



Teacher Support and School Environment Factors Influencing Children's Outdoor Play in Early Childhood Curriculum in Pre-schools in Kenya

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Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/JSRR/2017/33594

Editor(s):

(1) Kleopatra Nikolopoulou, Secondary Science Teacher and School of Education-University of Athens, Greece.

Reviewers:

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Complete Peer review History: <http://www.sciencedomain.org/review-history/19236>

Original Research Article

Received 22nd April 2017

Accepted 22nd May 2017

Published 29th May 2017

ABSTRACT

Teacher support and school environment are central in the provision of play in early childhood education. This paper is a report of a study that was carried out in the months of February and March 2016 on teacher support and school environment factors influencing children's outdoor play in early childhood curriculum in pre-schools in Kenya. The study area was in Wareng Sub-County in Uasin Gishu County in Kenya. The research objectives were to find out the teacher support; and school environment factors influencing children's outdoor play in early childhood curriculum. The study was guided by Bronfenbrenner's ecological theory and adopted a mixed methods research methodology with a descriptive research design. The target population was all the teachers in the pre-schools in the area. A total of 4 private and 17 public pre-schools were selected to participate in the study through stratified and simple random sampling methods. The sample constituted 42 pre-school teachers selected through simple random sampling method. The research instruments used were questionnaires for teachers, observation check lists and photo voice techniques. The findings revealed that teachers provided minimal support to children's outdoor play due to heavy workloads, limited time and demotivation. School environment factors such as inadequacy of and poor maintenance of materials; and safety issues affected children's outdoor play. The study

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recommended the need to strengthen teacher support in children's outdoor play through in-service training of teachers, improved teacher: pupil ratio; and improved teacher remunerations. Other recommendations included the need to enhance play materials' acquisition and maintenance; and that the play environments should be carefully planned and maintained. This study will inform curriculum implementation policies on early childhood education in Kenya and other parts of the world.

Keywords: Early childhood education; play; teacher support; play materials; play resources; environment.

1. INTRODUCTION

This paper is a report of a study that was carried out on teacher support and school environment factors influencing children's outdoor play in early childhood curriculum in pre-schools in Kenya in the months of February and March 2016. The study area was in Wareng sub County in Uasin Gishu County in Kenya. For the purposes of clarity, it's important to define three key terms in this study: Early childhood education; curriculum and play. Early childhood education encompasses the curriculum programs and settings that serve young children from birth to eight years of life [1,2]. According to Jackman [2] the term curriculum in relation to early childhood education is a multi-leveled process that encompasses what happens in an early education classroom each day, reflecting the philosophy, goals and objectives of the early childhood program. On the other hand, play is an activity that is freely chosen, process oriented, initiated and controlled by children and enjoyable [2,3].

The motivation to do this study was centered on the significance of play in early childhood education. Play is the primary vehicle for children's learning and socialization [1,4,3]. We also find that children spend so much of their time in schools therefore making schools a good setting for promoting physical activities in their young lives [5,6]. However, various trends in schools have currently deprived children this important component of their lives. These trends include minimal opportunities to natural environments, priority to academic skills, limited outdoor spaces and increased teacher workloads [7,2,4,8].

1.1 Purpose of the study

The purpose of the study was to find out teacher support and school environment factors influencing children's outdoor play in early childhood curriculum in pre-schools in Kenya.

1.2 Research Objectives

The research objectives were to find out:

- (i) Teacher support factors influencing children's outdoor play in early childhood curriculum; and
- (ii) School environment factors influencing children's outdoor play in early childhood curriculum.

1.3 Statement of the Problem

Interest in early childhood education is constantly increasing [9]. Of particular importance in early childhood education is the school setting. Young children gain a lot cognitively, emotionally, physically and socially from being in a quality school setting [10]. The skills gained in these years predict their later functioning in all domains of child development [11,3,10]. One of the significant activities in early childhood education and which has a great implication in their later lives is play. The benefits of play in early childhood education cannot be overemphasized. Denying children play can be equated to denying them food. Play stimulates children's holistic development in the four major areas of child development: Cognitive, physical, social and emotional development. Without play, childhood would be empty, meaningless, boring and incomplete. Play is the primary mode of learning in early childhood [7,11,12,3]. Play gives children the opportunity to create, invent, discover and learn about their world. It provides joy and understanding of themselves and others [2,11].

The drive to do this research stemmed from various issues. First, was the significance of play in early childhood education as discussed in the preceding sections of this paper. Second, were the researcher's experiences as a teacher educator in a Teacher Training College and at the University for close to fifteen years. During teaching practice sessions, the researcher noted that some pre-schools were squeezed in limited

spaces and that some schools had minimal materials for play. Second, until the year 2014, pre-schools in Kenya were staffed by teachers employed and paid by Parents Associations. In most schools, the teachers were poorly paid and in some cases untrained. This posed a challenge on adequacy of funds as schools require funds to purchase or put up the required facilities and resources [13]. In the year 2014, pre-school teachers in Kenya were hired by the county governments contrary to the constitution [14,15]. We note that the mandate to recruit teachers in Kenya rests with the Teachers' Service Commission (TSC) and as a result the Kenya National Union of Teachers (KNUT) sought court redress over the same [14]. Consequently, it was ruled out that the TSC would register all pre-school teachers [16]. In addition, complains have been aired that pre-school teachers in Kenya are under paid; that most pre-schools are understaffed; and that most pre-schools lack important resources and facilities [17,18,19].

It was out of these diverse reasons that the researcher set out to investigate teacher support and school environment factors influencing children's outdoor play in early childhood education in pre-schools in Kenya. Children spend most of their time in schools and schools provide an opportunity for active play to children who may have limited time for play at home or in their community [5,6]. Teachers are the key curriculum implementers and their support in learning activities is vital. On the other hand, the school environment is the setting of the learning experiences provided in schools. Teachers and learners interact in the school environment for effective learning. The environment can thus enhance or inhibit the implementation of school programs.

1.4 Justification of the Study

This study investigated teacher support and school environment factors influencing children's outdoor play in early childhood curriculum in pre-schools in Kenya. The study was justified by the significance of play in children's holistic development; the role of the teacher; and the school environment in the provision of play in early childhood education. The study shed light on important teacher support and school environment factors inhibiting the provision of outdoor play in pre-schools in Kenya. This study will inform curriculum implementation policies on early childhood education in Kenya and other parts of the world.

1.5 Theoretical Framework

This study adopted Bronfenbrenner's ecological theory [20]. Bronfenbrenner believes that child development can be explained through the influence of the environment. He proposes that there are multiple environmental systems that form systems around the child. The theory supports the influences that the child receives from the environment that can either support or inhibit holistic development. In this study are the roles of the teacher and school environment in supporting children's outdoor play. The child is at the center of the systems. In this theory, Bronfenbrenner proposes five interrelating environmental systems that include:

- (i) **The micro-system:** This includes any settings in which children have direct experiences such as the influences from interactions with parents, family, peers, child care, schools, neighborhood and religious groups. This study was an investigation of teacher support and school environment factors influencing children's outdoor play in early childhood education in pre-schools in Kenya. Both teacher support and school environmental factors fall under the micro-system.
- (ii) **The meso-system:** These are the linkages and interactions between micro-systems such as parent and teacher relationships.
- (iii) **The exo-system:** This includes the social settings that do not influence children directly but affect their micro-systems such as influences from parents' work settings.
- (iv) **The macro-system-** This is the larger cultural socio-economic background such as culture, customs and values of the society.
- (v) **The chrono-system:** These are the environmental influences and events that influence children over lifetime such as technology.

In this study, Bronfenbrenner's *micro-system* was the major focus on teacher support and school environment factors influencing children's outdoor play. Teacher support was measured using initiatives by teachers such as:

- (i) Teacher training in early childhood education.
- (ii) Playing with children
- (iii) Demonstrating new games
- (iv) Arranging the play environment

- (v) Observing children as they play
- (vi) Taking charge of emergencies and accidents
- (vii) Settling disputes between and among the pupils
- (viii) Provision of required materials.

Various school environment factors were investigated and included:

- (i) The availability and adequacy of play materials and resources such as open space, swings, slides, tyres, balls, ropes, toys, natural features (trees/grass), water, sand, and play houses.
- (ii) Children's safety in the environment.
- (iii) The ability of the environment to allow adequate exploration by the children during outdoor play times.
- (iv) Maintenance of materials and resources.
- (v) The ability of the outdoor environment to allow the children to enjoy active, engaged, meaningful learning.
- (vi) Availability of developmentally appropriate materials.
- (vii) The benefit of the children from the environment in enjoying warm interactions amongst themselves during outdoor play.
- (viii) The benefit of the children from the environment in enjoying warm interactions with the teachers during outdoor play.
- (ix) The ability of the school environment to provide a home away from home.

The teacher support and school environment challenges that teachers faced in the provision of children's outdoor play were also sought.

2. LITERATURE REVIEW

This section is a discussion of literature review in relation to the research topic and objectives. The literature review covers various sections: The goals of early childhood education; the role of the teacher in children's play; and the role of the school environment in children's play.

2.1 The Goals of Early Childhood Education

Early childhood is an important phase in children's lives. Early childhood education forms the foundation of all other levels of education and generally the future of the child [21,22]. Early childhood experiences have profound effects in children's later lives [21,2,23,4,22]. As Follari [4]

puts it; "There's no more influential period of life than the first eight years". Children in early childhood require a firm foundation in order to develop their innate potentials as individuals [24]. Early childhood period is the time when children develop basic values, attitudes, skills, behaviors and habits which will be long lasting [22,10].

Early childhood programs should focus on children's holistic development in the four domains of child development: Physical, cognitive, social and emotional developments. This points out at the role of play in child development as it enhances the holistic development in the four domains [7,12,2,3,11]. Play gives children a chance to build active, healthy bodies and to develop their decision making, negotiating, thinking and motor skills as well as their emotional well-being [5,10]. Outdoor play enables children's brains to process information after the indoor instruction [6].

Quality early childhood programs create improved life outcomes [10]. On the other hand, quality early childhood programs have to focus on teacher support and school environment. This is especially because schools are currently receiving children with deficiencies in various needs as a result of socio-economic changes in the world that have pushed parents to spend less time with their children [24].

The following are the objectives of Early Childhood Development Education (ECDE) in Kenya as stipulated in KIE, [24: x]. Early Childhood Development Education should:

1. Provide education geared towards development of the child's mental and physical capabilities.
2. Enable the child enjoy living and learning through play.
3. Develop the child's self-awareness, self-esteem and self-confidence.
4. Enable the child to develop understanding and appreciation of his/her culture and environment.
5. Foster the child's exploration skills, creativity, self-expression and discovery.
6. Identify the child with special needs and align him/her with existing services.
7. Enable the child build good habits and acquire acceptable values and behavior for effective living as an individual and a member of a group.
8. Foster the spiritual and moral growth of the child.

9. Improve the status of the child's health, care and nutritional needs, and link him/her with health services such as immunization, health check-ups and growth monitoring and promotion.
10. Enrich the child's experiences to enable him/her cope better with primary school life.
11. Develop the child's aesthetic and artistic skills.

The second objective of early childhood education in Kenya is centered on play. In addition all the other objectives cannot be adequately realized without play. This is because play stimulates the holistic development of the child in the early years. Play is the vehicle through which children acquire skills. Essa [11] says: "Play promotes mastery as children practice skills; it furthers cognitive development as thinking abilities are stretched; it involves language, encouraging new uses; it involves physical activity; it helps children work through emotions; its inventive nature makes it creative and it's often a socializing event". Papadakis et al. [9] conducted a research on "improving mathematics teaching in Kindergarten with Realistic Mathematical Education" Their findings revealed that use of the deductive approach emphasized in Realistic Mathematical Education contributed significantly to the development of mathematical concepts in young children. Play methods of teaching are based on the deductive approach and therefore, these findings support the importance of play in the teaching and learning process in early childhood education.

Due to the importance of play in the early years of a child, the curriculum for early childhood education must include play as part of the content or activity area. In addition, teachers are encouraged to use play as a teaching method because children naturally love play. As observed by Wang and Lam [25], the relationship between play, teaching and learning can never be ignored. This paper holds that play in early childhood education can be greatly influenced by teacher support and school environment factors.

2.2 Teachers' Role in Children's Play

Teachers are the key implementers of the curriculum. Their role can enhance or inhibit the implementation of learning experiences in schools. According to Follari [4] early childhood educators have profound effects on children's lives. Pre-school teachers have extra ordinary

opportunities to influence developmental outcomes in children [25]. They take diverse roles as teachers, researchers, life-long learners, care givers, family and child advocate, provocateur and play mates. Teachers perform the roles of planning; implementation and evaluation in children's play [26]. They are the main resources for school activities [27,13]. They are planners of classroom activities, role models and managers of instructional materials [27]. KIE [24] states that early childhood educators play a significant role in enhancing the provision for the needs of children for their holistic growth and development. Of importance is teachers support in children's play. Child guided or teacher supported play greatly benefits children in their holistic development. A meaningful way to form close bonds with children can be through their play.

Teachers should support children's play in a variety of ways: As *planners; observers; models; resource persons; mediators; and protectors* [2,28,3,8,4,27,26].

Teachers are the *planners* of the play environment. Wang and Lam [26] opine that planning is how the teacher frames the aims and intents of the play. Jackman [2] supports teachers' role to plan the environment, provide safety in play environments, and provide materials. As Kostelnik, et al. [28] assert, teachers should make sure children play in places comfortable enough to engage in meaningful activities. Saracho [29] argues that teachers need to design indoor and outdoor play settings that provide adequate space for desired children's play. According to Saracho [29] in order for teachers to use educational play to support their curricular, they must be aware not only of their goals but also of how they can use play resources to further support these goals. As guides in children play, teachers have to be aware of the elements that constitute children's play such as the children (players), the materials, and the play setting (space inside and outside the classroom). As planners, teachers organize the play environment for learning including space, time, resources and activities [27,26].

Teachers should *observe* children during play. By observing children, teachers can understand their behavior and evaluate activities and materials. Actually, lack of supervision greatly contributes to childhood injuries [30]. KIE [21] opines that teachers have the responsibility of interacting with the children under their care.

Teachers are *models* and children will always imitate their teachers. The teacher can thus demonstrate new games or generally encourage the children to play. During play, both the teacher and the children should play together [26].

As children engage in play, they can constantly differ and permit quarrels and disagreements. This calls for the teacher to be a *mediator*. Children need to be supported to settle disputes and maintain healthy relationships and cooperation. Children require the company of others to enjoy play.

Teachers play the role of *protectors* in children's play. They enhance the security of the children and administer first aids when need be. Teachers are thus facilitators of children's play and their support is prerequisite in the success of play experiences in early childhood education.

2.3 Play Environments that Support Children's Play

The school environment that the teacher and the learners interact can enhance or inhibit implementation of school programs. Jackman [2] defines the term environment in an early childhood setting as the conditions and surroundings affecting children and adults. According to Saracho [29], the quality of early childhood environment influences children's play. High quality play environments are conducive to academic learning and support young children's development. Children have two classrooms: Indoor and outdoor classrooms. This paper delved on children's outdoor play and how it was influenced by the school environment. High quality play environments should bear various characteristics.

First, the play environment should be *safe and healthy*. A healthy environment should be clean and well maintained [3,8,11]. According to Catron and Allen [7], in a healthy environment, children's needs are met and there are opportunities for rest and relaxation; exploration and enjoyment. Essa [11] opine that children demonstrate higher cognitive skill levels and greater social competence in schools that are safe and orderly, contain a variety of stimulating equipment and materials. A safe and pleasant school environment includes a safe neighborhood, free from traffic and environmental hazards, a fenced play area with well-maintained equipment, child-sized equipment and facilities [8]. Sandseter and Sando [30] suggest that schools require risky

management strategies because risky play can lead into injuries. A healthy environment should be attractive and pleasant too. A pleasant and attractive environment addresses all children play needs.

A healthy environment conveys to children that this is a good place to be; that people care about them, that these people are able to satisfy their desire to learn and their innate curiosity and that it is a place in which it is safe to try without fear of failure [11]. Other scholars [3,28] opine that early childhood programs require a safe and healthy environment that provides appropriate and well maintained indoor and outdoor physical environments. The environment includes facilities, equipment and materials to facilitate child and staff learning and development. A healthy environment is a respectable one in which caregivers deeply care for children [8]. Care givers do this by listening, observing and responding to children's verbal and non-verbal communications. Bakken, Brown and Downing [10] state that social skills that children exhibit their entire lives are well entrenched as they navigate their way through the school day. Peer and teacher interactions are thus pertinent in the school setting.

Second, the play environment should be *supportive* of child development and learning. Morrison [8] argues that a supportive environment means you spend time with children, pleasantly interact with them, encourage and help them. Supportive environments encourage and promote children's routine social interactions. Teachers can support children's play by playing with them, observing them, demonstrating new games, providing the required materials, settling disputes and taking charge of emergencies.

The outdoor environment should offer the children the opportunities to interact with natural features. Nature offers children with opportunities for discovery, adventure, challenge and learning about the mystery and majesty of the world [7]. The environment should take advantage of all available natural features [11].

Third, the play environment should be *carefully planned*. Catron and Allen [7:120] support a carefully planned play environment and say: "A carefully planned outdoor environment enhances children's sense of well-being, extends the level of body awareness, facilitates social interactions, promotes problem solving skills, enriches

movement vocabulary, develops perceptual motor skills, heightens respect for nature and supports creative expression”.

The play environment should be designed with children’s needs and development in mind. The environment enhances children’s self-esteem when it is designed with their needs and development in mind [11]. Once children have sufficient space to move without interfering with others they feel comfortable [28]. Such an environment allows freedom of movement, exploration, experimentation and discovery. Organization of the play environment requires attention to safety factors and the need to supervise all play areas. Teachers have the responsibility to plan and organize the play environment to enhance child development.

According to Essa [11], the outdoor area should be more than a place where children can let off steam and exercise large muscles. It should provide opportunities that enhance socialization, cognitive and language development, sensory exploration, creative expression and appreciation of nature. This requirement calls for adequate open spaces that are well maintained and safe. This is because as Catron and Allen [7] observe, children need to engage in movement to engage in the outdoor environment for instance by running and jumping. Ample outdoor space is essential to support children’s perceptual motor development and to provide a variety of creative play activities. Essa [11] observes that positive peer interaction is promoted when children are not crowded, when an ample number and variety of items are available.

Forth, the play environment should have *adequate materials and resources*. The environment for early childhood education requires availability of adequate program resources such as teaching materials, indoor and outdoor equipment [7,28]. The availability of resources and materials can greatly influence the implementation of school programs [1,13]. According to Cuffaro [31] materials are the textbooks of early childhood classrooms. They offer openings and pathways by and through which children enter the ordered knowledge of the adult world. Materials become tools with which children give form to and express their understanding of the world and the meanings they have constructed. Play grounds should be designed with equipment that promotes both quiet and active, individual and group activities.

According to Catron and Allen [7] playground materials can be classified into three broad categories according to the curricular objectives they support:

- (i) Sensory and tactile materials- they support children’s cognitive development and help children to learn many concepts as they are exposed to various sights, sounds, texture, smells tastes, outdoors such as water play, sand play, gardening area, and nature activities (trees, grass and other plants).
- (ii) Creative and dramatic play materials-The opportunities provided by these materials enhance early socialization, expression of emotions, acting out different roles, development of language and children imaginations such as play stages, pretend transportation equipment, play houses and creative art materials.
- (iii) Large motor materials- they enhance motor skill development such as motor planning ability, flexibility, agility, strength endurance, timing, sequencing and rhythm. The materials include slides and swings.

Adequate materials and resources make the play environment challenging. A challenging environment provides opportunities for children to be actively involved with other children and staff [8]. Play has to be an engaging fun for children [6]. Through the interactions in play, children learn about the world and themselves. Examples of the play materials and resources necessary for children’s outdoor play include an open space, swings, slides, tyres, balls, ropes, toys, natural features (trees/grass), water, and sand. This study investigated the availability and adequacy of play materials for children’s outdoor play in pre-schools in Kenya.

Fifth, the play environment should be *stimulating and explorative*. KIE [1] opines that a stimulating environment that includes supportive, caring and encouraging people provides good opportunities for learning and development. Children learn through senses, imitation, observation, experimenting, talking, listening, participating and doing things on their own. They are active learners. Children need a stimulating environment for a growth and development. They need an environment that has love, affection, protection, safety, care and nurturing [11, 28].

3. RESEARCH DESIGN AND METHODOLOGY

The study was carried out in Wareng Sub-county in Uasin Gishu County in Kenya. The study adopted a mixed methods research methodology with a descriptive research design. Quantitative data was collected through structured questions in the teachers' questionnaires and observation checklists; while qualitative data was gathered through open ended questions in the teachers' questionnaires and through photo voice techniques. The target population was all the teachers in the pre-schools in the area. A total of 4 private and 17 public pre-schools were selected to participate in the study through stratified and simple random sampling methods giving a total of 21 pre-schools. The sample constituted 42 pre-school teachers selected through simple random sampling method. Out of these, 8 teachers were from private pre-schools while the remaining 34 were from public pre-schools. Data analysis was done through descriptive statistics for quantitative data while qualitative data was analyzed through a discussion of emerging themes.

3.1 The Findings

This study was an investigation of teacher support and school environment factors influencing children's outdoor play. This section presents the findings that this study arrived at.

3.2 Teacher Support Factors Influencing Children's Outdoor Play

The first research objective was to find out teacher support factors influencing children's play. Teachers were asked to indicate their

highest level of training. It was evident that majority of the teachers were trained in early childhood education in which 47.6% had certificates in ECDE and 35.7% had diplomas in ECDE. It can thus be inferred that teachers had the required knowledge and skills on children's play in early childhood education.

Teachers were asked how conversant they were with the role of play in child development. Out of the 42 teachers, majority of them were conversant with the role of play in early childhood where 15 (35.7%); and 22 teachers (52.4%) said they were very conversant and conversant respectively. Only 5 teachers (11.9%) indicated that they were not conversant with the role of play in early childhood. The findings indicated that the teachers understood the significance of play in early childhood education.

Teachers were asked to indicate how often they would undertake various roles during children's play. The findings are summarized in Table 1.

From the findings in Table 1, it's evident that most teachers rarely or never undertook most of the roles in support of children's play. Most of the affected roles were playing with children, demonstration of new games, arranging the play environment, observing children as they play and provision of the required materials. The roles that most of the teachers undertook in most cases included taking charge of emergencies and accidents and settling disputes between and among the children during play. These findings agree with the study by Hyndman, Stanley, Boshoff and Dollman cited in Hyndman et al. [5] that established teacher support as a positive correlate to active play on school play-grounds. In support of these findings, Wang and Lami [26]

Table 1. Teachers' responses on the frequency at which they undertook various roles during children's outdoor play

Roles	Very often	Often	Rarely	Never	Totals
(i) Playing with children	2 (4.8)	5 (11.9)	30 (71.4)	5 (11.9)	42 (100)
(ii) Demonstrating new games	4 (9.5)	10 (23.8)	17 (40.5)	11 (26.2)	42 (100)
(iii) Arranging the play environment	0 (0.0)	9 (21.4)	24 (57.1)	9 (21.4)	42 (100)
(iv) Observing children as they play	6 (14.3)	20 (47.6)	11 (26.2)	5 (11.9)	42 (100)
(v) Taking charge of emergencies and accidents	36 (85.7)	6 (14.3)	0 (0.0)	0 (0.0)	42 (100)
(vi) Settling disputes between and among the pupils	34 (81.0)	8 (19.0)	0 (0.0)	0 (0.0)	42 (100)
(vii) Provision of required materials	7 (16.7)	14 (33.3)	21 (50)	0 (0.0)	42 (100)

(N=42; the percentage frequencies are indicated in brackets and have been rounded up to 1 decimal place; the percentage totals have been rounded to a whole number)

observe that teachers can support children’s play by using such strategies as playing along with children, introducing ideas, demonstrating skills, evaluation activities and assessing outcomes.

The analysis of the open ended questions revealed various challenges that affected teachers in undertaking their roles during children’s play.

The first challenge that teachers indicated was heavy work load. The pupil-teacher ratio in most cases in the public schools was beyond 1:40. The recommended one is 1:15. The teachers therefore preferred to use the outdoor play time for teacher preparation and for attending to children’s work books. However, in most of the private schools that were visited, there were two teachers in classes of beyond 25 children. This reduced their work load and gave them ample time to plan and engage in outdoor play.

The second challenge was demotivation of the teachers as a result of poor remunerations vis a vis the heavy workloads. Most of the teachers claimed that they were dissatisfied with their salaries. The overall success of school activities depends on teacher motivation [27,13]. These findings concur with the findings of a study by Oluvotimi et al. [27] on motivational factors and teachers commitment in public secondary schools in Mbale Municipality. They found out that there was a moderate significant relationship between teacher motivation and commitment to work.

The third challenge was inadequate time for both class work and outdoor play. Most public schools

run from 8.30 am up to 12.00 am. The teachers claimed that they had minimal time for both class work and outdoor work. As a result, teachers would use the time for outdoor play to attend to the children’s work books and for teacher planning and preparation. The private schools had more time as the children would remain in school up to 4 pm in most of the schools. The teachers would utilize the time for children’s rest to go through the children’s work books and plan for outdoor activities. Hyndman et al [5] observes that sometimes teachers consider active play a taxing demand on their busy day. On the other hand, Syomwene [13] observes that teacher work load vis a vis the available time can greatly influence implementation of school programs.

From the observations carried out by the researcher coupled by the photographs taken, teacher companion during children’s play was found to be stronger in the private pre-schools compared to the public pre-schools. In most of the private schools visited, teachers would accompany the children in play, demonstrate new games, observe children during play and provide the required materials. However in most of the public schools, children were found playing on their own without the company of the teacher.

3.3 School Environment Factors Influencing Children’s Outdoor Play

The second research objective was to find out the school environment factors that affected children’s outdoor play. Teachers were asked to indicate the availability and adequacy of various outdoor materials and resources. The results are indicated in Table 2.

Table 2. Teachers’ responses on the availability and adequacy of materials and resources for children’s outdoor play

	Materials/ resources	Available and adequate	Available but inadequate	Not available	Totals
(i)	Open space	28 (66.7)	14 (33.3)	0 (0.0)	42 (100)
(ii)	Swings	4 (9.5)	7 (16.7)	31 (73.8)	42 (100)
(iii)	Slides	3 (7.1)	8 (19.0)	31 (73.9)	42 (100)
(iv)	Tyres	10 (23.8)	21 (50.0)	11 (26.2)	42 (100)
(v)	Balls	13 (31.0)	20 (47.6)	9 (21.4)	42 (100)
(vi)	Ropes	14 (33.3)	13 (31.0)	15 (35.7)	42 (100)
(vii)	Toys	4 (9.5)	21 (50.0)	17 (40.5)	42 (100)
(viii)	Natural features (trees/grass)	36 (85.7)	6 (14.3)	0 (0.0)	42 (100)
(ix)	Water	27 (64.3)	15 (35.7)	0 (0.0)	42 (100)
(x)	Sand	7 (16.7)	13 (31.0)	22 (52.4)	42 (100)

(N=42; the percentage frequencies are indicated in brackets and have been rounded up to 1 decimal place; the percentage totals have been rounded to a whole number)

Table 2 shows that most of the materials were available but inadequate. These were materials such as tyres, balls, ropes and toys. The materials and resources that were available and adequate in most schools were the open spaces, natural features and water as indicated by majority of the teachers. Some materials were however lacking in many of the schools such as swings, slides, and sand. From the observations made, balls were available in most of the schools though in all the public schools visited the balls were improvised. In most of the private schools however, real balls were available. Syomwene [13] warns of flaws in the implementation of school programs in cases where materials are unavailable or insufficient.

The analysis of the open ended questions in the teachers' questionnaires indicated that teachers faced the challenges of lack of and inadequacy of materials and resources for children's outdoor play. The observations by the researcher confirmed this too.

From the analysis of the open ended questions, teachers indicated lack of maintenance of the available materials as a challenge that they encountered. Majority of the teachers in the public primary schools indicated that the play grounds were not flattened for easy movements; that the few materials they had were not regularly maintained; meaning that they were in poor condition. The results from the observations confirmed this. From the observations, cases of poorly maintained materials such as swings and slides were evident in the pre-schools that were visited. Teachers also indicated that they encountered accidents due to the poorly maintained materials.

Although the data obtained from the questionnaires indicated adequate open space in most public and private pre-schools; the observations revealed that most of the private schools visited lacked adequate open space for children's play. However, most of the private schools had materials such as balls, swings, slides, tyres, ropes and toys which lacked in most public schools. As for the public schools, the open spaces were empty in most cases without any fixed materials such as swings and slides. The findings concur with a study by Sandsetter and Sando [30] on how the Norwegian society's focus on safety influenced play and activities in early Childhood Education and Care. Their findings indicated that limited outdoor space inhibited children's active play. In

another study about policy implementation and problems in pre-primary education in Nigeria, Ejiel cited in Adegbam and Adewole [22] found out that most pre-schools had space and equipment problems.

Results from observations indicated that natural features were available in both private and public pre-schools though they were more adequate in the public pre-schools than in the private pre-schools. Sand was lacking in most of the schools. Soil was available though in most cases it wasn't loose and easy to access. The children had to scoop it or dig it out.

Teachers were asked to respond to some statements to indicate their level of agreement on how their school environment supported children's play. The results are summarized in Table 3.

From the findings summarized in Table 3, the environment in most of the schools did not fully support children's play. Many of the teachers disagreed or strongly disagreed on the following facts: That their school environment was safe and healthy; that their school environment allowed adequate exploration by the children during play; that their school environment had adequate materials for children's play; that the materials were well maintained; that the school environment allowed children to enjoy active, engaged and meaningful learning; that the school environment was carefully planned, pleasant and attractive; and that the environment allowed warm interactions with the teachers during play. On other hand, many of the teachers agreed; or strongly agreed to the following statements: That their school environment had adequate space; that the environment allowed warm interactions amongst the children and that the environment provided a home away from home. These findings were an indication of challenges in children's provision of play and which would adversely affect children's development. Within the school environment, children's relationships with teachers and peers may have long term consequences for their academic motivation and achievement [25].

The observations by the researcher further confirmed the findings. It was found out that both private and public schools had fences though the fences for the private schools appeared stronger than those of the public schools. The play grounds in some of the schools were not very

Table 3. Teachers' responses on how their school environment supported children's play

Statements	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
(i) My school environment is very safe and healthy for the children during outdoor play	5 (11.9)	6 (14.3)	0 (0.0)	17 (40.5)	14 (33.3)
(ii) My school environment allows adequate exploration by the children during outdoor play times	3 (7.1)	5 (11.9)	0 (0.0)	18 (42.9)	16 (38.1)
(iii) My school environment has adequate open space for children's outdoor play and interactions.	11 (26.2)	13 (31.0)	1 (2.4)	10 (23.8)	7 (16.7)
(iv) My school environment has a variety of materials and resources for children's outdoor play.	6 (14.3)	8 (19.0)	0 (0.0)	15 (35.7)	13 (31.0)
(v) The materials and resources in my school are well maintained for children's safety during outdoor play.	3 (7.1)	6 (14.3)	0 (0.0)	14 (33.3)	19 (45.2)
(vi) My school outdoor environment allows the children to enjoy active, engaged, meaningful learning.	2 (4.8)	4 (9.5)	2 (4.8)	19 (45.2)	15 (35.8)
(viii) My school environment is carefully planned, pleasant and attractive.	2 (4.8)	5 (11.9)	0 (0.0)	18 (42.9)	17 (40.5)
(ix) My pupils enjoy warm interactions with amongst themselves during outdoor play.	14 (33.3)	12 (28.6)	1 (2.4)	9 (21.4)	6 (14.3)
(x) My pupils enjoy warm interactions with the teacher during outdoor play.	8 (19.0)	10 (23.8)	3 (7.1)	14 (33.3)	7 (16.7)
(xi) My school environment provides a home away from home	11 (26.2)	13 (31.0)	4 (9.5)	7 (16.7)	7 (16.7)

(N=42; the percentage frequencies are indicated in brackets and have been rounded up to 1 decimal place; the percentage totals have been rounded to a whole number)

safe for children. Pools of water in the play-grounds were observed in some of the schools. Some play grounds some had long grass, rubbish pits and animal waste. In one of the public schools that I visited, some domestic animals were found grazing in the play-ground. In another public school that was visited, a bore hole was observed in the play-ground whose entrance was not properly locked.

4. CONCLUSIONS

The first research objective was to investigate the teacher support factors that influenced children's outdoor play. From the findings, it was concluded that teachers provided minimal support in children's outdoor play. Most of the affected roles were playing with children, demonstration of new games, arranging the play environment, observing children as they play and provision of the required materials. Teachers pointed out at heavy workloads, demotivation

due to poor remunerations and inadequate time as some of the challenges that affected them in support of children's outdoor play. Teacher support was found to be stronger in the private pre-schools as opposed to the public pre-schools.

The second research objective was to find out the school environment factors affecting children's play. From the findings, it was concluded that most of the schools either lacked or experienced inadequacies of the required materials and resources for children's outdoor play. Poor maintenance of the available resources and materials affected the schools. In most pre-schools, the school environment affected children's play on issues to do with safety, exploration by children, active learning, careful planning, and interactions with the teachers. The school environment in the public pre-schools was more affected compared to the private pre-schools.

Consequently, the study concluded that teacher support and school environment factors influenced children's outdoor play in early childhood curriculum in Kenya.

5. RECOMMENDATIONS

From the conclusions arrived at, the study recommended the need to strengthen teacher support in children's play through in-service training of teachers, improved teacher: pupil ratio; and teacher remunerations. Another recommendation was the need to enhance play materials' acquisition and maintenance through parent, government, community, and well-wishers' support. In addition, the play environment should be carefully planned and maintained.

DISCLAIMER

Some part of this manuscript was previously presented in the following conference.

Conference name: The Association of Educational Development in Africa (AEDA)

Dates: 3rd to 5th April 2017

Location: Blue Waters Hotel in Durban, South Africa

ACKNOWLEDGEMENT

I acknowledge: (i) The management of Moi University, Kenya who granted me leave of absence to travel and attend the AEDA 2017 conference in Durban, South Africa where I presented part of this paper; and (ii) The CERM-ESA office at Moi University which funded my travel costs for the conference.

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Kenya Institute of Education (KIE). Guidelines for early childhood development in Kenya. Nairobi: KIE; 2003.
2. Jackman HL. Early education curriculum: A child's connection to the world. (4th ed.). Australia, Delmar, Cengage learning; 2009.
3. Bredekamp S. Effective practices in early childhood education: Building a foundation. Upper Saddle River: Pearson Education Inc; 2011.
4. Follari LM. Foundations and best practices in early childhood education: History, theories and approaches to learning. (2nd ed.). Boston, Pearson; 2011.
5. Hyndman B, Benson A, Telford A. Active play: Exploring the influences of play-ground activities. American Journal of Play. 2016;8(3):325-340. Available: <http://www.journalofplay.org> (Accessed: 8 May 2017)
6. Perera T, Frei S, Frei B, Bobe G. Promoting physical activity in elementary schools: Needs assessment and a pilot study of brain breaks. Journal of Education and Practice. 2015;6(15):55-64. Available: <http://www.iiste.org> (Accessed: 9 May 2017)
7. Catron CE, Allen J. Early childhood curriculum. (4th Ed.). A creative play model. Upper Saddle River. Pearson; 2008.
8. Morrison GS. Fundamentals of early childhood education. (6th ed). Boston, Pearson; 2011.
9. Papadakis S, Kalogiannakis M, Zaranis N. Improving mathematics teaching in kindergarten with realistic mathematical education. Early Childhood Journal. 2017; 45(3):367-378. DOI: 10.1007/s 10643-015-0768-4
10. Bakken L, Brown N, Downing B. Early childhood education: The long term benefits. Journal of Research in Childhood Education. 2017;31(2):255-269. Available:<http://www.tandfonline.com> (Accessed: 7 May 2017)
11. Essa EL. Introduction to early childhood education. (6th ed). Australia, Wadsworth Cengage learning; 2011.
12. National Association for the Education of Young Children (NAEYC). Developmentally appropriate practice in early childhood programs serving children from birth through Age 8. (3rd ed.); 2009. Available: <http://www.naeyc.org> (Accessed: 25 October 2013)
13. Syomwene A. Change and management of change in curriculum. In: Syomwene A. Nyandusi CM, Yungungu AM. editors. Core principles in curriculum. Eldoret: Utafiti Foundation; 2017.
14. County Focus. TSC loses ECDE teachers to county governments. Available:<http://www.educationnews.co.ke>. (Accessed: April 3, 2015)

15. Oduor A. TSC seeks sh4b for nursery teachers. In Standard Newspaper. April 10, 2014.
Available: <http://www.standardmedia.co.ke>
(Accessed: 21 May 2014)
16. Kakah M. TSC ordered to register all ECDE teachers. In: Daily Nation; 2016.
Available: <http://www.nation.co.ke>
(Accessed: 11 January 2017)
17. United Nations Educational Scientific and Cultural Organization (UNESCO). Early childhood and family policy series No. 11. In: Policy review report: Early childhood care and education in Kenya. Nairobi: UNESCO; 2005.
Available: <http://www.unesco.org>
(Accessed: 15 February 2017)
18. Kenya Projects Organization (KEPRO). Challenges facing early childhood education in Kenya; 2014.
Available: <http://www.kenpro.org>
(Accessed: 15 February 2017)
19. Kenya News Agency. Teachers' Union wants ECD staff under Commission; 2016.
Available: <http://www.kenyanewsagency.go.ke>
(Accessed: 1 December, 2016)
20. Bronfenbrenner U. Making human beings human: Bio-ecological perspectives on human development. Thousand Oaks, CA, Sage publications; 2004.
21. Kenya Institute of Education (KIE). Handbook for early childhood development education syllabus. Nairobi, KIE; 2008.
22. Adegbami A. Adewole OS. Early childhood training and education neglect and its implication on children's future achievements, national peace and development: A critical review of literature. Journal of Education and Practice. 2013;4(22):43-49.
Available: <http://www.iiste.org>
(Accessed: 11 May 2017)
23. Wortham SC. Early childhood curriculum: Developmental bases for learning and teaching. (5th ed.). Boston, Pearson; 2010.
24. Kenya Institute of Education (KIE). Diploma course in early childhood education. Nairobi, KIE; 2004.
25. Palacios N. Why teachers matter: The relationship between long-term teacher and classroom quality and children's reading achievement. Journal of Research in Childhood Education. 2017;31(2):178-198.
Available: <http://www.tandfonline.com>
(Accessed: 11 May 2017)
26. Wang X, Lam CB. An exploratory case study of an American-style, play-based curriculum in China. Journal of Research in Childhood Education. 2017;31(1):28-39.
Available: <http://www.tandfonline.com>
(Accessed: 9 May 2017)
27. Oluvotimi OJ, Asad KW, Abdulrauf A. Motivational factors and teachers commitment in public secondary schools in Mbale municipality. Journal of Education and Practice. 2015;6(15):117-122.
Available: <http://www.iiste.org>
(Accessed: 9 May 2017)
28. Kostelnik MJ, Soderman AK, Whiren AP. Developmentally appropriate curriculum: Best practices in early childhood education. (5th ed.). Boston, Pearson; 2011.
29. Saracho ON. The role of play in early childhood curriculum in Spodek B, Saracho ON. editors. Issues in early childhood curriculum. New York: Teachers College Press. 1991;86-105.
30. Sandseter EBH, Sando OJ. We don't allow children to climb trees. How a focus on safety affects Norwegian children's play in early childhood education and care settings. American Journal of play. 2016; 8(2):178-200.
Available: <http://www.journalofplay.org>
(Accessed: 9 May 2017)
31. Cuffaro HKA. View of materials as the texts of the early childhood curriculum in Spodek B, Saracho ON, editors. Issues in early childhood curriculum. New York: Teachers College Press. 1991;64-85.

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Peer-review history:

The peer review history for this paper can be accessed here:
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