
The Availability and Suitability of Outdoor Play Environment for the Physically Challenged Children in Kisumu City ECD Centres

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Abstract

Outdoor play for physically disabled children has been regarded as not only a crucial part of their developmental stage but also as important for their holistic development. In Kenya, there has been progress in mainstreaming disabled children into the general system for education and care. However, very little progress has been made to extend this practice into the provision of play and recreation facilities for these children with special needs. This study thus set to investigate the status of play environments in Early Childhood Development (ECD) centers in relation to the needs of disabled children. The main concern of the study was to establish the suitability of outdoor play environment for the physically challenged children. The suitability was gauged using four major parameters namely; provision of appropriate facilities, inclusion of the disabled in outdoor play activities and availability of supporting adults. The study was done in Kisumu city in Kenya. Kisumu city has 512 ECD centers with the majority of these being public and run by Parents Teachers Associations (PTAs). The study population comprised of all the teaching staff (head-teachers and ECD teachers) in all the ECD centers in the city. Purposive sampling was used to select 20 urban ECD centers in Kisumu city that constituted the sample. Data was collected from the selected respondents by use of interviews, an event observation schedule and observation checklist. The results showed that the facilities for outdoor play for physically disabled children in the ECD centres were inadequate. Additionally, there was a limitation in use of some of the available resources due to the unsuitability of the environment in terms of space and safety. On the bright side, all the centres had supporting adults employed specifically to support the disabled children in outdoor play activities. The study recommends that the head teachers of the ECD centres in conjunction with the Ministry of Education should plan for increase of outdoor play space and equipment for physically challenged children to enable them engage fully in outdoor play. Physically challenged children's development in outdoor play should also be enhanced by varying equipment and materials to encourage gross and fine motor development.

Keywords

Physically Challenged Children, Outdoor Play, ECD Centres, Holistic Development

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1. Introduction

Childhood play activities form a fundamental part of children's mastery of physical, social and scholarly skills (Raudsepp & Pall, 2006). Researchers have shown that play activities involve children's total self and thus balancing their mental, physical, social and emotional status (Wood &

Attfield, 2005; Miller & Almon, 2009). Additionally, scientists have discovered a strong relationship between childhood play and learning, especially in the areas of problem solving, language acquisition, literacy, numeracy and social, physical, and emotional skills (Frost *et al.*, 2008). It is thus crucial for all ECD schools to provide adequate play equipment and suitable outdoor environment the children.

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The environment for play should proffer a richness of opportunity that allows each child to exercise choice and to grow safely at their own rate (Wohlwend, 2011). This is especially important for children with disabilities because they are faced with a double exclusion – that of being a child and that of being disabled which further limits their independence and control (Farrell, 2001). A study by the United Nations Children's Fund (UNICEF) on an inclusive playground, found that children with disabilities played differently from other children on the same facilities (UNICEF, 2005). Children with disabilities have to learn how to use the play facilities even when they have the access. They usually have little understanding of how to play in their disabled situation and have to learn progressively because they cannot simply imitate the play of other normal children. Because a disabled child needs more time to learn the normal play process, the facility needs not only to provide the necessary facilities but also to retain the interest of supporting adults who can help the children in the learning process.

In Kenya, there has been progress in mainstreaming disabled children into the general system for education and care (Bines & Lei, 2011; UNICEF, 2005). However, very little progress has been made to extend this practice into the provision of play and recreation facilities for these children with special needs. These children need help not only to learn their individual capacity to use the available play facilities but also in developing new ways of playing.

This study thus set to investigate the status of play environments in Early Childhood Development (ECD) centers in relation to the needs of disabled children. The main concern of the study was to establish the suitability of outdoor play environment for the physically challenged children. The study was guided by Brofenbrenner's Ecological theory (2000) which has been recently renamed to the Bioecological model.

HO₁ The outdoor play environments in the sampled ECD centres in the study area are not suitable for the physically challenged children.

2. Methodology

The study was done in Kisumu city in Kenya. It is a port city in Kisumu County, Kenya. It has an elevation of 1,131 m, with a population of 409,928 according to 2009 census (Linard *et al.*, 2012). It is the third largest city in Kenya after Nairobi and Mombasa. Kisumu city has 512 ECD centers with the majority of these being public and run by Parents Teachers Associations (PTAs). Kisumu city was selected because it is expanding very rapidly and there was need to establish whether the expansion had any impact on

availability of children's environment and play in the ECD centers.

The study used phenomenology design. The research design seeks the individual's perceptions and meanings of a phenomenon or experience (Creswell, 2013). The study population comprised of all the teaching staff (head-teachers and ECD teachers) in all the ECD centers in the city. Heads of ECD centers were selected because they plan for the resources to be used by children in the center. On the other hand the teachers were selected because they are involved in the preparation of activities for children and in the organization of outdoor play space.

From the study population, purposive sampling was used to select all the 20 urban ECD centers in Kisumu city and children who constituted the sample. From the 20 ECD centres, data was collected from the head teacher and two teachers of each centre thus comprising a sample size of 20 headteachers and 40 teachers. The selected ECD centers provided information on the nature of play environments in relation to the disabled children's needs. These centers were identified with the help of District Centre for Early Childhood Education (DICECE) Officers. The number of ECD centers that formed sample were 20 since it is typical in qualitative research to study a few individuals or cases.

Data was collected from the selected respondents by use of interviews, an event observation schedule and observation checklist. The data that was collected was mainly qualitative. In this case, head teachers and ECD teachers were interviewed to elicit information pertaining the nature of the outdoor playgrounds in their centers in relation to the needs of disabled children. For observation purposes, a checklist was used to obtain information on the availability of specialized equipment, which offers an opportunity for physical development of disabled children in outdoor play.

The data collected was both qualitative and quantitative and thus was analyzed descriptively and inferentially. Data from the various instruments was described and interpreted from the researcher's perspective and compared with other researchers' views which either supported or contradicted the presentation of the data.

3. Results and Discussion

The suitability of the outdoor play environment for the physically challenged children in the ECD centers was gauged using four major parameters namely; provision of appropriate facilities, inclusion of the disabled in outdoor play activities and availability of supporting adults.

3.1. Results of Checklist for Outdoor Play Equipment and Materials for Physically Challenged

The study sought to determine the availability, sufficiency and quality of the following equipment for outdoor play for the physically challenged children in the sampled ECD centres; swings, slides, merry-go-rounds, wet sand, blocks and accustomed seesaw.

3.1.1. Availability and Safety of Swings

Information derived from the checklist showed that 15 centres (75%) had swings suitable for the disabled children and five did not have. The information contradicts the results derived from the head teacher’s interviews which indicated that eighteen (90%) of them budgeted for swings. It is therefore evident that the head teachers may budget for the equipment but they don’t actually purchase all of them. The swings were inadequate in all the ECD centers going by the recommended ratio by the Ministry of Education that one equipment should serve ten children. Figure 1 below shows the proportion of centres with swings suitable for the disabled children.

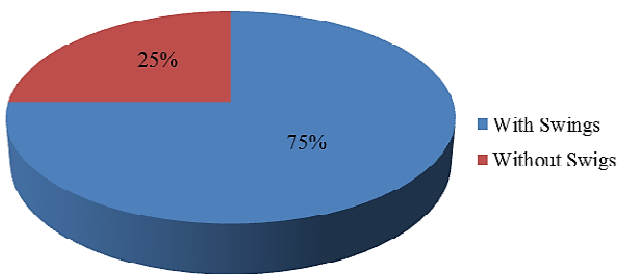


Figure 1. Availability of Swings in the Sampled Centres.

According to Lewis (2002), play equipment for disabled children should be of the child’s size to avoid unnecessary difficulty when in use. They should also be fixed firmly to avoid accidents. According to the findings, twelve centres (60%) had swings that were sturdy and firmly fixed while three centres (30%) had swings that were dangerously shaky. The swings in ten ECD centres were of child height for easy reachability and ten ECD centers had swings that were quite high for children’s use. The ropes that connected the frames and seats were smooth and strong in eleven ECD centres while in ten ECD centres the materials utilized to connect the seats and the frames were rough and dirty.

3.1.2. Availability and Adequacy of Swings

Slides were found in nine centres (45%) and were missing in the eleven centres (55%). In the nine ECD centres where the slides were available, it is only in one that the slides were adequate. The eight ECD centres had inadequate slides. Sliding is one activity that many disabled children enjoy and

lack of slides deprives them of the happiness and the physical development skills offered by slides. In two of the ECD centres the landing ground around the slides was covered with saw dust. The other seven ECD centres placed the slides on a hard ground that could easily cause some harm on children’s bodies. Figure 2 shows the availability of slides in the centres.

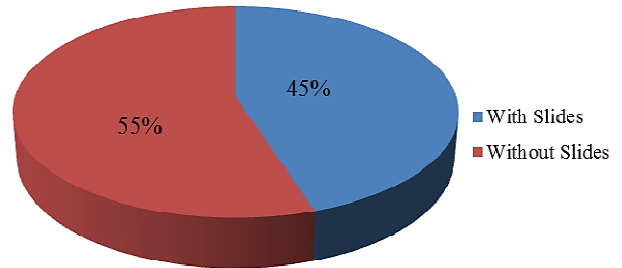


Figure 2. Availability of Slides for Physically Challenged Children.

3.1.3. Availability, Adequacy and Safety of Merry-Go-Rounds

Merry go rounds were available in only four centres (20%) and were unavailable in the rest sixteen centres (80%). In three centres the merry go rounds were adequate as each could accommodate six children at a go. It is only in one ECD centre that the merry go round was not adequate to serve the number of the children in the centre.

In terms of safety, it was observed that the materials used to make the merry go round were quite weak in two ECD centers. Wood had been used instead of metal which is strong and cannot easily break. In the same ECD centres, the rotating points at the centre of merry go round were not securely fixed. Figure 3 below shows the availability of merry-go-rounds.

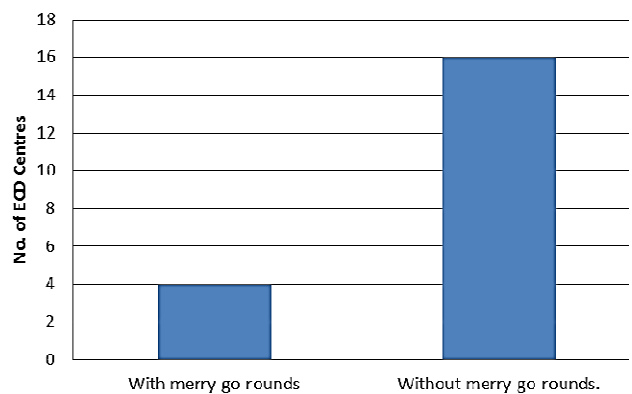


Figure 3. Availability of merry-go-rounds.

3.1.4. Availability, Adequacy and Safety of See-Saws

Only six centres (30%) provided see-saws for accustomed for disabled children’s outdoor play while fourteen (70%) of

them did not have. Children enjoy working in pairs and the sensation of moving up and down and ECD centers that lack see-saws deny children the opportunity to have fun. In addition to training children to work with others, see-saws also improve children’s balance and co-ordination skills. In twelve ECD centres, the see- saw were adequate compared to four ECD centers where they were not adequate. Three ECD centres had safe see-saws that the sitting area had been enclosed to prevent children from falling. The remaining three ECD centres had unsafe see-saws which had unenclosed sitting areas and the surrounding ground was rough and wet.

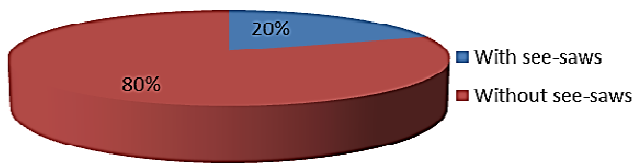


Figure 4. Availability of seesaws.

3.1.5. Availability and Adequacy of Sand and Soil

Soil was available in all the 20 centres all although in eight ECD centers, the soil was very little and was hardly enough for children to scoop and play with it. When Children play with soil, they touch and feel the texture, observe the small animals like worms and insects found in the soil. This provides a good chance for children to be exposed to science experiences that they hear about during indoor science activity. They can also mix the soil with water to make modeling clay and improve their creativity. Further, children use soil symbolically in fantasy play to represent maize meal. Fantasy play develops children’s cognitive ability as they make imagination.

There was sand in only four centers (20%) and there was none in rest sixteen centres (80%). One ECD centre out of the four had well-made and protected sand trays. The other three had sand that was heaped in an open place. The presence of sand in an ECD centres enables children to be creative by making castles and tunnels. Sand is also good for children to engage in filling and emptying activities. Filling and emptying exposes children to other mathematical concept namely; capacity, measurement and volume. Again as stated earlier although children will be playing, they will be practically experiencing mathematical activities.

3.1.6. Availability and Adequacy of Sand and Soil

Blocks were available in one ECD center and missing in nineteen ECD centers. The availability of blocks is enhances children’s cognitive development in several ways. One is that they strengthen perception of space such as under below,

above, inside and outside. Secondly, children develop concepts of big, little, more than, less than, equal to, longer and shorter. Thirdly, is the fact that in the process of block play children become aware of whole part relationships. Fourthly, children can classify the blocks according to shapes, sizes, colours and types. All these actions performed by children as they manipulate blocks. These are activities that enhance mathematical concept in Early Childhood Education.

3.2. Inclusion of Physically Challenged Children in Outdoor Play

In order to gather information on inclusion of physically challenged children in the provision of outdoor play environment, a checklist on the accessibility, adaptation and safety of materials and play environment was developed.

3.2.1. Availability of Well-Defined Pathways

In seven ECD centres (35%) there were well defined pathways that led to various play areas, while in thirteen centres (65%) there were no paths and children used any point to get to the play environment. In the seven ECD centres that had pathways, it is only in one that c a wheelchair could be accommodated. The other six ECD centres had pathways that were very narrow. Two of the seven ECD centres had pathways that easily facilitated use of other movement support aids like crutches and walking sticks. In four ECD centres the pathways had stone chips and soil that did not support easy movement of those using crutches and walking sticks.

3.2.2. Availability of Well-Organized Play Area

Only 2 ECD centres (10%) had organized the play area in such a way that there were close to each other. Play equipment were within reach of each other and also the open play space was next to the equipment. In this case physically challenged children did not have to strain by covering a long distance to get to wherever they wished to play. However in eighteen ECD centres, the case was different since play equipment were scattered all over the outdoor play environment. In and other forms of play was far from where connections from one play area to another was only distinct in one ECD centre. There were no connecting paths between play areas in eighteen ECD centres.

3.2.3. Adaptability of Play Materials and Equipment

In analyzing the adaptability of play materials and equipment, it was found that equipment in nine centres (45%) was of low height and could easily be reached and used by children with physical challenges. In eleven centres (55%) the equipment were high and had no provision for additional support to

enable children with physical challenges to use the equipment. None of the ECD centres had equipment that could be adjusted to suit the needs of children with physical challenges. Likewise there were no ramps in any part of the centre in all the twenty ECD centres in the study.

Three out of the twenty centers (60%) had movable containers which children could use for water and sand play. Seventeen centres did not have any containers. This means that the children with physical challenges either had to struggle to reach the water and sand area or miss out on water and sand play altogether. Movable sand trays were unavailable in all the ECD. A few potted plants that were located outside the classes were available in three ECD centres. The play materials in the ECD centres were assessed to find out whether they were light enough to be manipulated by children with physical challenges. Light balls and bean bags were available in three centers in comparison to seventeen which had big and heavy balls, heavy blocks and large improvised toy cars and balls.

3.2.4. Availability of Smooth and Properly Leveled Ground

The safety of children with physical challenges was derived from the results. From the checklist it was indicated that only two centres (10%) had smooth and properly leveled ground while eighteen (90%) that had rough and irregular play environment. The grass in the two centers was mowed and had no visible depressions. The eighteen ECD centers' play environment had stones, depressions, holes, sticks and discarded plastic tins and paper bags. In the seven ECD centres that had defined pathways, three had pathways that were clear. There were no obstacles that could hinder movement of children with physical challenges.

On the other hand, four of ECD centres had pathways that did not facilitate easy movement for children with physical challenges and who may use wheelchairs, crutches or walking sticks. The pathways had stones, sticks plastic papers, leaves, plants, mud and weeds.

3.3. Play Opportunities for Physically Challenged Children in Outdoor Play

When asked how they catered for children with physical challenges in outdoor play, eight teachers said that they ensured that the playground as well leveled to allow movement without difficulty. Three teachers mentioned that the outdoor play area had designated paths that led to play equipment and other places where children congregated to engage in play activities. The rest of the teachers explained that they never had children with physical challenges in mind whenever they are organizing for outdoor play and environment. One of the teachers explained:

“In our ECD center we hardly have children with physical disability. Children who are physically challenged are taken to special schools. In case we get a child with mild disability then they learn to adjust or stay away when the other children are playing outdoors”.

3.4. Availability of Supporting Adults

Because a disabled child needs more time to learn the normal play process, the facility needs not only to provide the necessary facilities but also to retain a supporting adult/s who can help the children in the playing activities. According to the findings, all the centres had at least two supporting adults specifically employed to help disabled children in outdoor play activities. Compared to the number of disabled children in the sampled centres, the number of supporting adults was adequate to cater for the physically challenged children.

4. Conclusion

Generally it was observed that the facilities for outdoor play for physically disabled children in the ECD centres were inadequate. Moreover, there was a limitation in use of some of the available resources due to the unsuitability of the environment in terms of space and safety. Consequently, the null hypothesis was accepted.

On the bright side, all the centres had supporting adults employed specifically to support the disabled children in outdoor play activities. Nonetheless, the virtues of sharing and cooperating are likely to be missed out as many of the disabled children in the sampled centres since in most centres, they lacked the opportunity to play with their peers.

Recommendations

- i) Head teachers of the ECD centres in conjunction with the Ministry of Education should plan for increase of outdoor play space and equipment for physically challenged children to enable them engage fully in outdoor play.
- ii) Physically challenged children's development in outdoor play should be enhanced by varying equipment and materials to encourage gross and fine motor development.
- iii) Head teachers should design the outdoor play environment to ensure that it is safe and conducive enough to cater for the needs of physically challenged children.
- iv) The Ministry of Education should make follow ups in all ECD centers to ascertain the extent to which the special needs policy framework has been implemented.

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