Early Childhood Provisioning for Children Between 3 and 5 Years Within Rural Eastern Cape Communities: The Untold Stories of the Physical Environment

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ABSTRACT The state of the physical infrastructure at various early childhood development (ECD) centres in a rural area in one Eastern Cape Education District is the focus of discussion in this paper. Data were collected through photo-voice and observations during an introductory visit to the centres. The paper explores the status of the physical environments of the ECD centres and raises doubts over their potential for enhancing child development and early learning. Thematic analysis of the findings reveals that no evidence suggests that the communities visited had benefitted from the vast attention and publicity ECD has gained in South Africa. An overwhelming infrastructural neglect and/or decay were observed. There seems to be no evidence that ECD practitioners and architects of the centres visited neither considered nor understood the most suitable design and reorganise spaces to augment desired ECD learning outcomes. This paper concludes that poorly designed ECD physical environments not only present the health and security hazards to little children learning in such amenities but also affect the learning and freedom children should be enjoying. The paper recommends that particular care and attention should be given to the settings in which children learn as early as the design phase of such settings. Other recommendations have been highlighted in the paper.

INTRODUCTION

The paper explores the status of the physical environments of the ECD centres and raises doubts over their potential for enhancing child development and early learning. The provision of early childhood education and care is premised on the ideology that children learn best when they feel psychologically safe and secure within a given environment (Isbell 2007; Atmore et al. 2012; Okeke et al. 2015; Okeke et al. 2015; Tarim 2015). Studies have also demonstrated how good space design can enhance child development. According to Isbell (2007: 1), the importance of the children's space is such that when children still at infancy stage commence attending child care they are likely to spend as much as 12,000 hours in this venue. Spending so much time in one setting requires that the space be prudently designed". Most recent research on ECD provisioning in South Africa has reported the increasing access to centre-based ECD services (Statistics South Africa 2009; DoE 2001a; van Niekerk and Ashley Cooper 2012).

The Eastern Cape Province where this study was conducted has also over the years shown a rapid growth in the number of children accessing centre-based ECD services. According to the findings of the General Household Survey in 2012 just about 37 percent of children aged 0 to 4 year olds were attending an education institution (DBE 2013). Table 1 reflects a huge increase, from almost 7 percent in the year 2002 up to 37 percent in 2012 in proportion to the number of children aged 0 to 4 years olds in educational institutions (DBE 2013). For the Eastern Cape the increase is from approximately 9 percent in 2002 to 38 percent in 2012.

In the year 2012, there were 85 percent of 5 year olds attending an educational institution. Table 2 shows that the number increased from 39 percent recorded in 2002 to around 85 percent in 2011 in the enrolment of 5 year olds attending an educational institution. This interprets an increase of 46 percent over the years 2002 to 2012 (DBE 2013). For the Eastern Cape the increase was from approximately 49 percent in 2002 to about 93 percent in 2012.

Bullard (2010) cites that many children are spending a huge portion of their day in early childhood centres. ECD centres have become the social environment in which early development in many children takes place. They have

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Table 1: Percentage of 0-4 year-olds attending educational institutions by province, 2002-2012

Province	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Eastern Cape	9.3	14.2	12.5	17.5	18.8	18.86	20.3	29.95	32.6	32.9	37.8
Free State	6.8	11.3	11.8	20.4	20.2	21.2	18.0	36.8	33.4	38.2	46.7
Gauteng	11.9	18.8	18.3	21.7	28.4	24.0	25.4	43.5	42.6	43.6	45.7
Kwazulu-Natal	4.9	8.1	7.3	7.2	7.9	10.4	11.7	23.7	25.1	24.9	27.9
Limpopo	5.3	10.1	11.8	13.4	17.6	15.5	14.5	27.9	29.6	42.1	37.3
Mpumalanga	5.2	8.4	13.1	11.3	13.5	12.4	16.2	28.1	28.5	31.0	28.8
North West	6.7	11.1	8.9	11.8	8.3	15.6	8.0	21.8	26.7	29.0	32.9
Northern Cape	3.4	5.1	4.1	9.0	8.6	14.2	10.6	19.3	21.1	26.9	25.6
Western Cape	10.3	14.1	14.3	19.1	16.0	14.1	14.4	27.6	39.4	36.2	39.6
National	7.5	12.1	12.0	14.8	16.6	16.5	16.7	29.8	32.3	34.5	36.5

Source: Statistics South Africa 2013

Table 2: Percentage of 5 year old children attending educational institutions by province, 2002-2012

Province	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Eastern Cape	49.6	52.7	60.8	69.0	70.9	69.3	80.3	85.4	92.1	91.0	93.1
Free State	33.3	54.7	56.3	55.6	59.2	61.3	60.4	86	79.1	81.8	86.4
Gauteng	45.9	59.2	51.3	60.0	60.9	64.3	61.3	73.3	82.5	86.5	86.0
KwaZulu-Natal	33.4	35	38.7	50.1	54.3	51.5	57.5	70.1	84.8	78.0	77.1
Limpopo	43.1	55.7	68.4	73.2	76.6	71.8	74.3	92.7	95.9	95.0	93.8
Mpumalanga	28.9	37.9	60.1	55.5	57	63.6	65.1	83.2	73.1	86.3	84.5
North West	36.6	42.8	48.2	47.4	50.5	45.7	53.2	66.8	73.8	86.4	89.0
Northern Cape	21.5	34.2	25.9	55.2	46.7	59.1	50	80.1	78.3	78.1	71.1
Western Cape	41.2	53.7	49.6	63.3	65.7	52.2	53.5	79.1	69.5	75.9	73.9
National	39.3	48.1	51.9	59.3	61.6	60.2	63.2	78.3	83.4	84.8	84.6

Source: Statistics South Africa 2013

become places where children are taught to interrelate with others, participate in early learning and develop their linguistic. The centre-based early childhood education (ECE) provisioning is also viewed as an important initiative that has promoted learning opportunities for children to try to achieve the Millennium Developmental Goals particularly the Education For All (EFA) goals intended to be achieved by 2015 (Declerq et al. 2011).

Recent research (Ebrahim et al. 2008; Schaffer 2009; Ebrahim et al. 2011; Keir 2013) on centre-based ECE provisioning in South Africa is biased towards the ECD practitioners and programme quality. However, there seems to be a dearth of literature that focuses explicitly on the physical environment of ECD centres concerning their importance for child development and early learning. Most studies conducted on the physical environment of ECD centres tend to focus on the types of buildings, availability and quality of rudimentary infrastructure such as clean running water, availability of electricity or appropriate sanitation, learning materials (Schaf-

fer 2009; Ebrahim et al. 2011; Keir 2013; Atmore et al. 2012). This paper therefore explores the excellence of the physical environment of the ECD centres concerning the potential they have for children to develop and learn at an early age.

Requirements for Registering An ECD Centre in South Africa

There is a growing body of evidence emanating from extensive research that the brain development of a child is faster from birth to three years (DSD 2006). It is essential then to have ECD centres catering for this massive brain development to be registered according to the law governing the state. In order to safeguard the rights of children the South African government requires that anybody participating in the care, growth and protection of children has to abide by the legal framework provided by the Children's Act 38 of 2005 (as amended by the Children's Amendment Act 41of 2007). This Act gives specific instructions to be followed in registering ECD centres which are directly un-

derneath the judiciary of the Department of Social Development. Early childhood has been divided into three categories according to their specialised service to the children. A crèche which offers all-day care for children in the age range of 3 months and 7 years; a Day-care centre which affords day-care and pre-school or after school care services for a minimum number of children; and an Educare centre which incorporates basic education, ensures health and welfare services for pre-school children and embraces physiognomies of both crèches and nursery schools.

The application for registration is done in terms of section 30(3) of the Act on a prescribed form (Regulation 30(1)) by the Director-General for Social Development through the local government (DSD 2006). The first step towards registering an ECD centre is to adhere to the Zoning Scheme Regulation of the area which is meant to re-assess the area and designate it for educational purpose. Using the land for such purpose is subject to approval by the Local Authority. Issues covered in the Education White Paper 5 (DoE 2001a) are also considered and when applying for ECD centres there is need to observe the applicable legislation, for example, Removal of Restrictions Act and National Building Regulations and Standards Act (DoE 2001b).

For an ECD centre to be registered the infrastructure should have bathroom facilities which include one toilette and a basin for washing hands for every 20 children. There should be a separate space or room serving as a kitchen where food is kept and prepared. In this room there should be an area designated for boiling water, for sterilization and cooking food. There should be adequate safe storage for all tools used and washable floors that are easy to clean. The ration of indoor space is 1.5 square metres for babies and 2 square metres for toddlers while the outdoor space should be 1 square metre per child. A bucket with a lid should be provided for sterilizing and soaking nappies, a separate place for changing nappies and for cleaning the potties. Nowadays with disposable nappies diaper genes should be available for the disposal of nappies. A separate space or room should be selected as a sick bay within or near the office.

The other issue considered in registering an ECD centre is the qualification of personnel in charge with the children. According to the Children's Act when a person submits an application to register for an ECD centre they should possess: i) the National Certificate in Early Childhood Development at National Qualification Framework (NQF) which is Level 1-6 of the South African Qualification Authority standards; or ii) an suitable ECD qualification; or iii) at least have three years of experience in implementing ECD. An additional criterion is that a person should have suitable knowledge of ECD. (Regulation 27 and Annexure B, Part Two) (DSD 2006: 78).

The Value of the Physical Environment in Child Development and Early Learning

A number of studies have identified some factors that influence and have a bearing on the value of the physical surroundings in the development and early learning of children. Below these factors are discussed.

The Environment as a Significant Factor for Brain Pruning of the Child

According to Atmore et al. (2012) and the World Bank (2011), early childhood education (ECE) programmes are known to benefit children from birth to nine years. Their major focus is to develop the children physically, socially, and emotionally, language and creativity facets which in due course will assist the children to demonstrate all round skills when they start formal schooling (UNESCO 2008; UNICEF 2010). To enhance children's overall development, researchers in ECD (for example, Isbell 2007; Okeke et al. 2015) have always recognised the importance of physical environment. Scientific evidence confirms that brain development has also been found to be extremely rapid in early childhood and the environment in which children socialise, has a critical influence on the way in which the brain progresses and how children access learning (Izadpanah and Gunce 2014). Bullard (2010) cites that the brain at this age development is more synapses than it can perchance use. Those that the children use form robust connections while synapses that are not utilised are pruned. The author believes that children's experiences in the ECD centres in this instance help to make the determination of which synapses to prune and which ones to use and form strong connections. Earlier, Old (2001: 25) states that "the belief that every child is a miracle can transmute the way we design for child's

care programmes. This implies that architects should not design spaces that allow children to meet minimum requirements in their developmental milestones but design spaces that challenge children to go beyond the accepted norm.

The Physical Environment as the Third Educator

Alongside the teacher and quality programming, the physical surrounding is perceived as a critical partner and participant in a child's physical, social and cognitive development. Malaguzzi (1998) cited in Greenman (2005) as well as Moore and Sugiyama (2007) view the child's learning environment as the third educator. According to Malaguzzi (1998), there are three teachers in the life of the child: adults, other children and their physical environment. The concept of the physical environment as an important third teacher (alongside with children and adults) emanates from establishing that the environment is a participant in the educational experience of young children. Slutsky and Pistorova (2010) describe the physical environment as the educational and social setting where children intermingle with peers and educators.

Prominent theorists like Piaget view the child's environment as a significant partner in developing a child cognitively, socially, emotionally and physically. It is imperative therefore that the architects of ECD settings and ECD practitioners should understand that the physical surrounding in child-care services, both indoor and outdoor can either augment or obstruct with the process of children's learning and independence (Stonehouse 2011). In conceptualising ECD setting, architects should design the environment living spaces that dynamically contribute in the educative progression of young children (Wurm 2009).

Moreover, ecological model of child development (Bronfenbrenner 2005) suggests that development in humans become apparent in a set of overlapping ecological systems that function together to influence what a person turns out to be as he or she develops (also see Lewthwaite 2011). These are the microsystems, mesosystems, exosystems, macrosystems and chronosystems. As noted by Bronfenbrenner (2005), Lewthwaite (2011); and, Swick and Williams (2006) the microsystem is the central entity that positions itself as a channel offering the child

initially learning about the world. According to Berk (2000), the microsystem incorporates the relationships and collaborations a child has with his/her immediate environments. The ECD centre in this instance can be a microsystem for the child. Through its physical environment, it is the space for the child's initial learning about the world. The nature of the physical environment provides the developing child with opportunities for socialisation and interactions. During these interactions, the child becomes a participant who reciprocates attention with adults, her/his peers and the physical environment as well as the significant others. However, the nature of the physical environment determines the degree of participation. The experiences provided by the physical environment in many ways shape the developing child.

Features of Learning Environments that Enhance Children's Development and Learning

Spaces that Foster Engagement

Coetzee et al. (2008), Browne (2008) and Izadpanah and Gunce (2014) suggest that quality design and suitable space organisation in pre-school surroundings can support pre-school educational activities and children's experiences. Thoughtful and germane design of physical area have been found to have the capability for exploration, acquiring knowledge through play, peer collaboration and enhancing the development of self-confidence and social skills (Berris and Miller 2011). For example, South Africa and other countries consider High/Scope education a core philosophy of their early childhood education (Izadpanah and Gunce 2014). 'High' in this case signifies to the maximum level of achievement for children and 'scope' indicates the diversity of experiences that can be accessible to children so that they can attain their personal high (Holt 2010). High/Scope day-to-day programme is grounded on the 58 key experiences of pre-school children. These experiences are clustered into 10 classifications namely: creative demonstration; language and literacy acquisition; ingenuity and social relations; music; movement; classification; seriation; space; time and numbers (Holt 2010).

High/Scope programmes challenge children as they require a maximum level of exploration. Davis and Hui-Tu (2008) and Gestwicki (2010) suggest that an escalation in challenges children face and discoveries is that are related to the existence of motivation in the surroundings. The physical environment is thus regarded as critical because it is exactly how children acquire their learning and should therefore be designed such that it stimulates children's interest and exploration.

Welcoming and Comfortable

Greenman (2005) suggests that physical environments in childcare centres play a significant role in contributing to both individuality and belonging. Physical surroundings should therefore imitate the lives of the children away from the centre in respectful ways through resources, equipment and images. This implies that what is present and absent in the class affords children with essential information regarding who is important and what is vital. On this issue, Izadpanah and Gunce (2014) suggest that every determination should aim at creating a setting that is rich in opportunities for discovering cultural diversity. The environment should also foster positive self-concept and attitude in children. This kind of an environment supports the development of children's ideas about themselves and others, generates the circumstances under which children are able to initiate conversations about metamorphoses and provides teachers with a background for introducing activities around diversity.

The physical environment should also be comfortable to encourage good quality interactions. Maxwell (2007) allude to that the density of children in a centre has also been found to have an influence on development. Child-care centres that are lesser in size and attend to fewer children were found to offer better quality child care. In South Africa, the Department of Social Development (DSD) requires that the indoor space should be 1.5 square meters per child and 2 square metres per toddler (DSD 2006: 74). Children in centres that are crowded are more likely to display aggressiveness, be more withdrawn and hyperactive more than those from less-crowded centres. An escalation in challenges and discoveries that children experience is thus associated to the presence of motivation in an environment. Bullard (2010) mentions that the environments in which children are impacts on their temperaments, ability to create relationships in work and play.

Safety and Security

Safety and secure environments for children are a prerequisite by law. Sections 24(1) and 28(1) of the Constitution of the Republic of South Africa (1996) state that "everyone has a right to surroundings that are not detrimental to their health and well being" and every child has a right to be protected from mistreatment, abandonment, cruelty or degradation. The environments in which children learn should therefore be physically and psycho-socially safe through the adequate provision of infrastructure facilities and space that meet the minimum health and safety standards.

Demarcated Spaces

Holt (2010) suggests that each space in educational scenery should be branded according to the activity and learning practices that will take place in that space. For example, interior areas in early childhood centres have to be organized in such a way that they assistant children to link and distinguish between activities. In support of this issue, Olds (2001) proposes the features of well-designed activity areas as have five essential attributes; namely, i) a physical position; ii) boundaries that visibly indicate the beginning and ending of each area; iii) surfaces for working and sitting; iv) storage for materials and visible displays; and, v) drawn images of personalities and animations. However this set-up does not suggest that children cannot change the position of equipment from one area to another. Nevertheless, as suggested by Pairman and Terreni (2002), distinctive boundaries provide children a sense of order that inspires them to make purposeful choosing and feel empowered by their capacity to find things. Tabane and Human-Vogel (2010) posit that children who operate in zones with clear boundaries usually become profoundly involved in activities for extended periods of time.

Research on the interior spaces in ECD centres identifies at least 5 key spaces: the entrance; learning area; playing area; kitchen; and the bathrooms. First, at the entrance the zone could be

reserved for the children's arrival and departure activities. Tabane and Human-Vogel (2010) suggest that this space should be secure and welcoming as this is an important aspect for instilling a sense of belonging. Tabane and Human-Vogel (2010) also suggest that if the sense of belonging is emphasized in the entrance, this has the potential to ease the separation of parents and children.

Second, the learning area/classroom: as already discussed, High/Scope daily programme is grounded on the 58 key practises of children in pre-school. These experiences are clustered into 10 groups. According to Dudek (2008), the learning area is a space where activities are facilitated. Epstein (2006) suggests that the learning area should comprise at least the four main zones: that is the art zone, the reading zone; areas to supply open-ended and manipulative materials that promote children's learning and inspire them to explore a sitting area.

The third aspect is the playing area where young children learn through play and a playing area is a requirement. It should be safe and should allow children to comfortably engage in free play. Fourth, is the kitchen? This is considered to be an isolated space for serving food. However, Izadpanah and Gunce (2014) suggest that the kitchen area could be intergrated with the learning and playing area to increase children's exploration. Supporting this is, Dudek (1996) who postulates that, a harmless and well distinct kitchen that permits preschoolers to partake in preparing the food will enhance their sense of freedom and experience the 'at home feeling' at the setting. Finally, on toilet facilities, which are spaces that are considered to be isolated areas, Greenman (1998) as cited in Izadpanah and Gunce (2014), suggests that these spaces should be visibly eye-catching and physically reachable to inspire children to use them with ease. DSD requires that each centre should have one toilet for every 20 children.

RESEARCH METHODOLOGY

The practical research aimed at collecting data on the status of the physical surroundings of the ECD centres and their potential in enhancing the development of children and early learning. Data for this study were collected in 10 ECD centres located in a rural community within one of Eastern Cape Education Districts in South Africa. The researchers chose purposive sampling for selecting research sites. Berg (2004) asserts that purposive sampling warrants certain categories of individuals or research sites exhibiting certain attributes are encompassed in the study. The 10 ECD centres have been operating for more than 5 years and are registered with the Department of Social Development. They are therefore recognised as legitimate spaces for ECD provisioning. The study was qualitative in nature even though Tables 1 and 2 reflected numbers and figures; those tables were only inserted for the purposes the tables described in the relevant sections. Schram (2003), Babbie and Mouton (2005) and Leedy and Ormrod (2005) perceive qualitative research as a subjective approach exploited to describe experiences of life and giving them a meaning. Creswell (2007: 18) asserts that in qualitative research "proclamations of knowledge are grounded upon constructed perceptions from numerous social and historical meanings of individual experiences".

In this study observations and photographs were utilised as data sources. As suggested by Hancock (2002), statistical tables and snapshots are a worthy method of collecting data that is observable of phenomena which can be captured in one or a series of shots. Basic features of learning environments that enhance children's development and learning were identified beforehand so as to ensure that observations focused on relevant aspects of the physical environment and how it is used. Fieldnotes were prepared with regard to identified features and comments established from informal conversational interviews with practitioners on the requirements for registering a centre. As highlighted by Merriam (1998) data collection and analysis occurs as a simultaneous and recursive process. Information from the two data collection methods was constantly compared, analysed and coded to identify themes, categories and subthemes.

Ethical Considerations

Ethics in research have been conceptualised to refer to the honourable principles guiding investigation from its commencement through to completion and publication of results and beyond, for instance the curation of data and physical samples after the research has been pub-

lished (Fouka and Mantzorou 2011). The following ethical issues were addressed in the study.

Informed Consent

Informed consent according to Babbie and Mouton (2005) relates to the accuracy of communiqué of all possible information, possibly about the research as a whole to the research informants. Proof of consent was achieved through the use of Consent Forms that the principals of the centres were required to sign and return.

Anonymity and Confidentiality

Stringent anonymity and confidentiality of participants was upheld in this study throughout the process of the study and in the dissemination of the outcomes of the study. Participants were formally well informed about the intentions of the study. To accomplish this, demographic data of informants and sources were not recorded, and every effort has been made to cluster the data collected so that individual characteristics and traceable details of the participants would not become known.

FINDINGS

Observations concentrated on the status of the ECD centres' physical surroundings and their potential in enhancing child development and early learning. The physical environs inside and outside was observed in this respect. Below are the findings of the study.

The Exterior Physical Environment

The exterior physical environs were inviting and identifiable as a space for children. In all the communities visited, locating the ECD centres was not a difficult task as they were easily identifiable. The buildings that served as ECD centres were painted with bright colours and decorated with drawings depicting children playing and learning. In a way, the drawings and colourful paint made these buildings identifiable as spaces for children. The images of children that adorned the walls were inviting to children. This is in line with Greenman's (2005) assertion that physical surroundings in childcare centres dis-

play a major role in contributing to both uniqueness and belonging.

The existence of demarcated areas for outside play seems to suggest that the designers of the physical environment acknowledge play as a component of early learning. Even though the physical grounds on which the centres are built were small in size, there was a clearly demarcated playground in each centre and these were generally well kept. However, in most centres the equipment in the playground did not reflect a diversity of groups. There was over-resourcing of a particular gender's equipment. Except for the sand pit, the playgrounds catered mostly for boys as there were scooters and, car tyres that children played with. Only one centre had a swing which was made by one of the parents. Izadpanah and Gunce (2014) suggest that the physical environment should mirror the lives of the children when they are outside the centre in ways that are respectful through ingredients, apparatus and images. What is present and missing in the class affords children with significant information about which and what is essential.

The state of the physical buildings threatened children's safety. The fact that some of the buildings were made of metal roofing sheets meant that on a sunny day, the interior of the learning areas were excessively hot. In addition, some of the interiors of the buildings had broken floors; what we may refer as 'potholes in the house', while some others had dilapidated walls. However, sections 24(1) and 28(1) of the Constitution of the Republic of South Africa (1996) state that; "everyone has a right to an environment that is not detrimental to their health and well-being". The environments in which children learn should therefore be physically and psycho-socially safe.

All the centres had fencing and gates that were locked during school hours and this gave an impression of safe and secure environment; however, the story was completely different when inside. But the buildings were not in a good state of repair. In 8 centres children were taught in dilapidated buildings. Some (6 centres) had roofs that are leaking, cement flooring with no mats. Some had walls with cracks, exposed foundations. They were not safe spaces for children. Toilet facilities in 2 centres were in good condition; had washing basins, visually attractive and usable. In 1 centre the toilet had no door. In 3 centres children used pails filled

with water to relieve themselves when they wanted to urinate, and had to use the veld for anything else. In 4 centres, the children made use of toilets in homes closer to the centres; the ECD practitioners had made arrangements as there were no toilets at the centre. All the centres were reportedly built by donations from the then Ciskei Government and have not benefited in post 1994 South Africa

The Interior Physical Environment

The open classroom setting seems to be the most used design model. The centres catered for children between 30 and 60**.** In 7 centres children between the ages of 3 and 5 were lumped in an overcrowded room; they were not divided according to age groups. This is despite the stipulated ratios of children per adult and per age group. Such an arrangement does not consider the fact that children in different age groups have different needs. Grouping them together in an open classroom is likely to limit their ability to explore and learn through age-appropriate play, peer collaboration and to develop self-confidence and, social skills (Berris and Miller 2011). Moreover, it limits the provisioning of age-appropriate opportunities and participation in a variety of practices that can help the children to accomplish their individual high (Holt 2010).

The design of learning area did not support learning and exploration. As already indicated above, in 7 centres, the open classroom setting was found to be the most used design. In the open classroom settings observed, there were no demarcated spaces for the different learning experiences that children in ECD centres are expected to participate in. Holt (2010) suggests that every zone in an educational locale should be branded according to the learning experiences and activities that will take place in that space. On this issue Pairman and Terreni (2002) suggest that distinctive boundaries offer children a sense of order and children who operate in clearly marked areas have a tendency to be deeply enthralled in those activities for extended periods of time (Tabane and Human-Vogel 2010).

The learners' home language was highly invisible in the teaching and learning support materials that adorned the interior walls. For example 6 centres had few teaching and learning support material (LTSM) displayed on the interior walls. The LTSM consisted of charts that presented children and practitioners daily routine or daily activities, classroom rules and some children's work. However, all were in English although both the practitioners and the children's home language is isiXhosa. Greenman (2005) suggests that physical environments in childcare centres play a most important role in contributing to both individuality and belonging. Physical surroundings should therefore replicate the lives of the children outside the centre in ways that are respectful through resources, equipment and images. In these centres the practitioners seemed to have ignored the children's language as a contributing factor to their identity.

DISCUSSION

In South Africa, the centre-based ECD provisioning is growing rapidly. For many children, ECD centres have developed into social context where early development takes place. They have become places where children are introduced to learning in interacting with peers; participate in early learning and language development. This study highlighted the importance of physical environment start of the influencing factors in the early learning and development of a child.

The study found that the exterior of most of the centres was inviting, painted colourfully and had drawings depicting children learning and playing. However, there were disparities and contradictions between the inviting exterior walls, the state of the buildings and the interior physical environment. The findings of this study reveal that the communities visited had benefited from the vast attention ECD has gained in South Africa. An overwhelming infrastructural neglect was observed. Most of the buildings from which the children learn are in a dilapidated state that threatens children's physical and psycho-social safety; needing repairs from the floors to the roof. In this study, the ablutions and toilet facilities were found to be a potential health hazard to the children.

There seems to be no evidence that ECD practitioners and architects of the centres consider and understand the best wat to design and construct spaces to augment learning outcomes for ECD. The open classroom setting was found to be the most used design model and its potential to support learning and stimulate exploration is a cause of concern. Children were found to be lumped in one room regardless of age and there

were no clearly demarcated boundaries for the learning experiences that children in ECD centres are expected to participate in. Existing playgrounds were found to be gender biased and did not cater for cultural diversity. Moreover, children's home language was found to be invisible in the teaching and learning support materials.

The findings of the current study tally with the findings of an assessment carried out by the DBE, the DSD and UNICEF as far back as 2011 which found substantial racial inequalities in ECD facilities' infrastructure and that a substantial number of buildings were valued as being in a bad or very bad condition (DSD 2006). The findings of this study point out that the ECD centres are still significantly under-resourced and this scenario negatively impacts on the development of the affected children.

CONCLUSION

Centre-based ECD provisioning has become the context where the minds of many children can be developed. However the current state of the physical environment of ECD centers in rural communities and the design thereof has the potential to compromise early learning and development of children. Investment on children is investment for the future. As a result it is imperative that efforts are made to ensure that children are given the best opportunity for a positive early start. A functional early childhood physical environment can make huge difference on how children perceive of their early development. Basis on these discussions, the paper proposes a number of recommendations.

RECOMMENDATIONS

First, there is a need to educate the architects and ECD practitioners on the importance of the physical environment on how best to design ECD spaces in order to enable children to actively participate in the educative process and thereby enhancing their early development and learning.

Second, there is equally the need for constant monitoring and evaluation to be carried out on the centres to ensure adherence to the stipulated standards and regulations and that every effort should be made to create physical environments that act as a third educator and an essential partner and participant in the development of a child cognitively, socially and physically, environments that foster children's positive self-concept and offer physical and psycho-social safety.

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