ropes, climbing poles, bridges, platforms, swing, walking board, balance boards, sand boxes and tunnel. These are also consumables like the toys for play, garden tools, soft balls, bean bags, rocking horses, boats and board tubs, sand box materials (funnel, strainers and empty plastic containers ) wheel toys) tricycles, child size vehicles and wagons) and water play materials (KIE syllabus 2008; KIE guideline for ECDE, 1999)

Layout of the equipment is crucial to enhancing children's safety in the playground. Structural integrity of the equipment should be a concern so that the equipment is not hazardous or flimsy that it can break while children use it. Well laid outdoor play equipment provide easy navigation that builds confidence without sacrificing safety of the children. Different equipment should be used in different zones; for instance, moving equipment such as swings and merry-go-round should be located towards the corner,

edges or outside of the playground. Large muscle activities (those involving static balancing, gross body coordination and flexibility) should also be separated from the fine muscle activities (those requiring finger speed, arm steadiness arm and hand precision and finger and hand dexterity). This also enables them to maintain their play areas, create positive emotional development and to explore new ideas through equipment they can handle (Braidekamp, 1992).

## **2.6 Role of teachers in provision of play Equipment and participation in outdoor activities**

Maria Montessori (1870, 1952) stresses that children are able to learn on their own, teachers should therefore provide play materials. Children are born with the potentials from parent and other adults. Their potentials should however be nurtured in order to make them achieve their goals, the only way a teacher can nurture children's potentials is by providing them with a variety of play facilities so that they can participate freely in play through manipulation of the facilities.

The teacher needs to provide children with prepared outdoor environment that is: environment which allows play to take place without any hindrances. The purpose of the prepared environment is to make the child independent to the adult. Thus working alone while being responsible. It is a place where the child can do things for himself or herself without any instruction and at times without interferences (NACECE, 2004)

Morrison (1991) asserts that the teacher has the role of assessing the child during play and presenting that child with a suitable piece of equipment. The teacher should always be there to provide support and encouragement to the child, during play. She or he should never make the child feel inferior or a failure. Every attempt of the child to execute a given skill during play should be rewarded positively.

Research done by Mwaura (1987) recommended that play fullness of children influences the development of cardinal concepts and also learning in the other areas. Therefore teachers must appreciate playfulness of children and encourage them by providing play facilities and materials. In schools where parents are of low socio-economic status and cannot afford to equip their children with all the play facilities the government should come for their help.

Study done by Millicent (2009) on “Effect of learning materials on children’s performance in activity areas”. She noted that head teachers and teachers were to some extent willing to provide materials for indoor learning activity areas as opposed to those of the outdoor activity as they viewed play as less important and therefore did not see the need to provide facilities to promote play. Head teachers also blamed the government for not funding preschool programmes which also led to the lack of physical facilities in their schools.

Another study conducted by Lillian in (2010) on effect of play facilities on children’s performance in pre-school activities showed that there is laxity of head teachers and teachers to engage children in play as it is considered a waste of time to them and a lot of emphasis is put on academics rather than learning through play. As a result less effort has been put by teachers to equip preschools with play facilities in E.C.E centres in Suba East division. Therefore there is need to conduct this study on effect of play facilities on children’s participation in outdoor activities in order to ascertain whether there is a relationship between the role of teachers in provision of play equipment and children’s participation in outdoor activities.

According to Anne Cockburn (2004) attitude plays a very significant role in acceptance of any idea or innovation. Therefore head teachers and teachers with a positive attitude towards play will work hard towards providing relevant play facilities to their schools where as head teachers and teachers with a negative attitude towards play will view it as a less important activity and therefore will not bother to promote it by providing play facilities to the school.

## **2.7 Theoretical framework**

This research proposal is based on Friedrich Froebel theory of play as postulated in (1782, 1852). The theory states that education should seek to create environments that involve practical work and the direct use of materials. He insisted on the essence of play. He argued that through creative activities, children become aware of their place in the world. Froebel developed special materials such as shaped wooden bricks and balls (gifts), a series of recommended activities (occupations) and movement activities, and linking a set of theories. His original concern was the teaching of young children through educational game in the family. In the later years of his life, this became linked with a demand for the care and development of children outside the home.

Froebel's enduring significance was through his formulation of the 'kindergarten system' with its emphasis on play its use of 'gifts' (play materials) and 'occupations' (activities). Froebel as one of the pioneers of Early Childhood Educational reform, believed that every child possessed, at birth, his full educational potential, and that an appropriate educational environment was necessary to encourage the child to grow and develop in an optimal manner. Froebel's vision was to stimulate an appreciation and love for children and to provide a new small world (kindergarten), where children could play with others of their own age group and experience their first gentle state of independence. Froebel's

philosophy of education is encompassed by four basic components of free expression: self- activity, creativity, social participation and motor expression. Froebel asserts that the role of teachers should be to stimulate voluntary self –activity in the young child which is the necessary form of pre-school education.

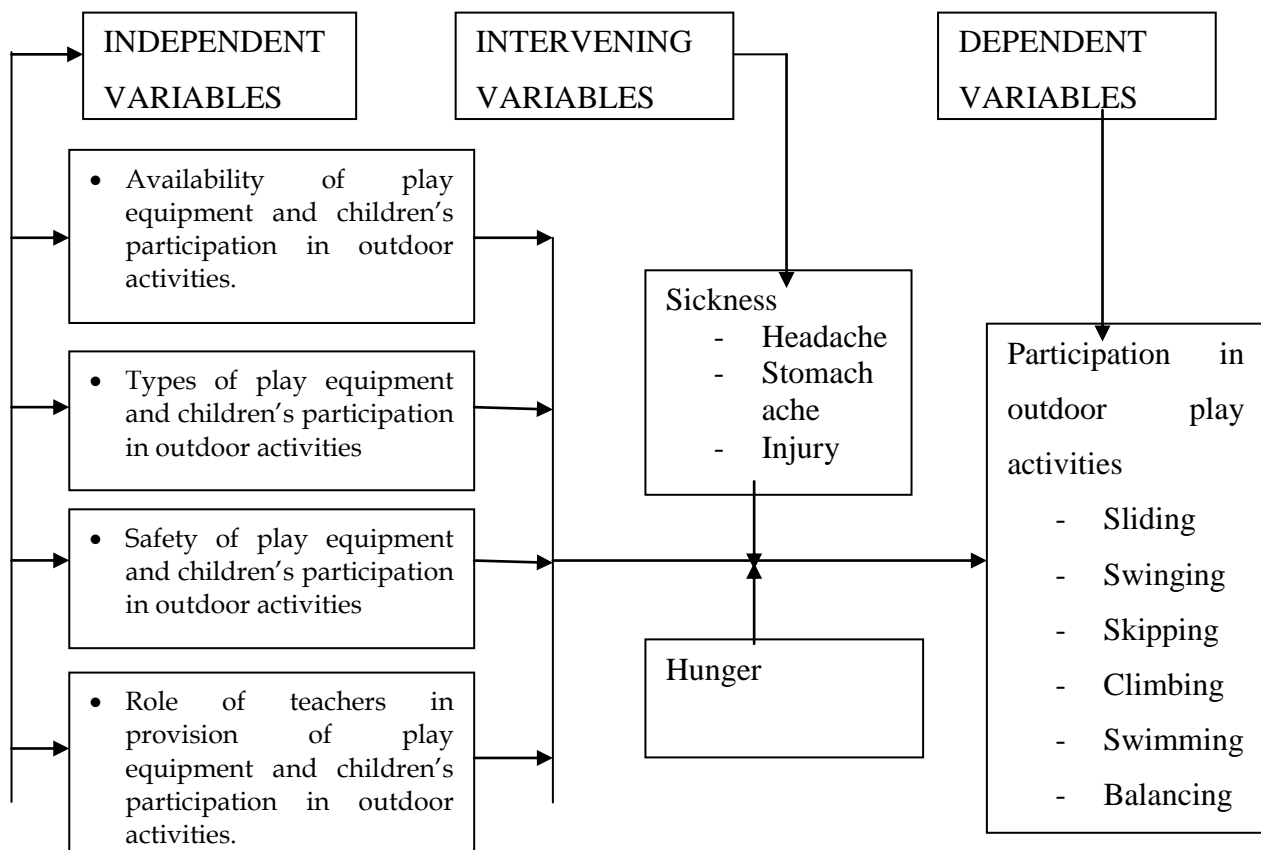
This theory identifies well with the study on the effect of play equipment on preschool children’s participation in outdoor play activities. Through stimulating play, the child is able to realise fullness of growth which brings about the realization of his budding powers and continually carries him from one plane of educational growth to another.

Froebel’s ideas on development and play provision have been adopted by childcare providers. Froebel designed a series of instructional material that he called ‘gifts and occupations’ which demonstrated certain relationships and led children in comparison, testing, and creative exploration activities .These gifts were objects provided for the child to play with such as a sphere, cube, or cylinder which helped the child to understand the concept of shape, colour, size and their relationships. The occupations were items like clay, sand and paint which children could use to make what they wished. Therefore, through the child’s own self-activity and creative imaginative play, he or she would begin to understand both the inner and outer properties of things as he moves through the development stages of the education process. All of the Froebel’s ideas are reflected in today’s approach to childcare and education. Education is often designed to be ‘child centred’ with the need of the child to actively engage in lots of activity with the use of play materials. Emphasis is placed on children experiencing things and discovering for themselves. Free play is often developed from Froebel’s idea of ‘gifts’ that is play with use of play materials.

## 2.8 Conceptual framework

Conceptual framework is the perceived framework of relationship between variables play equipment and preschool children's participation in outdoor play activities. The effect of the two variables namely plays equipment and participation in outdoor activities is mediated by Availability of play equipment, types of play equipment, safety of play equipment and role of teachers in provision of play equipment. However there are intervening variables like: sickness, hunger, and fatigue that can also affect participation in outdoor play activities.

**Figure 1: The conceptual framework on effect of play equipment on preschool children's participation in outdoor play activities**





## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter covered the research design, target population, sampling and sampling procedures, research instruments, validity of the instruments, reliability of the instruments, data collection procedures and data analysis.

#### **3.2 Research design**

The study adopted descriptive survey design. According to Orodho (2008), descriptive survey design is used in preliminary and exploratory studies to allow the researcher to gather information, summarize, present and interpret for the purpose of clarification. The design was therefore used by the researcher to gather information, summarize, present and interpret information in order to clarify the effect of play equipment on children's participation in outdoor play activities. The descriptive survey design was suitable in this study because this type of research depicts the state of affair as it exists. Kothari (2004) states that the researcher has no control over the variables and only reports what happens or what is happening. The researcher attempts to discover causes when they cannot control the variables. Kerlinger (1976) asserts that descriptive survey design does not deal with manipulation of variables. The researcher therefore found descriptive survey design suitable in explaining the effect of play equipment on preschool children's participation in outdoor play activities in Suba East division, Migori County.

#### **3.3 Target Population**

Target population consisted of all the preschools in Suba East division, Migori County. This has 45 preschools. Thirty of which are private preschools and fifteen are public preschools. Population of children in the 45 preschools stand at 4225 children and that of

teacher and head teachers is 135. This was the target population consisting of a set of people and events or objects from which the researcher generalized the research study. (Mugenda and Mugenda, 2003).

### **3.4 Sample size**

Orodho and Kombo ( 2000 ) describes sampling as a provision of selecting a number of individuals or objects from a population such that the selected group contain elements representative of the characteristics found in the entire group. Webster (1985) asserts that a sample is a finite part of a statistical population whose properties are studied to gain information about the whole. The sample size consisted of 9 preschools which is 20% of 45 preschools, 18 teachers and 9 head teachers which is 20% of 135 teachers and 45 children out of 845 children present in the 9 sampled schools.

### **3.5 Sampling Procedure**

To ensure that various categories of preschools are represented, the researcher employed stratified random sampling technique to sample the preschools as public and private. According to Mugenda and Mugenda (1999), 20% to 30% of the population is adequate. This becomes the rule of the thumb the researcher therefore sampled 20% of the preschools, in Suba East. The researcher will use simple random sampling to select 20% of preschool children and teachers in the selected preschools.

### **3.6 Research instrument**

The researcher used questionnaires, observation schedules and interview guides for consistency and reliability in data collection.

### **3.6.1 Questionnaires**

Questionnaires were used to collect data from preschool head teachers and teachers on demographic information as well as information on the effect of play equipment on preschool children's participation in outdoor activities. The questionnaires were suitable for collecting data from teachers because most of them are literate and therefore capable of answering the items adequately. Both closed-ended and open ended questions were used to gather information from the preschool teachers on effect of play equipment on preschool children participation in outdoor play activities.

### **3.6.2 Interview guides**

According to Palton (1990), interviewing has an advantage of letting the interviewer penetrate the feelings and thinking of interviewees. Therefore the researcher used interview guides to seek information from preschool teachers concerning their role in provision of play equipment, types of play equipment, availability of play equipment as well as their role towards ensuring safety of play equipment interview guides were also used to seek information from children concerning the role of teacher in provision of play equipment as well as on who accompanies them during outdoor activities.

### **3.6.3 Observation schedule**

Caswell (1982) asserts that observation is the most commonly used method of collecting statistical data. The researcher used observation schedule to collect first-hand information to some research questions. The researcher was able to observe types of play equipment used in outdoor activities, availability of play equipment for outdoor activities, safety of the play equipment, and role of teachers towards provision of play equipment as well as to observe teachers involvement in children's outdoor play activities. This method of data

collection was suitable since the researcher collected first-hand information of what took place instead of relying on hearsay.

### **3.7 Validation of the instruments**

The researcher conducted a pilot study in order to pre-test the instruments just before actual data collection. The researcher visited two schools which are not involved in the main study. The purpose of the pilot study was to reveal deficiencies in the design of the proposed study so that they would be addressed before the actual study.

#### **3.7.1 Validity of the instruments**

Validity is the accuracy and meaningfulness of inferences based on research result (Mugenda and Mugenda, 2003). It is the ability to measure well what it purports to measure. In order to enhance validity of the instruments, content validity was used where the items in the questionnaire were checked against the research objectives. An expert judgement was sought from the supervisors who assisted in the appraisal of the instruments by advising the researcher to indicate the number of participant on the observation schedules. The validity helped in identifying items in the questionnaires that needed to be restated and removal those that were not important to the study.

#### **3.7.2 Reliability of the instrument**

Mugenda and Mugenda (2003) define reliability as a measure of the degree to which a research yields consistent results after repeated trials. Kothari (2004) and Kerlinger (1967) observed that for research data to be reliable it must have the ability to consistently yield the same results when repeated measurements are taken under the same conditions to test reliability of the instruments. The researcher in this case used retest method where by the researcher after collecting data in the 9 schools in May went back again in June and collected data for the second time from the same respondent in order to

establish the reliability of the instruments. The researcher then made a comparison between answers obtained in the test and retest of the questionnaires.

### **3.8 Data collection procedure**

Before collection of any data from the target population, an authorization letter was sought from the University of Nairobi, Department of Educational Communication and Technology, to help the researcher be allowed to collect the expected data in the sampled schools. After that the researcher obtained a research permit from the national council of science and technology. The researcher then reported to the county commissioner to seek permission of conducting the study before commencement of data collection. The researcher then made appointments with the head teachers and teachers of the sampled schools on when to visit and collect data. On the material day, the researcher, upon visiting the institutions created rapport with the head teachers, teachers and administered questionnaires to them. The researchers also made a rapport with the preschool children and interviewed them. The researcher filled in the observation schedules during outdoor activities.

### **3.9 Data analysis**

Data analysis is the process of bringing meaning to raw data collected (Mugenda and Mugenda, 1999). After the data had been collected, there was cross examinations to ascertain their accuracy, competences and identify those items that were wrongly responded to, spelling mistakes and blank spaces quantitative data was then organized into frequencies and percentages using a scientific calculator. Tables were used to present the data. Qualitative data was analysed thematically in relation to the research objectives.

In the analysis of the research questions, all the items focusing on a given research question were analysed together and conclusions made. Data from the observation schedules was quantitative and hence was tied with the analysis of the qualitative data.

### **3.10 Ethical concerns**

According to Kombo and Tromp (2006), researchers whose subjects are people or animals must consider the conduct of their research and consider the ethical concerns associated with conducting the research. This study involved human being that is teachers and preschool children therefore the researcher ensured that the data collection process did not cause any physical or psychological harm to the research participants. The researcher also had to seek the consent of teachers before starting to collect any data from them. The researcher had to tell the truth as to why she needed to collect that data and the purpose of the study. The researcher had to treat certain information gathered from the research participants with confidentiality. This involved not writing the participants names. The information collected from the various schools was only used for the purpose of the research but not for any other purpose as another way of ensuring confidentiality.

## **CHAPTER FOUR**

### **RESEARCH FINDINGS**

#### **4.1 Introduction**

This chapter focuses on presentation and interpretation of the data collected in order to establish the effect of play equipment on Pre School children's participation in outdoor play activities. Children's participation in outdoor activities is determined by several factors among them; availability of play equipment, types of play equipment, safety of play equipment and role of teachers in provision of play equipment. Among the issues discussed in this chapter are the respondents, Availability of play equipment and participation in outdoor play activities, types of play equipment, safety of play equipment and role of teachers in provision of play equipment. The raw data collected during the research study using questionnaires, interview schedules and observation schedules were analysed both quantitatively and qualitatively. The research analysis is presented in form of tables and figures after which conclusions are made. The quantitative findings include the observation made by the researcher on availability of play equipment, types of play equipment, safety of play equipment as well as participation by children in outdoor activities.

The qualitative findings include responses gathered from preschool teachers, head teachers and preschool children concerning role of teachers in provision of play equipment.

## 4.2 Schools that participated in the study

In this section, demographic information will be provided for schools which participated in the study. We shall be looking at the schools in terms of year of establishment, category and population of the school.

**Table 1: Schools that participated in the study**

Schools and year of establishment	Category of the school	No. of children in terms of gender				Total No. of children per school	Percentage (%)
		B	%	G	%		
A (2013)	Private	98	57.6	72	42.2	170	20.10
B (1993)	Public	27	41.5	38	58.5	65	7.6
C (2013)	Private	32	53.3	28	46.7	60	7.10
D (2014)	Private	46	43.8	59	56.2	105	12.42
E (1994)	Private	42	52.5	38	47.5	80	9.46
F (1998)	Private	52	43.3	68	56.7	120	14.20
G (2000)	Private	68	48.2	73	51.8	141	16.68
H (1992)	Public	32	64	18	36	50	5.91
I (1984)	Public	28	51.9	26	48.1	54	6.39
Total	9	425	50.30	420	49.70	845	

From the Table 1 above the number of children in the sampled schools is 845. There are 425 boys and 420 girls in the 9 sampled school. Out of the 9 schools in the sample, 3 (33.3%) schools are public schools whereas 6(66.7) are private schools.



The total number of children in the 3 public schools is 169 (20%) whereas that in the private schools is 676 (80%). Therefore it can be concluded that private preschools in the sample had a large number of children who were present in the public pre-schools. There is also a clear indicator that there is a higher enrolment of boys in preschools as compared to girls though the difference is very minimal.

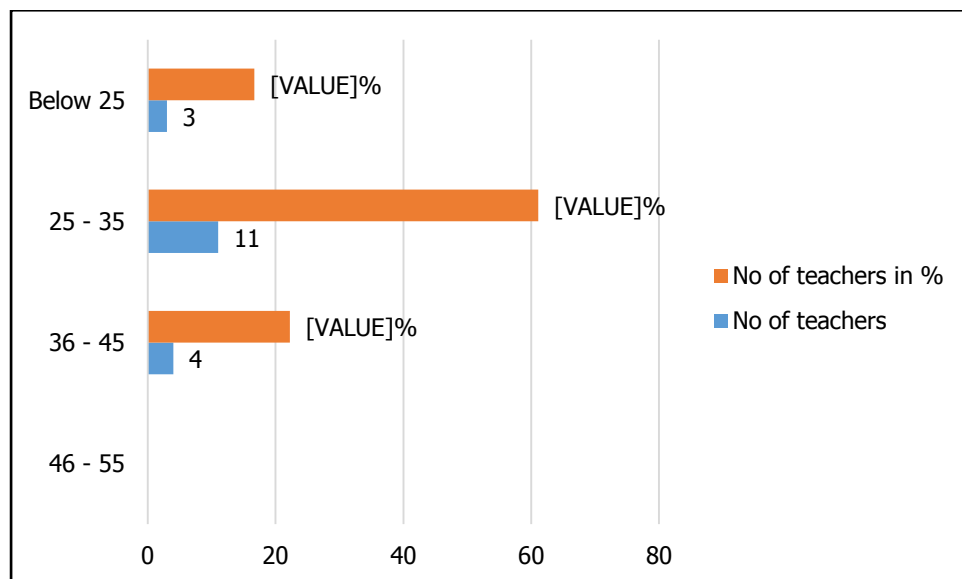
### 4.3 Teachers who participated in the study

In this section demographic information will be given on teachers who participated in the study. This will include: Age bracket, Educational level, academic qualification as well as work experience of both teachers and head teachers.

#### 4.3.1 Preschool teachers and head teachers age bracket

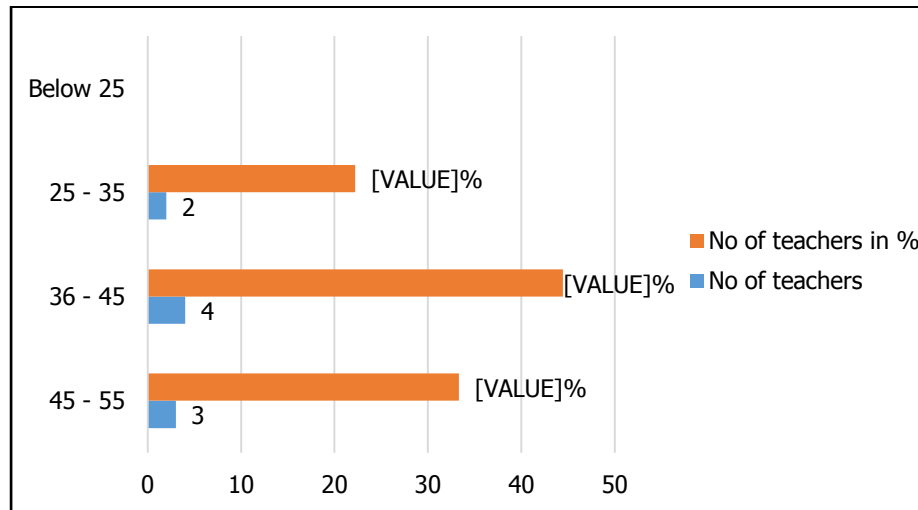
From the data collected and analysed, the preschool teachers' age bracket were as follows:

**Figure 2: Preschool teachers' age bracket**



From Figure 2 above it is evident that 22.22% of the preschool teachers are in the age brackets of between 36 – 45 years. Whereas 61.11% are in the age bracket of between 25 – 35 years and 16.67% of the preschool teachers are below the age of 25years. This means that majority of the preschool teachers are mature enough to handle preschool children since most of them are between 25-35years of age. At this age bracket, teachers are full of energy and are very innovative enough to supervise and instruct children during outdoor activities. The analysis for head teacher’s age bracket were as follows:

**Figure 3: Preschool headteachers’ age**

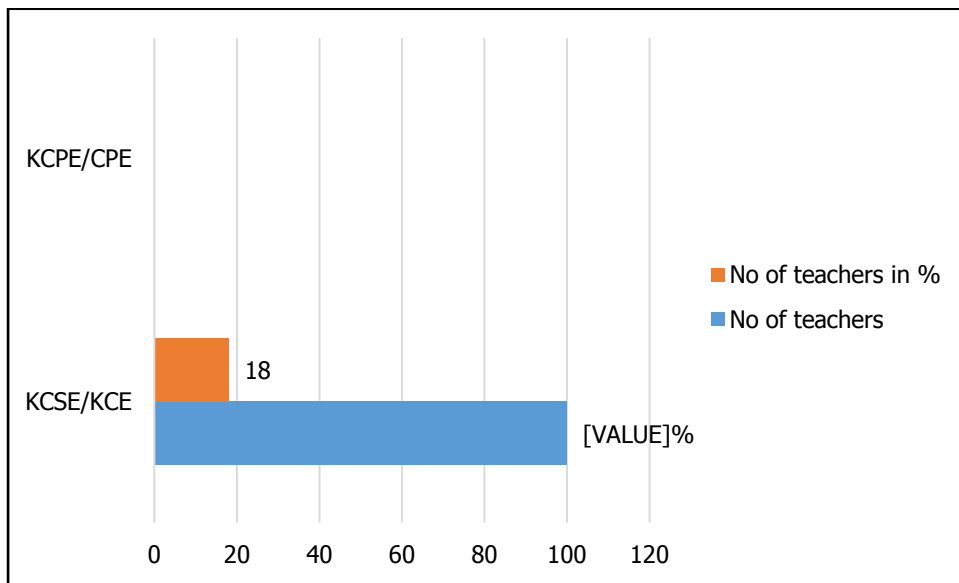


From the analysis in Figure 3, it is clear that majority of the headteachers are mature and have the necessary skills it takes to guide preschool teachers in their schools on how to manage outdoor activities in their schools.

#### **4.3.2 Preschool teachers’ and headteachers’ educational level**

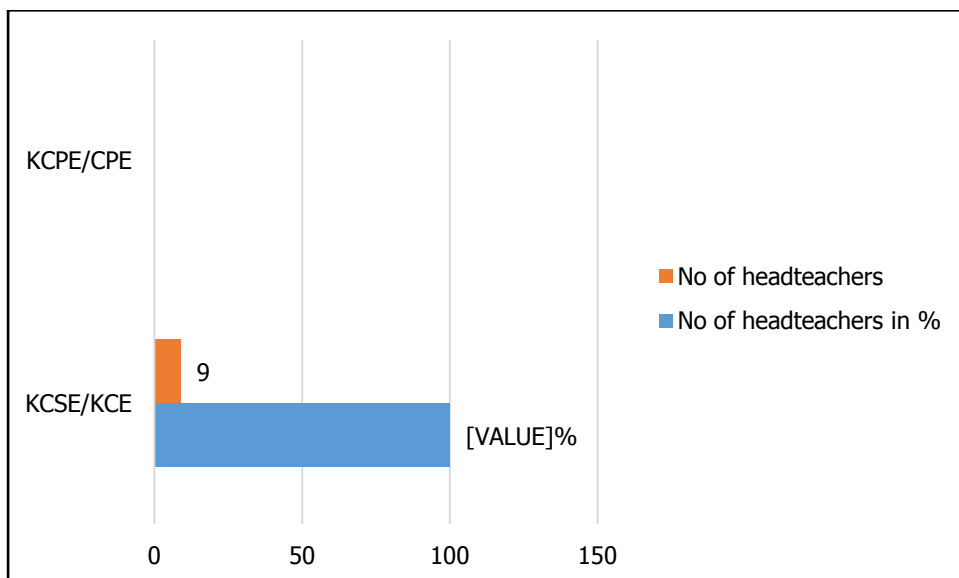
From data collected and analysed, the educational level of teachers were as follows.

**Figure 4: Preschool teachers' educational level**



From Figure 4, it is evident that all the 18 teachers in the 9 preschools in the sample had gone through form four and therefore they all have form four certificates. The headteachers educational level is as shown in Figure 5.

**Figure 5: Preschool headteachers educational level**

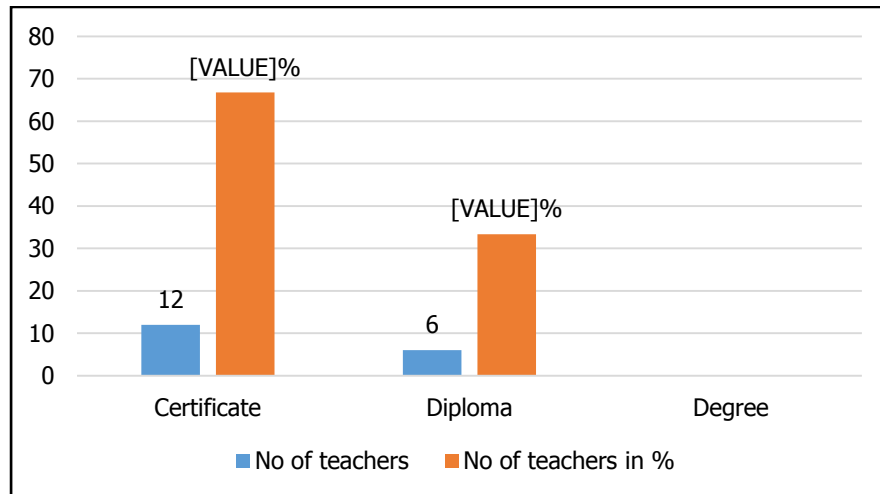


From figure 5 it is evident that all the nine head teachers have gone through form four.

### 4.3.3 Preschool teachers and headteachers qualification

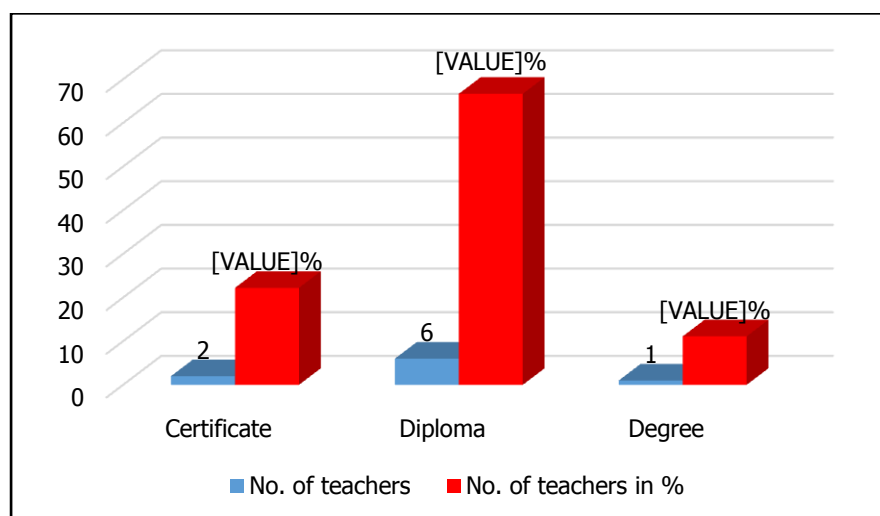
Preschool teachers' qualification and results were as follows

**Figure 6: Preschool teachers' qualification**



From Figure 6, it is clear that 66.67% of teachers have got certificate in Early Childhood Education whereas 33.33% have Diploma Certificates in Early Childhood Education. It can therefore be concluded that at least all the 18 teachers in the 9 sampled schools are trained and qualified therefore they must be having some knowhow on the improvisation of play equipment which could be used to facilitate participation by children in outdoor activities. Preschool head teachers' qualification was analysed as shown in Figure 7.

**Figure 7: Preschool head teachers qualifications**

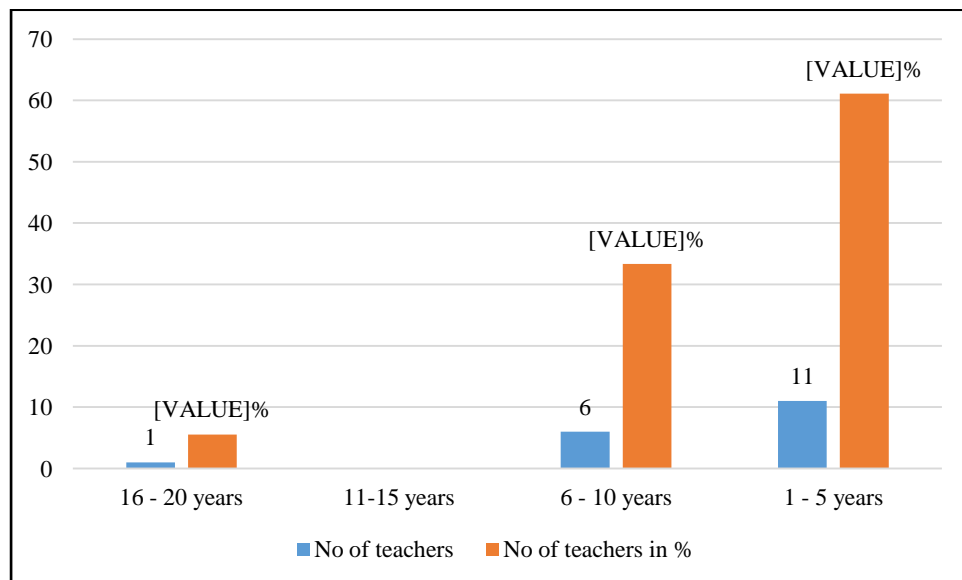


From Figure 7, it can be concluded that 66.67% of the headteachers have diploma in Early Childhood Education, 22.22% have certificates while 11.11% of the headteachers have Degree in Early Childhood Education. Therefore, all the headteachers have the relevant qualification it takes to head a preschool and are therefore capable of guiding the rest of the teachers on issues relating to play, equipment and outdoor activities.

#### 4.3.4 Preschool teachers and headteachers experiences

The data collected and analysed on preschool teachers teaching experience were as follows.

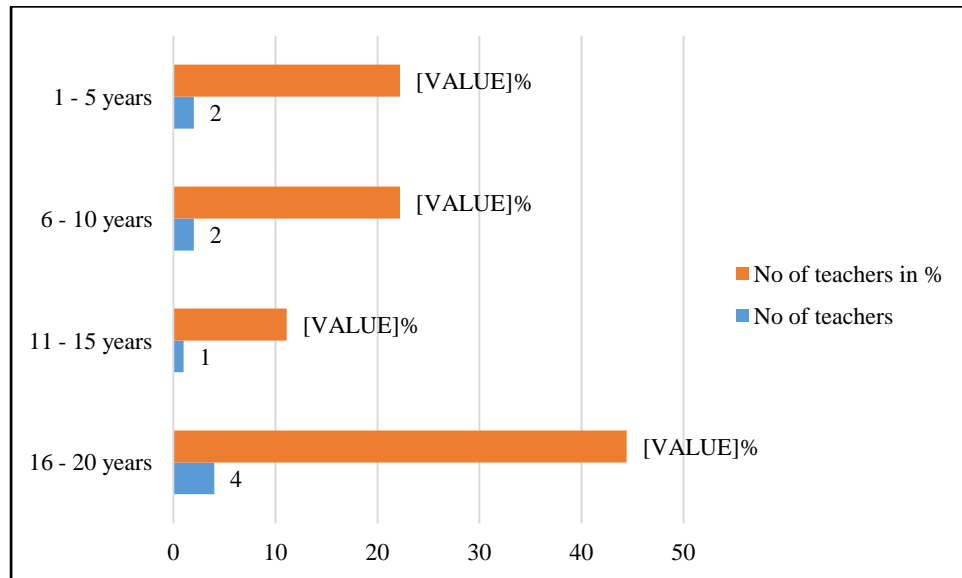
**Figure 8: Preschool teachers’ experience**



From Figure 8, it is evident that 61.11% of the teachers have taught as ECD teachers for at least 1-5years, 33.33% of the teachers have an experience of between 6 – 10years while 5.55% of the teachers have 16 to 20 years teaching experience. Therefore it can be said that at least 38.88% of the teachers have the necessary experiences for teaching in preschool as well as supervising children in outdoor activities.

Further analysis of data on head teachers teaching experience gave the following results.

**Figure 9: Preschool head teachers experiences**



The data in Figure 9 shows that 77.7% of the head teachers have the required experiences for heading a preschool as an administrator. To summarize, there is evidence that preschool teachers and head teachers in the 9 sampled schools had some necessary teaching experiences.

#### **4.4 Availability of play equipment**

In this section demographic information will be provided for schools which participated in the study. The researcher will be looking at the schools in the sample in terms of the play equipment they have the number of children taking part in each school.

##### **4.4.1 Availability of play equipment per school**

Here the researcher analysed the data which was collected with the help of the observation schedules. The data collected and analysed was as shown below

**Table 2: Availability of play equipment per school**

Play Equipment	SCHOOL A	SCHOOL B	SCHOOL C	SCHOOL D	SCHOOL E	SCHOOL F	SCHOOL G	SCHOOL H	SCHOOL I	TOTAL	PERCENTAGE (%)
Swings	√			√	√		√			4	44.44
Slides	√			√						2	22.22
Merry go round				√						1	11.11
Tunnels	√									1	11.11
Sea saw	√			√						2	22.22
Climbing frame	√			√						2	22.22
Car tyres	√	√		√			√	√		4	44.44
Balls	√	√	√	√	√	√		√	√	8	88.89
Skipping rope	√	√		√		√		√		5	55.56
Building blocks										0	0
Total no. of equipment available	7	3	1	8	2	2	2	3	1		
No. of equipment available in %	70	30	10	80	20	20	20	30	10		

**KEY:** √ means availability of equipment

From Table 2 above, it is evident that 88.89% of the schools in the sample had balls. 55.56% had skipping ropes where as 44.44% of the schools had swings and car tyres respectively. It can also be concluded that at least 22.22% of the schools had slides, sea saw and climbing frames respectively.

Most of the schools in sample lacked merry go round and tunnels with only 11.11% of the schools having merry go round and tunnels. All the schools in the sample lacked building blocks. From the table it is also clear that School D and A had the highest number of play equipment with school D having 80% play equipment followed by school A which had 70% play equipment. Data was collected and analysed on participation of children in outdoor activities in relation to the availability of play equipment as will be seen below

#### **4.4.2 Availability of play equipment and participation in outdoor activities**

Here the research analysed data based on the number of play equipment a school had and the total number of children that took part.



**Table 3: Availability of play equipment and participation in outdoor activities**

PLAY EQUIPMENT	OUTDOOR ACTIVITIES	NO. OF CHILDREN PARTICIPATING PER SCHOOL									TOTAL	PERCENTAGE (%)
		A	B	C	D	E	F	G	H	I		
Swings	Swinging	30			10	5		25	5		75	18
Slides	Sliding	35			25						60	14.5
Tunnels	Crawling	10			0						10	2.4
Sea saw	Balancing				10						10	2.4
Merry go round	Swinging				30						30	7.2
Climbing frames	Climbing	25			10						35	8.4
Balls	Ball games	20	10	10	13		15		20	10	98	23.6
Ropes	Skipping	15	10		2	5	5		5		42	10.1
Car Tyres	Tyre racing		20		5			10	30		55	13.3
Building blocks	Constructive play											
Total	10	135	40	10	105	10	20	35	50	10	415	
Percentage %		79.41	61.53	16.67	100	12.5	16.67	24.82	100	18.51	50.3	

From Table 3, it is evident that school D and H had 100% of their children taking part in outdoor activities because they had adequate play equipment to support the population of children in those schools during outdoor activities.

School A also had 70% play equipment which led to the participation by 79.4% of the children in outdoor activities. School E had the least number of children taking part in outdoor activities with only 12.5% of the entire population of children taking part in outdoor activities due to inadequate play equipment which denied a large number of children opportunity to take part in outdoor. Looking at the overall participation by children in the 10 outdoor activities, the researcher found that ball games was the most popular outdoor activities with 23.61% of the children in the 9 schools participating in ball games due to the availability of balls 18 (88.89%) of the schools in the sample. However no child took part completely in constructive play due to lack of building blocks in the 9 schools. Therefore it can be concluded that the higher the percentage of play equipment, the higher the participation will be in outdoor activities.

#### **4.5 Types of play equipment**

In this section data which was collected from the observations made will be organized in terms of types of play equipment a school has and number of children taking part.

##### **4.5.1 Types of play equipment**

According to Hymes (2004), play equipment can be grouped into two broad categories namely; fixed equipment such as swings, slides, sea saw, tunnels, tyre climbers and step ladders and into movables or loose materials such as tyres, balls, bean bags, containers, ropes and hopes.

However, in my research visits I observed that most schools lacked fixed play equipment and even those with fixed play equipment had some which were not firmly fixed. Most of the schools had movable play materials as will be seen in the Table 4.3.

**Table 4: Types of play equipment**

Fixed play equipment	No. of schools	Percentage (%)	Movable Play Equipment	No. of schools	Percentage (%)
Swings	5	55.56	Tyres	4	44.44
Slides	2	22.22	Balls	7	77.78
Tunnel	1	11.11	Ropes	5	55.56
Sea Saw	1	11.11	Building Blocks	0	
Climbing Frames	2	22.22			
Merry go round	1	11.11			

From Table 4, it is evident that 55.56% schools have swings, 22.22% have slides and climbing frames whereas 11.11% of the schools have merry go round, tunnels and sea saw respectively. When it comes to movable materials, 77.78% of the schools have balls, 55.56% have ropes and 44.44% have tyres. That means the most common fixed movable play equipment is swings whereas the most common movable play equipment is balls. That implies that majority of the schools visited had at least swings and balls. The researcher further analysed data on types of play equipment and children participating in outdoor activities.

**Table 5: Types of Play Equipment and Participation in Outdoor Games**

<b>Fixed play equipment</b>	<b>No. of schools</b>	<b>No of schools (%)</b>	<b>Outdoor activities</b>	<b>No. of children participating</b>	<b>No of children in %</b>
Swings	5	55.56	Swinging	75	18.1
Slides	2	22.22	Sliding	60	14.5
Merry go round	1	11.11	Rotating	30	7.2
Tunnel	1	11.11	Crawling	10	2.4
Sea Saw	1	11.11	Balancing	10	2.4
Climbing Frames	2	22.22	Climbing	35	8.4
<b>TOTAL</b>				<b>220</b>	<b>53</b>
<b>Movables play equipment</b>					
Ropes	5	55.56	Skipping	42	10.1
Balls	7	77.78	Ball Games	98	23.6
Tyres	4	44.44	Tyre Racing	55	13.3
<b>TOTAL</b>				<b>195</b>	<b>47</b>

From Table 5, it is evident that 53 % of the children in the sampled schools engaged in outdoor activities with use of fixed play equipment whereas 47% of the children in the sampled schools engaged in outdoor activities with use of movable play materials. That means most children in preschools prefer using fixed play equipment as opposed to moveable play equipment that is why the total number of children using fixed play equipment is higher than that of loose play equipment. Teachers who were interviewed reported that children tend to prefer using fixed play equipment since fixed equipment can be used at the same time by many children as opposed to moveable equipment like

ropes, tyres and bean bags whereby only one child can use them at a time. This implies that schools like school A & D which had the highest number of play equipment both fixed and moveable have a greater chance of recording high participation by children. However, schools with adequate moveable play equipment whereby each child can get hold of a play equipment can also record high levels of participation.

#### **4.6 Safety of play equipment**

Here the researcher analysed data collected through observation schedules and recorded the findings in terms of number of safe play equipment a school had and the number of children taking part in outdoor activities.

##### **4.6.1 Safety of play equipment per school**

The consumer product safety commission (CPS,2010) recommends that young children's playground should be composed of age appropriate equipment scaled to their sizes, ability and developmental level for instance handles should be smaller, bridges and platforms should be low and have guard rails and hand rails, slides should be short (under 4 feet), and stairs should have gradual incline. A playground of this nature provides opportunity for children to engage in activities that satisfy their inquisitive nature and innate desire to discover and be creative.

During my research visits to various pre-schools, I had an opportunity of observing the safety of play equipment and analysed data as shown below in Table 6.

**Table 6: Safety of Play Equipment per School**

SCHOOLS	PLAY EQUIPMENT AND THEIR SAFETY															
	Swings		Slides		Sea saw		Merry go round		Tunnels		Climbing frames		Tyres		Balls	
	Firmly fixed	Loosely fixed	Smooth ends	Sharp parts	Under 4 feet	Over 4 feet	Under 4 feet	Over 4 feet	Smooth ends	Sharp parts	Gradual incline	steep	Small size	Big size	Small Size	Medium
School A	√		√						√		√					√
School B													√			√
School C																√
School D		√	√		√		√				√		√			√
School E		√														
School F																√
School G	√														√	√
School H		√											√			√
School I																√
Total no. of safe equipment	2		2		1		1		1		2		3			7
Safe equipment in %	22.22		22.22		11.11		11.11		11.11		22.22		33.33			79.78
No of unsafe equipment		3														
No of unsafe equipment in %		33.33												11.11		

From table 6, 22.22% of the schools had climbing frames which were safe since they had gradual incline. And 77.78% of the schools had medium balls. It can therefore be concluded that out of 9 schools in the sample only 44.44% had unsafe play equipment, these are school D, E and H which had loose swings and school G which had tyres that were too big for the children to use.

The researcher collected data and analysed how children participated in relation to the safety of play equipment as will be seen in Table 7.

#### **4.6.2 Safety of play equipment and participation in outdoor activity**

During the research study, the research sought the opinion of teachers on the effect of safety of play equipment and materials on children's participation in outdoor activities. One of the teachers reported that when the play equipment are safe, children feel more confident to use them in carrying out outdoor activities. Another teacher said that safety of play equipment enhances children's liveliness during outdoor activities since there is no fear of getting hurt. Whereas the third teacher reported that safety of play equipment promotes maximum participation and enjoyment. The fourth teacher reported that safety of play equipment lowers chances of accidents during outdoor activities. Four of the teachers reported that children tend to enjoy outdoor activities when the facilities are safe whereas ten of the teachers reported of increased participation when facilities are safe and decreased cases of accidents.

However, the researcher also carried out some observation on safety and participation and recorded the following report in table 7.

**Table 7: Safety of Play Equipment and Participation in Outdoor**

PLAY EQUIPMENT	OUTDOOR ACTIVITIES	NO. OF CHILDREN PARTICIPATING PER SCHOOL																	
		A (%)		B (%)		C (%)		D (9%)		E (%)		F (%)		G (%)		H (%)		I (%)	
Swings	Swinging	30	17.64	0		0		10	9.52	5	6.25	0		25	17.72	5	10	0	
Slides	Sliding	35	20.58	0		0		25	23.80	0		0		0		0		0	
Sea saw	Balancing	0		0		0		10	9.52	0		0		0		0		0	
Merry go round	Rotating	0		0		0		30	28.57	0		0		0		0		0	
Tunnels	Crawling	10	5.88	0		0		0	0	0		0		0		0		0	
Tyres	Tyre racing	0		20	30.76	0		5	0	0		0		10		20	40	0	
Balls	Ball games	20	11.76	10	15.38	10	16.67	13	9.52	0		15	12.5	0		20	40	10	18.51
Ropes	Skipping	15	8.82	10	15.38	0		2	1.90	5	6.25	5	4.16	0		5	10	0	
Climbing frame	Climbing	25	14.70	0		0		10		0		0		10	7.09			0	
Building blocks	Constructive play	0		0		0		0				0		0		0		0	
Total no. of participants	425	135		40		10		105		10		20		35		50		10	
No of participants in %			79.41		61.53		16.67		100		12.5		16.6		24.82		100		18.5



From Table 7, it is evident that school A, D and H had the highest number of participants in outdoor activities possibly because the 3 (33.33%) schools had safety play equipment to support participation by the entire population of children in the three schools. It is also evident that participation by children in swinging varied from one school to the next. For instance school A and G which had safe play equipment had the highest number of children taking part in swinging with school A having 17.64% and school G had 17.73% as opposed to school D, E and H which had the least participants in swinging with school D having 9.52%, school E having 6.25% and school H having 10%. The reason why the three schools recorded low number of participants in swinging was due to the fact that some of the swings in the 3 schools were loosely fixed. There was high participation by children in ball games due to the fact that 7(77.78%) schools had balls which were medium in size hence safe for preschool children to use in ball games.

#### **4.7 Role of teachers in provision of play equipment**

In this section, the researcher collected and analysed data collected from children, teachers and head teachers on the role of teachers in provision of play equipment and the participation by children in outdoor activities.

##### **4.7.1 Role of teachers in provision of play equipment**

According to Maria Montessori (1870, 1952) children are able to learn on their own, teachers should therefore provide play materials. Children are born with the potentials from parents and other adults. Their potentials should however be nurtured in order to make them goals, the only way a teacher can nurture children's potentials is by providing them with a variety of play facilities so that they can participate freely in play through manipulation of the facilities.

Data collected and analysed from the interview guides for preschool children indicated that out of 45(100%) children who were interviewed only 33.3% of those interviewed were supervised by their teachers during outdoor activities whereas 66.7% of the children reported that they played alone without the supervision of their teachers. This implies that out of the nine schools in the sample only three schools, 33.3% had their children play in the company of their teachers whereas 66.7% of the schools had their children play without proper supervision of the teachers. The information collected from children has further been illustrated in Table 8 below.

**Table 8: Number of children supervised in outdoor activities by teachers**

SCHOOL	NO. OF CHILDREN INTERVIEWED	NO. OF CHILDREN PARTICIPATING				
		SUPERVISED	NOT SUPERVISED	NO	%	
A	5	11.11%			135	74.51
B			5	11.11%	40	61.53
C			5	11.11%	10	16.67
D	5	11.11%			105	100
E			5	11.11%	10	12.5
F			5	11.11%	20	16.67
G	5	11.11%			35	24.82
H			5	11.11%	50	100
I			5	11.11%	10	18.51
TOTAL	15	33.33%	30	66.67%	415	

From Table 8, it is evident that only 33.33% of the children in the sample are supervised in outdoor. And out of 45 children who were observed in outdoors, only 275(66.3%) are supervised, the remaining 140 (33.7%) are not supervised. It is important to note that in schools where children are supervised many children tend to participate as opposed to

schools whereby children are not supervised possibly because without supervision children tend to fight over play equipment such that only the strong ones dominate the field of play more so when equipment are inadequate.

The researcher are sought the view of teachers and head teachers on their roles in provision of play equipment. The data collected from the teachers was analysed in table 9 below.

**Table 9: Role of teachers in provision of play equipment**

SCHOOL	NO. OF TEACHERS		ROLE OF TEACHERS IN PROVISION OF PLAY EQUIPMENT
	NO	%	
A	3	16.67	<ul style="list-style-type: none"> <li>- Improvise play equipment</li> <li>- Supervise and instruct children</li> <li>- Buying balls and ropes</li> <li>- Distribute moveable play materials</li> </ul>
B	2	11.11	<ul style="list-style-type: none"> <li>- Improvise balls and ropes</li> <li>- Supervise children</li> <li>- Replace worn out equipment</li> </ul>
C	1	5.55	<ul style="list-style-type: none"> <li>- Improving play equipment</li> <li>- Distribute play equipment during outdoor</li> </ul>
D	2	11.11	<ul style="list-style-type: none"> <li>- Supervising children</li> <li>- Checking on safety of play equipment</li> </ul>
E	2	11.11	<ul style="list-style-type: none"> <li>- Children play on their own</li> <li>- Teachers does nothing to avail play equipment</li> </ul>
F	2	11.11	<ul style="list-style-type: none"> <li>- Improvise balls and ropes</li> <li>- Supervise children during play</li> <li>- Encouraging children to bring play materials</li> <li>- Ensure repair of worn out play equipment</li> </ul>
G	4	22.22	<ul style="list-style-type: none"> <li>- Guide and supervise</li> <li>- Check on safety of play equipment</li> <li>- Replace worn out materials</li> </ul>
H	1	5.55	<ul style="list-style-type: none"> <li>- Checking play materials to ensure safety before use</li> <li>- Improvise play materials like balls, ropes and tyres</li> </ul>
I	1	5.55	<ul style="list-style-type: none"> <li>- Make enough play materials</li> <li>- Supervise children during play</li> </ul>

From the study analysed in table 8 above, it is evident that 16(88.89%) teachers who were interviewed seems to be aware of their roles in provision of play equipment. However, 2(11.11%) teachers who were interviewed did not know their roles in provision of play equipment since they reported that their children played on their own and they did nothing to avail play equipment. But the information given in table 8 seems to contradict what is there on table 7 where only 3(33.33%) of the schools had their children being supervised in outdoor activities and the remaining 6(66.7%) had children playing without supervision. That means that most of these teachers did not supervise children in outdoor as they claim to do so. In fact only school A, D and G (33.3%) had teachers (50%) who supervised children in outdoor. The rest however improvised play equipment, checked on safety but when it comes to supervision it was not 100% done. Which in turn led to poor participation by children in (66.7%) schools due to lack of enough play equipment, loosely fixed play equipment and frequent fights over play materials with the absence of the teacher.

#### **4.7.2 Role of head teachers in provision of play**

Head teachers were also issued with questionnaires whereby they gave their views on their roles in provision of play equipment and their responses were recorded and analysed as shown below.

**Table 10: Role of head teachers in provision of play equipment**

SCHOOLS	NO. OF HEAD TEACHERS		ROLE IN PROVISION OF PLAN EQUIPMENT
A	1	11.11%	- Spearhead their purchase - Ensure repair and maintenance
B	1	11.11%	- Improve from locally available materials
C	1	11.11%	- Buy - Improve play equipment
D	1	11.11%	- Greasing of fixed play equipment - Check on safety - Ensure repairs are done
E	1	11.11%	- Does nothing to provide play equipment
F	1	11.11%	- Purchase - Improve
G	1	11.11%	- Ensure they are in good condition - Check on safety daily before use
H	1	11.11%	- Encourage teachers to improvise - Purchase balls
I	1	11.11%	- Encourage teachers to improvise - Purchase

From Table 10 above it is evident that 8(88.89%) of the head teachers are aware of their roles when it comes to provision of play equipment with only 1(11.11%) head teacher who reported that he did nothing to ensure the availability of play equipment in his school. However, not all the 8 schools where teachers knew their roles had adequate play equipment. The study indicates that schools A, D and H had the highest number of children taking part in outdoor activities accounting for 33.3% of the schools which were sampled. The study also indicates that 66.7% of the schools in the sample had inadequate play equipment meaning that at least 6(66.7%) of the head teachers who claim to be aware of their roles are doing very little to ensure adequate play equipment in their schools.

**4.7.3 Role of teachers in provision of play equipment and participation by children in outdoor activities**

**Table 11: Role of teachers in provision of play equipment and participation in outdoor activities**

TEACHERS				HEADTEACHERS				NO OF CHILDREN PARTICIPATING	
Aware of their roles		Ignorant of their roles		Aware of their roles		Ignorant of their roles		No	%
9	50%	9	50%	3	33.3%	6	66.7%	275	66.26

From Table 11, it is clear that 9 teachers out of 18 teachers who were interviewed are aware of their roles in provision of play equipment. These are teachers from school A, D and G accounting for 50% of the teachers aware of their roles whereas 9 other teachers are ignorant of their roles these are teachers from school B, C, E, F, H and I accounting for 50% of teachers ignorant of their roles. On the other hand out of 415(100%) children who were observed taking part in outdoor activities, only 275 (66.26%) reported that their teachers supervised and instructed them whereas 140(33.74%) were not supervised in outdoor. Therefore it can be concluded that children who are supervised are likely to participate in large number as opposed to those who play without supervision. Children who are supervised stand few chances of getting injured since their teachers are likely to ensure that equipment are safe before they start to play.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter contains summary of the major findings of this research, conclusion based on the findings and recommendations arising from the same findings.

#### **5.2 Summary**

This study investigated the Effect of play equipment on preschool children's participation in outdoor activities in Suba East Division, Migori County.

Four research objectives were formulated to guide the study. Objective one sought to establish the effect of availability of play equipment on preschool children's participation in outdoor activities. Secondly, to find out the extent to which different types of play equipment influence preschool children's participation in outdoor activities. Thirdly, to examine the impact of safety of play equipment on children's participation in outdoor activities. Last but not least the study sought to establish whether the role of teachers in provision of play equipment affect children's participation in outdoor activities.

The study employed descriptive survey design. The design was chosen because the researcher was not going to manipulate the variables but could only record the state of affair as it is. The study targeted 45 preschool, 4225 preschool children, 45 head teachers and 90 preschool teachers. But due to the difficulty in accessibility of the entire population, a representative sample was selected through stratified random sampling technique as follows; 3 public preschools, 6 private preschools, 18 teachers and 9 head teachers. Data was collected through questionnaires, interview guides and observation schedules. The data collected was recorded and analysed using descriptions, frequencies and percentages by use of tables.

### **5.3 Conclusions**

The study found that out of 845 children in the sample 676 (80%) were from private schools where as 169 (20%) were from public schools. Looking at the age bracket of the teachers the study found that 61.1% of the teachers are in the age bracket of 25-35. This means that most of the teachers are still young and energetic and are therefore capable of guiding and instructing children in outdoor activities. On the other hand 44.4% of the head teachers are in the age bracket of 36-45 years where as 33.3% are in the age bracket of 46-55 years. This implies that most of the head teachers are mature enough to supervise and direct what goes on in the outdoor activities. Therefore one can say that most of the teachers and head teachers in the sample had enough experience to enable them handle children during outdoor. The study indicates that both the teachers and the head teachers in the sample had undergone training and therefore they have some know how on outdoor activities and how they enhance the holistic development of the child.

#### **5.3.1 Effect of availability of play equipment on preschool children's participation in outdoor**

The study found that out of the nine schools in the sample 88.9% had balls, 55.6% had skipping ropes, 44.4% had swings, 22.2% had slides, sea saw and climbing frames respectively where as 11.1% of the schools had merry go rounds and tunnels. Therefore it can be concluded that swings and balls are the most popularly used play equipment in the schools in the sample. Study also showed that school D was leading in terms of availability of play equipment with 80% followed by school A with 70% then school B and H respectively with 30% each. The rest of the schools had 20-10% play equipment. This implies that only 22.2% of the schools in the sample had adequate play equipment where as 77.8% of the schools lacked adequate play equipment. The study on participation in relation to availability of play equipment showed that school D which had



80% play equipment had 105(100%) of the children participating whereas school A which had 70% play equipment had 135(79.4%) of the children participating. However school B and H also recorded high levels of participation due to their low enrolment rate which enabled their children to make use of the few play equipment. School E had the least number of participant with 12.5% .This implies that the higher the availability of play equipment in a school the higher the participation rate in outdoor activities.

### **5.3.2 Influence of types of play equipment on preschool children's participation in outdoor activities**

The study found that there is a relationship between types of play equipment and participation in outdoor activities. For instance 77.8% school had balls which led to the participation of 98(23.6%) of the children in ball games. On the other hand 55.6% of the schools had swings with 75(18.1%) children taking part in swinging. Study also indicates that 220(53%) children participated in outdoor activities involving use of fixed play equipment like: swings, slides, climbing frames, merry go round, tunnels and sea saw. Whereas 195(47%) children took part in outdoor activities involving use of movable play materials like: ropes, balls, tyres and hoops. This implies that most children prefer using fixed play equipment as opposed to movable play equipment. Children who were interviewed also reported that they preferred activities like swinging, sliding, crawling because the facilities used for these can accommodate many children at ago unlike skipping and throwing of bean bags where children have to play in turn.

### **5.3.3 Impact of safety of play equipment on preschool children's participation in outdoor activities**

The findings on safety indicate that 7(77.7%) schools had balls of medium size that is not too small to be swallowed by children. On the other hand 2(22.2%) schools had firmly fixed swings whereas 3(33.3%) schools had swings were loosely fixed thus posing danger to the children. It is also clear that 2(22.2%) schools had slides with smooth rails.11.1% of the schools had sea saw, merry go round and tunnel all of which were under 4 feet each thus being age appropriate and safe for use. I found that out of 9 schools I sampled only 3(33.3%) schools had a greater number of play equipment. Schools A had 7 play equipment, school D had 8 play equipment whereas school H had 4 play equipment. It can therefore be concluded that out of 9 schools, 4(44.4%) had unsafe play equipment with 3(33.3%) having loose swings and 1(11.1%) having too big tyres to be used in tyre racing by children. Interviews involving teachers regarding safety indicated that when play equipment are safe: children feel more confident to use them, there is increased participation, children are more lively during play since there is no fear of getting hurt, promotes maximum participation and enjoyment. Observations made on safety of play equipment and participation in outdoor activities indicated that the safer the play equipment the higher the participation will be. For instance school A and G had safe swings therefore they had at least 17.64% and 17.73% of their children taking part in swinging as opposed to school D ,H and E where the number was low due to the loose swings which forced children to share the few that were safe.

#### **5.3.4 Effect of the role of teachers and head teachers in provision of play equipment on preschool children's participation in outdoor activities**

The findings on role of teacher in provision of play equipment indicate that 33.3% of the schools in the sample have teachers who are aware of their roles and are taking them seriously. The remaining 66.7% schools have teachers who are not taking their roles seriously. This was confirmed during the interview session of preschool children whereby the researcher interviewed 5 preschool children per school and out of 45 that were interviewed, 33.3% reported that their teachers accompanied them during outdoor whereas 66.7% reported to have been playing alone without the supervision of their teachers. Findings also indicate that out of nine head teachers 8(88.9%) knew their roles in provision of play equipment however 1(11.1%) did not know his role in provision of play equipment. However findings on the role of the teachers in provision of play equipment and participation in outdoor activities indicate that participation in outdoor activities was high in 3(33.3%) schools possibly because the teachers and head teachers in those schools must have done a lot to purchase, improvise as well as to supervise children in outdoor activities. The study indicates that 6(66.7%) schools had inadequate play equipment each. Meaning that most of the teachers and head teachers are reluctant when it comes to provision of play equipment and that in turn has affected participation by children in outdoor. I also found out that private schools were better equipped with both fixed and loose play equipment as opposed to public schools. The reasons being that private schools are funded by individuals who own them whereas public schools rely on the county government and parents for its funding yet the county government has not allocated enough funds for preschool programs.

Based on the findings of the study it concluded that availability of play equipment influence children's participation in outdoor activities since the study found that the schools which had a greater number of play equipment had a greater number of participants in outdoor. The study also concluded that the safer the play equipment a school has the higher the participation rate in outdoor activities. And finally the study concluded that there is a relationship between the role of the teacher in provision of play equipment and children's participation in outdoor activities. Teachers who knew their roles of improvisation, supervision, distribution and ensuring safety had their school having play equipment as well as their children participating.

#### **5.4 Recommendations**

This study recommends that preschool teachers go for seminars, workshops and refresher courses on their roles in provision of play equipment as well as on supervision of children during outdoor activities as they will be equipped with more knowledge on how they can improvise most of the play equipment which could be used to promote participation by children in outdoor activities. This is because most of the teachers were still ignorant of their roles when it comes to equipping their schools with outdoor play activities and that is why out of 9 schools in the sample only 3 had adequate play equipment.

The study recommends that school inspectors should ensure that preschools have safe play equipment through frequent supervision of schools and play fields to check on the play equipment. This is necessary because in most schools I visited teachers were not present at the play field to check on what children played with. Therefore if school inspectors could carry out inspection of the play equipment it would ensure that children play with safe play equipment and that teachers and head teachers are forced to repair those that need repair in good time before they cause accidents during play.

The study recommends that all stake holders cooperate to help equip preschools within their locality with enough play equipment and materials necessary to promote participation in outdoor activities. Teachers, head teachers, parents and county government need to change their attitude towards play and work together to equip schools within their locality with play equipment. The county government need to be sensitized on the need to increase its funding towards provision of infrastructure in the preschools within their county. Parents on the other hand need to be sensitized on how they can avail play equipment through donations and improvisation. Head teachers should also be encouraged to buy loose play equipment such as balls, ropes, hoops and ropes which children can use during outdoor. Whereas teachers could improvise ropes, balls bean bags and tyres to encourage participation in outdoor. The stake holders need to realize that no participation can occur in their schools without the necessary outdoor play equipment.

The study recommends that DICECE officers should hold meetings and seminars to sensitize the teachers and head teachers on the types of play equipment needed on a preschool playground. This is necessary because in some schools there were play equipment which were not being used since they were not age appropriate. Head teachers need to be made aware that the fixed play equipment such as swings, slides, climbing frames, merry go round and sea saw need to be 4 feet and not above 4 feet as they will be too high for the preschool children to use. Again head teacher need to be sensitized on the need to ensure that fixed play equipment are firmly fixed and repaired promptly when need arises so that they do not become a health hazard to the children.

## **5.5 Recommendation for further research**

This study recommends that further research should be done on:

1. Effect of sources of funds for preschool programs on the development of preschool infrastructure. So that enough information could be gathered towards solving the problems related to funding at the county level.
2. A study to be conducted on the influence of teacher's attitude towards provision of play equipment on preschool children's participation in outdoor activities.
3. A comparative study on the effect of outdoor activities on children's participation in indoor activities needs to be conducted in order to sensitize preschool stakeholders of the importance of play to learning.

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## APPENDICES

### APPENDIX 1

#### QUESTIONNAIRE FOR PRE SCHOOL HEAD TEACHER

Dear Sir/Madam

I am a University of Nairobi student conducting a research on effect of play equipment on preschool children's participation in outdoor activities in Suba East division, Migori County. The following questionnaire has two sections A and B designed to gather information to fulfil the purpose of this study. Kindly note that the information collected will be used only for the purpose of the study. Your response will be treated with absolute confidentiality.

#### SECTION A

1. Indicate your gender

Male ( ) Female ( )

2. How long have you been a preschool head teacher?

0-3 years ( )

4-6 years ( )

7-9 years ( )

10 and above ( )

3. Indicate your highest level of education

KCPE/CPE ( )

KCSE/KCE ( )

Diploma in ECE ( )

B.ED in ECE ( )

Masters in ECE ( )

Others ( )

4. What is the total number of children in your school?

.....

5. What is the category of your school?

Public ( )

Private ( )

Religious sponsored ( )

6. When was your school established?.....

**SECTION B**

1. Indicate the types of play equipment found in your school

.....  
.....

2. What is the source of the play equipment in your school?

.....  
.....

3. What is your role in provision of play equipment for outdoor play activities?

.....  
.....

4. Explain how you ensure safety of play equipment used in your school

.....  
.....

5. Indicate what you do when children are playing during outdoor activities

.....  
.....

6. Do you consider play equipment important in promoting of children's participation in outdoor play activities?

Yes ( )      No ( )

Explain your reason for the answer above

.....

.....

## APPENDIX II

### QUESTIONNAIRE FOR PRESCHOOL TEACHER

Dear Sir/Madam

I am a University of Nairobi student conducting a research on effect of play equipment on preschool children's participation in outdoor play activities in Suba East Division, Migori, county. The following questionnaire has two section A and B designed to collect data to fulfil the purpose of this study. Kindly note that the information collected will be used only for the purpose of the study. Your response will be treated with absolute confidentiality.

#### Section A

1) Indicate your gender

Male (    )      female (    )

2) Indicate your age bracket

Below 25 years (    )

25-35 years (    )

36-45 years (    )

46-55 years (    )

3) Indicate your highest academic qualification KCPE/CPE

KCSE/KCE (    )

Certificate in ECE (    )

Diploma in ECE (    )

B.ED in ECE (    )

Masters in ECE (    )

Others specify .....

4) How long have you been an ECE teacher?

5 years and below (     ) )

6-10 years           (     ) )

11-15 years         (     ) )

16 and above       (     ) )

5) What is the category of your school?

Private   (     )       public (     )   Religious sponsored (     ) )

**SECTION B**

1) Indicate whether your school has necessary play equipment

.....  
.....

2) Is the play equipment adequate for use in outdoor play activities?

Yes (     )       No (     ) )

Explain your answer above.....

3) What role do you play in availing the play equipment for children in your school?

.....  
.....

4) Indicate the types of play equipment found in your school .....

.....  
.....



5) Which outdoor play activities do children like engaging in?

.....  
.....

6) Which play equipment do children like using during outdoor play activities?.....

.....

7) Play equipment impacted on the participation of preschool children in outdoor activities?

- a) Highly agree ( )
- b) Agree ( )
- c) Undecided ( )
- d) Disagree ( )
- e) Highly Disagree ( )

8) In your opinion, how do developmentally appropriate play equipment affect the participation of children in outdoor activities?.....

.....

9) How do you ensure the safety of play equipment and materials for children's outdoor activities?.....

.....

10) How do the safety of play equipment and materials influence children's participation in outdoor activities? .....

.....

11) What challenges do you encounter in maintenance and inspection of play equipment?.....  
 .....

12) Who is responsible for supervising children during outdoor activities?

Head teacher ( )                      play supervisor ( )

Class teacher ( )                      care taker ( )

13) What do you do when children are playing during outdoor activities?  
 .....

14) What is your role in ensuring adequate play equipment for use in outdoor activities?.....  
 .....

15) In your opinion, how does provision of play equipment affect children's participation in outdoor play activities? .....  
 .....

16) Kindly confirm your level of agreement with the following attributes as related to the effect of play equipment on preschool children's participation in outdoor activities.

HA-Highly Agree A-Agree U-undecided DA- Disagree HD-Highly disagree

Availability of play equipment promotes participation of children in outdoor activities	HA	A	U	DA	HD
Our school has adequate play equipment that promotes participation of children in outdoor through manipulation					
Different types of play equipment have impact on the participation of children in outdoor activities					
Safety of play equipment greatly impact on the participation of children in outdoor activities.					
Teacher attitude towards provision of play equipment has had an impact on the participation of children in outdoor activities.					

17) To what extent has the availability of play equipment impacted on the participation of children in outdoor play activities?

High degree ( )

Medium degree ( )

Low degree ( )

18) To what extent have the types of play equipment influenced children's participation in outdoor play activity?

High degree ( )

Medium degree ( )

Low degree ( )

## APPENDIX III

### INTERVIEW SCHEDULES FOR PRESCHOOL TEACHERS

#### SECTION A

1) Gender of the teacher

Male (            )      female (        )

2) Age bracket of the teacher

Below 25 years      (        )

25-35 years         (        )

36-45 years         (        )

46-55 years         (        )

3) Academic qualification of the teacher

KCPE/CPE      (        )

KCSE /KCE      (        )

Certificate in ECE (        )

Diploma            (        )

Degree in ECE     (        )

Others .....

4) Teaching experience of the teacher

5 years and below    (        )

6-10 years            (        )

11-15 years           (        )

16 and above         (        )

5) What is the category of your school?

Private (      )                      public (      )

Religious sponsored (      )

**SECTION B**

1) What play equipment are available in your school?

.....  
.....

2) Are the play equipment adequate for use in outdoor play activities?

.....  
.....

3) What role do you play in availing play equipment in your school?

.....  
.....

4) What do you do when children are playing during outdoor activities?

.....  
.....

5) What safety measures have you put in place regarding play equipment?

.....  
.....

6) Do you think safety of play equipment has influence on children's participation in outdoor activities?

.....  
.....

7) What challenges do you encounter in ensuring safety of play equipment?

.....  
.....

8) Do you consider play equipment as being useful in promoting participation by children in outdoor activities?

.....  
.....

**APPENDIX IV**

**INTERVIEW SCHEDULE FOR PRESCHOOL CHILDREN**

1) Do you have play equipment in your school?

Yes ( ) No ( )

b) Which play equipment and materials do you use while playing during outdoor activities?.....

c) Which play equipment do you find much interesting to use in outdoor activities at your school?.....

ii) Give your reason for the answer above.....

d) What outdoor play activities do you like engaging in at school?.....  
.....

2) Are the play equipment adequate for all children to use during outdoor?

Yes ( ) No ( )

3) Who provides you with the play materials you use at school?

Teacher ( ) parents ( )

School buys ( ) own initiative ( )

4) Do you find the play equipment attractive to use?

a) Attractive ( )

b) Not attractive ( )

5) Who takes you for outdoor play activities?.....

## APPENDIX V

### OBSERVATION SCHEDULE

Observation schedule for the effect of play equipment on preschool children's participation in outdoor activities in Suba East division, Migori county.

#### PART A: SCHOOL DETAILS

1) Type of school

Private ( )

Public ( )

Religious sponsored ( )

2) Location of the school

Urban ( ) rural ( )

3) Enrolment

No. of girls ( ) No of boys ( )

4) Teachers establishment

Males ( ) female ( )

#### PART B: PLAY EQUIPMENT AND CHILDREN'S PARTICIPATION IN OUTDOOR

Enter data by ticking and indicating the number of children participating according to the level of participation given.



**(1)Availability of play equipment**

Play equipment	Age appropriate		Attractive		Safe		Outdoor activities	Level of participation		
	Yes	No	Yes	No	Yes	No		Excellent	Good	Adequate
								20-40	10-20	1-10

**2) Types of play equipment**

Types of play equipment	Available	Not available	Outdoor play activities	Level of participation		
				Excellent	Good	Satisfactory
				20-40	10-20	1-10

**3) Safety of play equipment**

Play equipment	Firmly fixed	Loosely fixed	Smooth ends	Sharp parts	Non toxic	Toxic (painted)	Outdoor activities	Level of participation		
								High	Medium	Low
								20-40	10-20	1-10

## APPENDIX VI

### BUDGET FOR THE STUDY

ITEM	ESTIMATED COST (SHS)
1) Typing and photocopying proposal	5000
b.) Photocopying questionnaires and interview schedules	1500
2) Stationary	
a) Foolscap papers	
b) Pens	200
c) Computer diskettes	50
d) Flash disk	200
3) Travelling costs	2000
a) To pre-test questionnaires	
b) Administering questionnaires	500
c) Consulting supervisors	4000
4) Computer analysis costs	8000
a) Data processing	
5) Binding costs	6000
a) Binding proposal	
b) Binding the project	1000
6) Lunch and refreshment	2000
Lunch	
Refreshment	1000
	500
<b>TOTAL</b>	<b>31,950</b>

## APPENDIX VII

### TIME FRAME FOR THE STUDY

Activity	2014		2015					
	Nov	Dec	April	April	May	June	July	August
Submission of topics								
Allocation of supervisors and proposal writing								
Submission of proposal								
Defence at department level and correction								
Administration of instruments								
Data analysis								
Report writing								
Submission of project								