The Impact of Space on Children's Play: a Case of Four Preschools in Masvingo City

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Abstract

This paper reports on findings of a study on the impact of children's population density in an available space during playing traditional games in Masvingo urban preschools, Zimbabwe. Some of the common traditional games for a holistic growth and development which are played in Early Childhood Development (ECD) centres in Zimbabwe are: *chitsvambe (*touch and run); *chuti/bhekari (*ball dodging); *mapere* (hyenas); *chihwande-hwande* (hid*e* and seek). A qualitative case study research design involving observation of 120 children playing at four randomly selected ECD centres in Masvingo urban namely A, B, C and D was undertaken. Eight (8) caregivers were also interviewed to solicit their views on the effects of children's numbers in a given space on playing traditional games. The results revealed that centres A, B and C had a high population density and faced serious molecular and molar challenges involving shortage of play space, materials and a general lack of a play enabling environment. Centre D showed the opposite, where space and play materials were found to be adequate. Centers D promoted sustainable development in all children's domains of development. Unlike centre D, molar variables such as social interaction and language use during playing traditional games in centres A, B, and C, were weak. In the three centers, children were crammed in small play environments which did not allow them to run freely without bumping and pecking on each other. In light of this study's findings, it was concluded that population density had influence on the way children played traditional games in Zimbabwe. Therefore, the study recommends that low population density, ideal space and play materials should be provided at ECD centres if children are to play freely and realize sustainable development.

Introduction

In defining play one will realise that pay is one of the ways children learn about themselves, the people around them, their environment and their community. Play is a form of behaviour. It is an essential part of every child's life and important to their development. Through play, children learn to explore the world around them, develop and practice skills they will use throughout their lives. Overall, play is defined as behaviour that is freely chosen, personally directed and intrinsically motivated. Play inessential for physical, emotional and spiritual growth, intellectual and educational development and social and behavioural skills. A child's capacity for positive development will be inhibited if denied access to a range of stimulating play opportunities. Play often, though not always, implies a sense of fun for the child. Play encourages and refines sustainable development across all cognitive, physical, emotional and spiritual areas of an individual child.

The emphasis of the development varies at different ages of children's developmental milestones. Hence, it is important to look at play as being on a continuum. In different cultures and successive generations, traditional games children play seems to change. However, there are some attributes of play that remain constant. For example, the activities of play do not have to reach one predetermined conclusion. Play is process driven rather than result driven. It is self-chosen and the child is in control. Child initiated play using freely chosen equipment and interpreted in an individual way often lasts longer than adult led play. Tassoni and Hucker (2000:2) say,

"Some experts believe that children remember best the free play they have created themselves, because it had meaning for them. It is also often the case that such play will hold a child's interest far longer than an activity organized and controlled by an adult".

On this note, play provides enjoyment and this is the reason why children return to their games time after time. The frequency of specific forms of play differ across cultures, and is influenced by children's population density and play environments adults set up, which in turn, reflect cultural values (Papalia, Olds & Feldman 2004:278). In light of the foregoing assertion, it could be viewed that, it is the children's population density and their spontaneous play that facilitate development. In an effort to attain education for all (EFA), the post independence era in Zimbabwe saw the mushrooming of early childhood development centres (ECD), most of which are housed in back yards and church court yards where there is limited space for effective playing of traditional games by large groups of children.

Children's Need For Time And Space To Play

The constraints and fears that limit children's opportunities for play, particularly outdoors, deprive children of essential childhood experiences and opportunities. These are: opportunities to develop friendships and negotiate relationships; opportunities to grapple with the full gamut

of emotions including those such as jealousy, boredom or anger, as well as happiness and satisfaction; opportunities to take risks, have adventures and misadventures; to have contact with nature and the environment. It is because play offers unique benefits to children that the right to play is included in Article 31 of the *UN Convention on the Rights of the Child* which recognises:

The Right of the child to rest and leisure, and to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts. (UNICEF, 1989In Zimbabwe, not much research has been done on the impact of children's population in a given play area on the quality of play. Thus, this study sought to investigate the impact of children's population density on playing traditional games in early childhood development (ECD) settings in an effort to attain sustainable growth and development.

The following research questions guided the study:
- How does children's population density affect playing of traditional games in early childhood development settings in Masvingo Urban?
- What are the views of caregivers with regards to the effect of children's numbers on the quality of their play?
- How does the size of space available in a setting influence the quality of children's play?

Conceptual Framework

This study was conceptualized within the constructivist/interprtivist framework, with the realization that meanings are constructed by participants in their socio-cultural and historical contexts, (Vygotsky, 1986; Slavin, 2000:256). Constructivism as a theory of knowing that emphasizes the role each person plays in constructing their own knowledge rather than absorbing it directly from the environment. Ontologically, this study acknowledges that, there are many realities and not a single universal truth in the process of research. According to the constructivists; epistemologically, seeking knowledge is seeking the truth, and seeking the truth is about understanding the phenomena that one is dealing with (Creswell, 2007:20-34). In this study, it is about understanding what works best in a specific play context. In constructivist philosophy, the focus is on children's creation of knowledge rather than on their repeating what others consider important knowledge. This occurs as the individual child mentally acts on the environment during playing traditional games.

The study is also founded of classical theories of play which try to answer the question 'why do children play?'.

Now, it is important to consider the contributions of literature and the illumination that has been cast in this discussion on the impact of children's population density on playing traditional games in ECD centres.

Literature Review

In the African culture, most children's free play takes place during playing traditional games such as *chitsvambe, chuti, mapere, nhodo, pada, tsuro darika mutanda and chihwande-hwande.* In light of the fore going assertion, it could be viewed that it is the spontaneous child play that facilitates development. Most of these games children play emerge from their prior cultural experiences. Mutemeri & Mugweni (2005:49) view that a people's culture is an important survival strategy passed down from one generation to another through processes of enculturation and socialization; a type of roadmap that serves as a sense-making device that guides and shapes behaviour. Literature (Papalia et al, 2004; Dempsey & Frost, 1993; & Oravec, (2000-2001) shows that children need wide play environments that are spacious and enabling. The interaction that takes place during playing traditional games in limited space mostly develop into another form of play and emotional encounters such as pinching and pushing each other. Ormrod (2000) observes that cognitive theorists support the view that spontaneous imaginative play facilitates children's intellectual development. For example, Piaget (1962, 1969:59) maintains that games of construction often arise from symbolic play, and these games are initially embedded with play symbolism, but later tend to constitute genuine adaptations or solutions to problems and intelligent creations. Thus, he argues that spontaneous play facilitates intellectual development, in that it can lead to discoveries about the physical environment. Vygotsky (1986 in Slavin, (2000), suggests that *pretend play* facilitates the mastery of symbolism, the understanding of a relationship between the signifier and the signified, which is one of the cognitive foundations of literacy. Imaginative play frees behavior and thought from the domination of the immediate perceptual field. It represents a middle-ground between the literalness of seeing meaning as immediately apparent and inherent in objects. Hence, it constitutes a form of thinking that is totally separated from real situations.

Research on children's intellectual development indicates that a number of cognitive skills, including measurement, equivalency, balance, spatial concepts, conservation, decentration, reversibility, and logical classification are enhanced during play. In addition, play is thought to afford children the opportunity for creative expression, as well as to actually facilitate creative processes, including divergent thinking (Fein, 1987; Russ, 1993). Socio-dramatic play allows children to create alternative worlds and encourages them to engage in subjunctive representation of reality. It enhances the child's need to organize a complex environment into meaningful scripts and schemas for possible action in the future, and encourages children to plan, to consider a variety of courses of action, and to communicate their plans and courses of action to other people (Stebbing, 1999; Singer & Singer, 1998). It stimulates the 'what if' type of thinking that forms the basis for mature hypothetical reasoning and problem solving. It encourages children to think creatively, and has been found to predict later creativity. In addition, extensive involvement in traditional games and socio-dramatic play has been seen to improve children's memory, language development and cognitive perspective-taking abilities (Stebbing, 1999:298; Ormrod, 2000:106-107).

In the area of language development Ormrod (2000:63-64) observes that there is a growing body of evidence in support of a relationship between various forms of spontaneous play and linguistic development. In fact, all of the four aspects of the human language system namely the phonological, syntactic, semantic, and the pragmatic are incorporated into young children's play (Kuczaj, 1985). During playing traditional games children engage in language play. Garvey (1984) suggests that there are four different types of language play, which roughly correspond to the different aspects of language. These are: play with sounds and noises, play with linguistic systems such as those involving word meanings or grammatical constructions, play with rhymes and words, as well as play with the conventions of speech. While the purpose of language play is not fully understood, it is worthy to note that language play involving sounds and sound structures has been observed in lower animal species as well as in human off-springs. Play is thought to facilitate cognitive, social, and linguistic development (Kuczaj, 1998).

During playing traditional games, three-to-four year old children become fascinated with sounds such as songs, chants and rhymes. They enjoy nonsensical rhyming patterns. Play of this type is related to language development in that the ability to sing and rhyme is highly correlated with early speaking and reading achievement in children (Bergen & Mauer, 2000).

The connection between play and divergent thinking has been established in various lines of research. First, a relationship has been found between divergent problem solving ability and the characteristics of children's play materials (Dansky & Silverman, 1973, 1975; Pepler & Ross, 1981). For example, Pepler and Ross (1981) gave 64 preschool children the opportunity to play repeatedly with convergent (puzzles with one correct solution) and divergent (blocks, which can be assembled in a variety of ways) materials. When the children were later asked to solve a variety of problems, those who had engaged in divergent object play were more flexible and more original in their problem solving approaches. They were quicker to abandon ineffective problem-solving approaches than those in the convergent play group. Playing with open-ended materials, on the other hand, may suggest that there are numerous approaches that can be taken to any problem. It has been suggested that the link between fantasy play and divergent thinking can be found in the concept of decentration (Rubin, Fein, & Vandenberg, 1983). This involves the ability to attend simultaneously to many features of the environment in order to transform objects and situations. A child who engages in make believe during playing *mapere* (hyenas) knows that the subject he/she is running away from is a human being but pretends that the subject is a hyena. Make-believe play, therefore, provides evidence of a considerable amount of intellectual flexibility in the child, and flexibility is a key ingredient in creativity.

Imaginative play cannot and should not be considered without reference to the social context in which it occurs. The freedom to play, and to play as one chooses, can vary from one cultural milieu to another. It depends on the amount of play space and free time that is available. It also depends on parental and general societal attitudes about the relative importance of play and work in children's lives (Roopnarine, Lasker, Sacks, & Stores, 1998). Despite research detailing the developmental progression of pretend play and its various benefits, there remains a major

gap in our understanding of the intersection between pretend play and the socio-cultural system in which it occurs (Roopnarine, Shin, Donovan, & Suppal, 2000).

Methodology

Research Design

A qualitative case study research design was employed. A case study design was employed because the research was richly descriptive and was grounded in varied sources of data. Using a checklist, preschool children were observed playing popular traditional games in availed spaces. Care givers were also interviewed to solicit data on their views on the effect of children's numbers and space during playing traditional games.

Sample

Purposive sampling was employed to come up with 120 four-five year olds children at four randomly selected preschools coded A, B, A, and D; and 8 care givers 2 selected from each ECD center. Care givers were selected since they interact with the preschool children most of the time.

Findings and Discussion

Table 1 below shows the results of the observations made in four selected ECD centers in Masvigo urban to establish the situation on the ground pertaining to the impact of children's population density in a given space on the quality of play during playing traditional games.

Table 1: **Observation Results**

Item	Center A	Center B	Center C	Center D
Location	House backyard	Home garage	Church courtyard	EDC setting attached to a Private Primary School
Density	High	High	High	Low to medium
Space Arrangement	Not evident	Not evident	Not evident	A variety of learning centers and free play areas created
Play materials	Swings, tunnels made of old tires, paint and brushes	Balls, blocks, tires and swings	Sand area, balls, old clocks and swings	Blocks, dolls, Wendy house, library corner, discovery corner, sand area, climbing frames, tunnels, surfaced area and large play fields.

Culture	Academic oriented	Academic oriented	Academic oriented	Development oriented

The observation results in Table 1 above revealed that centers A, B, and C faced some serious challenges that Dempsey and Frost (1993) categorize under molecular and molar variables. Molecular variables being those found within the ECD settings such as population density, equipment, peers and arrangement of space. On the other hand are molar variables such as culture, language as well as socio economic variables. These molar variables fall between settings. An analysis of what pertains on the ground was made under the foregoing themes.

Molecular Variables

Density

Of the four centres observed, three namely A, B, and C were situated in cramped locations. These restricted spaces impacted negatively on the quality of children's play of traditional games. Greater density (that is less space) resulted in greater amount of group play aggression and anger, (Dempsey and Frost 1993). This was because increased spatial density resulted in decreased running and increased physical contact, which more often than not resulted in exchanges of harsh and impolite language. It appeared that whilst centers A, B, and C faced high population density challenges centre D was of low to medium density and children's interactions were positive compared to the former, resulting in better playing of traditional games.

Space Arrangement

Because of restricted learning environments, space arrangement was not evident in all the other ECD centres except Centre D. It should be noted however that as far as space arrangement is concerned consideration is not on quantity but delineation and flexibility of available space. Space must be delineated so that children have places to play individually as well as in social groups. Also children love to play within boundaries and the boundaries are viewed by the children as providing some kind of security. Observation of individual children seemed difficult in centers A, B, and C as children tended to play in large groups. On the other hand in center D there was evidence of delineation of space where children played individually, in small groups as well as in large groups.

Materials

Scarcity of play materials characterized the three ECD centers observed namely A, B, and C. It appeared that children's natural development from their homes was thwarted at the three densely populated centers. Dempsey and Frost (1992) clearly indicate that the quantity of play materials available to the child is correlated with the child's development. They further mention that undesirable behaviour increases with the reduction in play materials. However, sometimes

it is important to limit quantity of toys so that children are forced to focus on social possibilities and to discover novel uses of the environment. Observed play materials, like tyres tended to support more the physical development of children at the expense of the cognitive, social and affective. On the other hand there was evidence of toys that develop cognitive, social and affective development

Molar Variables

Culture

Adults interpret children's play and development differently depending on their culture. It appeared that within the ECD centers observed play and academic activities were seen as unrelated. Traditional games were played without much of caregiver's supervision whilst the academic activities were facilitated by the caregiver. In selecting and organizing what the child views during traditional games, the child enters into the world of symbolism and abstraction thereby acquiring new knowledge and language. These communicative abilities enhance the development of mother tongue in ECD centres. This is the issue that pedagogy needs to focus on in order to develop in children rich language skills (Papalia et. al. 2004). It is important that a balance be struck between developmentally and culturally appropriate approaches to language development during children's playing of traditional games.

When the 8 caregivers were interviewed on the impact of children's population density on their quality of play, it was found that the caregivers did not see the relationship between available play space and the quality of play generated. Instead they viewed children's behaviour during play as affecting the quality of play. Indicated below are examples of what some of the respondents said.

"Zveuwandu whevana panzvimbo yekutambira hazvina nebasa rese! Kana vana vasina misikanzwa vanotamba zvakanaka". (The number of children playing within a given space has no problem! As long as children are not naughty they can play well regardless of their numbers).

Another caregiver said, "*Kana vana vachiita tumitambo otwu, misikazwa ndiyo inowanda, kushunyana nekurovana. Izvi ndizvo zvinoresva kutamba kwakanaka kwatinotarisira*". (When children are playing these traditional games, they become mischievous – pinching, punching and swearing at each other. This behaviour spoils the good play patterns expected)

A further view from a respondent was, "*Vamwe vana wedu vanongoberekwa vachida zvekufara nekutamba nevamwe asi vamwe ndivo vanongokwindimara. Vana vakadayi ndivo vanovanzo kwadzwa nevamwe pakutamba mitambo.* (Some of our children are naturally happy and they like to play with others whilst others are just introverted and de-motivated. Such introverts are the ones who often get hurt during playing games).

These results imply that the caregivers were not aware of the need for availability of adequate space in order for effective playing of traditional games to occur. Caregivers were of the view that it was children's mischief and antisocial behaviour that caused deterioration of play quality into pushing and punching of each other. Yet other caregivers blamed the development of poor quality play to children's introvert behaviour and de-motivation to engage in games. These findings are contrary to earlier research findings which showed that children need spacious and enabling environments to play effectively (Dempsey and Frosty, 1993; Oravec, 2000 and Papalia et al. 2004). There seems to be a gap in terms of teacher espoused knowledge and enacted knowledge with regards to issues of play.

Conclusions and Recommendations

The major findings of the study suggest that children's high population density results in poor quality play of traditional games in ECD settings. On the other hand low population density enhances the quality of play and attainment of sustainable development. Findings of the study further suggest that caregivers at the ECD centers are not aware of the impact of limited space on the quality of games played by children. Their enacted knowledge or tacit theory seems not to be consistent with contemporary practice in ECD play theory. Caregivers need to be exposed to information concerning the value of setting up an enabling environment which facilitates and sustain children's playing of traditional games.

Perceptions of caregivers need to be changed by them taking a proactive stance to get informed on young children's play curriculum and contemporary play issues in ECD settings. Through ECD specialist advocacy, there is need to make caregivers aware that both children's high and low population density affect the quality of play and in turn positively or negatively impact on sustainable development. This study shows that children can benefit emernsily if the traditional games are done in spacious environment as is done culturally. The restricted places such as the ones discussed in the study limit the benefits to be accrued through playing traditional games.

In an effort to democratize the ECD programme, the Ministry of Education Sport and Culture has incorporated a 2-year ECD programme in the formal education system with implementation guidelines for both primary schools and private owned centres spelt out in the Director's Circular No. 48 of 2007:1 and Statutory Instrument 106 of 2005. Education officers and ECD District Trainers should assist communities in establishing quality ECD centres. All ECD centres established outside school premises should attach themselves to nearest primary schools for professional, curriculum and administrative assistance by ECD experts.

The study recommends that low population density, ideal space and play materials should be provided at ECD centers for a sustainable play curriculum to be realised. The study also recommends that there is need for further research on caregiver preparedness to implement the ECD play based curriculum.

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