

Poverty and School Readiness: Implications to Early Childhood Development in Zimbabwe

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Abstract

The concept of school readiness is multi-faceted, encompassing the holistic development of the learner, physical health, social-emotional, cognitive and linguistic status of children. Children from poverty stricken households in Zimbabwe often start school at a disadvantage. This paper examines the reasons why poor children are less ready for school and evaluates intervention measures for improving their school readiness. This study is informed by Urie Bronfenbrenner's ecological theory. A qualitative phenomenological design was used with face to face interviews as data-collection instruments, to purposively selected eight (8) teachers in two ECD centres in Masvingo, Urban. This study established that poverty decreases a child's readiness for school through aspects of, poor health and nutrition, financial constraints, neglect, parental level of education, stressful living conditions, low-quality preschools and low attachment to primary caregivers. School readiness gaps are further widened by unavailability of play materials at home and at school. On the way forward, parents, educational policymakers, Non-Governmental Organisation and the general public should recognise the importance of the first few years in the life of a child for promoting healthy physical, emotional, social, and intellectual development. High-quality early interventions should also be designed to combat the negative factors that threaten child development. Collaborative work is also needed among Zimbabweans and all stakeholders to revisit the root causes of poverty and poor academic performance among ECD B learners.

Keywords: poverty, school readiness, academic performance, Early Child Development, phenomenological

Background of the study

School readiness reflects a child's ability to succeed both academically and socially in a school environment. It requires physical well-being, appropriate motor development, emotional health, a positive approach to new experiences, age-appropriate language skills, and age-appropriate general knowledge and cognitive skills (Blair, 2012; Castro & Murray 2010). Poverty decreases a child's readiness for school through aspects of health, home life, schooling and neighbourhoods. A child's home has a particularly strong impact on school readiness (Connolly, 2005 & Jensen 2007). Children from low-income families often do not receive the stimulation and do not learn the social skills required to prepare them for school. Poverty is one of several risk factors facing poor children. Mothers living in poverty are often unmarried and poorly educated, they have higher rates of depression and poor health than more affluent mothers, and they demonstrate lower parenting skills in certain dimensions (Broadhead, 2014.). In fact, the gap in school readiness shrinks from 27 percentage points to 7 percentage points after adjusting for demographic, health, and behavioral differences between poor and moderate- and higher-income families. Even so, poverty remains an important influence on school readiness, partly through its influence on many of the observed differences between poor and more affluent families (Wright, Diener. & Kay, 2010). Higher levels of depression and a more punitive parenting style, for example, may result from economic stress and so models controlling for these factors may understate the full effects of poverty on school readiness.

In addition to poverty, key influences on school readiness include preschool attendance, parenting behaviors, parents' education, maternal depression, prenatal exposure to tobacco, and low birth weight. For example, the likelihood of being school ready is 9 percentage points higher for children attending preschool, controlling for other family characteristics, and is 10 percentage points lower for children whose mothers smoke during pregnancy and also 10 percentage points lower for children whose mothers score low in supportiveness during parent-child interactions (Wright, Diener, & Kay, 2010). These findings suggest a diverse set of policy interventions that might improve children's school readiness, ranging from smoking cessation programs for

pregnant women to parenting programs, treatments for maternal depression, income support programs and expansion of preschool programs (Broadhead, 2014.).

Home learning environments that include parental assistance with homework, availability of play materials, and parents who understand the role of play have been shown to predict greater school readiness among preschoolers (Chinyoka, 2014, Brooks-Gunn & Duncan, 2007). Improvements in parents' understanding of the role of play, in addition to parents' ability to facilitate their children's learning, have been associated with more positive behavioural outcomes such as increased creativity, curiosity, and independence in the classroom (Wright, Diener, & Kay, 2010).

When a child is neglected and does not get basic needs due to poverty, the brain does not grow as much (Tay and Diener, 2011). Unfortunately, low-SES children overall receive less cognitive stimulation than middle income children do. Coley (2002) cited in Kenrick, (2010) found that only 36 percent of low income parents read to their kindergarten age children each day, compared with 62 percent of upper income parents. In addition, low SES children are less likely to be coached in learning skills or helped with homework, and they are half as likely as their well off peers to be taken to museums (Bradley et al, 2001) and on other culturally enriching outings. They also have fewer play areas in their homes, have less access to computers and the Internet (and use them in less sophisticated ways), own fewer books, toys, and other recreational or learning materials, spend more time watching television, and are less likely to have friends over to play (Evans, 2004:80). Low income and parents' financial limitations often exclude their kids from healthy after school activities, such as music, athletics, dance, or drama.

Canadian studies have demonstrated the association between low income households and decreased school readiness. A report by UNESCO, (2010) concluded that children from lower income households score significantly lower on measures of vocabulary and communication skills, knowledge of numbers, copying and symbol use, ability to concentrate and cooperative play with other children than children from higher income households. Bronfenbrenner, (2008) found that schools with the largest proportion of children with low school readiness were from neighbourhoods of high social risk, including poverty. Willms (2006) established that children from lower socioeconomic status (SES) households scored lower on a receptive vocabulary test than higher SES children. Thus, the evidence is clear that poor children arrive at school at a cognitive and behavioural disadvantage. Schools are obviously not in a position to equalise this gap (Willms, 2006). This writer noted that the girl children are mostly affected by poverty in Zimbabwean secondary schools hence the need to explore the psychosocial effects of poverty on the academic performance of the girl child.

Many children raised in poverty enter school a step behind their well off peers (Santo and Lesmire, 2009:368). The cognitive stimulation parents provide in the early childhood years is crucial, poor children receive less of it than their well-off peers do. These deficits have been linked to underdeveloped cognitive, social, and emotional competence in later childhood and have been shown to be increasingly important influences on vocabulary growth, IQ, and social skills (Bradley et al., 2001:1862). Standardised intelligence tests show a correlation between poverty and lower cognitive achievement, and low SES girls often earn below average scores in reading, math, and science and demonstrate poor writing skills (Santo and Lesmire, 2009:369). Although the effects of poverty are not automatic or fixed, they often set in motion a vicious and stubborn cycle of low expectations. Poor academic performance often leads to diminished expectations, which spread across the board and undermine girl children's overall self-esteem. Successful school performance are built upon cognitive, physical, emotional, social adjustment and self-regulating skills like distractibility, adaptability and paying attention, following instruction and inhibiting inappropriate actions (Wright, Dien & Kay, 2000: 99-117). All these skills are critical elements for school performance. Learners that enter school without these skills, especially the self-regulating academic skills, have a significant greater risk for difficulties like peer rejection and poor academic achievement (McClelland, Cameron, Connor, Farris, Jewkes, & Morrison, 2007:947-959). On the contrary learners with high levels of self-regulation achieve on significant higher levels of literacy and

numeracy. That is also why there are a strong association between attention-giving behaviour and school performance (Chang & Burns, 2005, 247-263 and Wright, Diener & Kay, 2000: 99-117).

Although we are faced with a lot of changes in the 21st century which bring along new strategies for education, poverty and school readiness remain a topical and contemporary issue to be explored further in research since it have a significant effect on the school performance of ECD B learners in Zimbabwe.

Theoretical framework

This study is informed by Urie Bronfenbrenner's ecological theory which stresses the importance of the microsystem, mesosystem, exosystem, macrosystem and chronosystem in the achievement of learning readiness by ECD B learners. The microsystem is the layer closest to the child and contains the structures with which the child has direct contact. The microsystem encompasses the relationships and interactions a child has with her immediate surroundings (Berk, 2007). Structures in the microsystem include family, school, neighborhood, or childcare environments. At this level, relationships have impact in two directions, both away from the child and toward the child. For example, a child's parents may affect his beliefs and behavior; however, the child also affects the behavior and beliefs of the parent. Bronfenbrenner calls these bi-directional influences, and he shows how they occur among all levels of environment. The interaction of structures within a layer and interactions of structures between layers is of paramount importance to this theory. At the microsystem level, bi-directional influences are strongest and have the greatest impact on the child. However, interactions at outer levels can still impact the inner structures. The mesosystem layer provides the connection between the structures of the child's microsystem (Berk, 2007). Examples include the connection between the child's teacher and his parents, between his church and his neighborhood, etc.

The exosystem layer is defined as the larger social system in which the child does not function directly. The structures in this layer impact the child's development by interacting with some structure in her microsystem (Bronfenbrenner, 2008). Parent workplace schedules or community-based family resources are examples. The child may not be directly involved at this level, but she/he does feel the positive or negative force involved with the interaction with her/his own system. The macrosystem may be considered as the outermost layer in the child's environment. While not being a specific framework, this layer is comprised of cultural values, customs, and laws (Chinyoka, 2013). The effects of larger principles defined by the macrosystem have a cascading influence throughout the interactions of all other layers. It is the belief of any culture that parents should be exclusively responsible for raising their children, that culture is less likely to provide resources to help parents. This, in turn, affects the structures in which the parents function. The parents' ability or inability to carry out that responsibility toward their child within the context of the child's microsystem is likewise affected.

The chronosystem encompasses the dimension of time as it relates to a child's environments. Elements within this system can be either external, such as the timing of a parent's death, or internal, such as the physiological changes that occur with the aging of a child. As children get older, they may react differently to environmental changes and may be more able to determine more how that change will influence them. More modern child development theories accept that both a child's biology and his environment play a role in change and growth. Theories now focus on the role played by each and the extent to which they interact in ongoing development. Bronfenbrenner's ecological systems theory focuses on the quality and context of the child's environment. He states that as a child develops, the interaction within these environments becomes more complex. This complexity can arise as the child's physical and cognitive structures grow and mature. So, given that nature continues on a given path, how does the world that surrounds the child help or hinder continued development? This is the question answered by Bronfenbrenner's theory.

Research Methodology

In this study, qualitative design was employed. Qualitative research gives the researcher a picture of what people think. The qualitative researcher often uses a sample or a smaller group of selected people and generalises the results to a larger group from which the smaller was chosen (Babbie, 2013). Qualitative was used to elicit the teachers' and parents' perceptions on the major reasons why poor children are less ready for school. More detailed information on the intervention measures for improving their school readiness was collected through the use of face to face interviews.

The twelve participants (8 ECD B teachers) were purposively selected. "The logic and power of purposeful sampling depends on selecting information-rich cases for study in depth. The information-rich cases are those from which one can learn a great *about* issues of central importance to the purpose of the inquiry" (Patton 2012:169). All of the teachers were ECD B teachers who had attended ECD education workshops and who were involved in its implementation. The selected preschools could be seen as typical primary schools, which serve learners from lower socio-economic group. The sample was homogeneous only in so far as that all the participants were ECD teachers involved in ECD teaching. These teachers were sampled because their attitudes, skills and knowledge have not been explored.

Data Collection Procedures

To allow for the collection of as much relevant information as possible, the interviews were not tightly structured. Therefore, relevant issues which were not included in the interview guide but arose during the process of conducting the interviews were explored and noted in impromptu supplementary questions. This was in line with the flexible nature of qualitative research (Yin, 2012). Follow-ups and probing questions were also asked for elaboration or in order to seek clarification during interviews.

Data Analysis

The main method that was used to analyse qualitative data from interviews was thematic content analysis. This involved identifying, coding and categorising patterns in data. In order to make sense of collected data, the researcher applied the Tesch's open coding method of data analysis to identify themes and categories. This Tesch's method is a systemic process of examining, selecting, categorising, comparing, synthesising and interpreting data to unpack the major research question of the study.

Ethical Considerations

Permission to conduct the study was secured from the headmasters of the two primary schools in Zimbabwe (where the preschools were housed), as well as from the selected ECD B teachers. The participants were informed that their involvement in the study was voluntary and that they were free to withdraw at any stage of the interviews if they were not comfortable. Participants were assured of anonymity in the research report.

Validation/ trustworthiness of data collected

Strategies were applied to counteract validity threats. Information was obtained from individuals in their respective interviews, using different sources, cross-checking and verifying sources of information (Creswell, 2013).

Discussion

Psychological Factors/Cognitive factors

The study established that children's readiness for school is partly determined by the child's physical, intellectual, emotional, cognitive development, aptitude and motivation to learn. All the eight teachers interviewed highlighted that the effective assessment of children's school readiness must therefore address all

the dimensions of child development. Health, nutrition and psychosocial processes interact to affect survival and development in the early years of life and these interactions influence the readiness of the child for school (Mr. Moyo, during an interview). During interviews teachers also discussed that learning readiness is strongly influenced by two biological conditions over which the individual child has no control. These include the maturational level of the brain and the degree to which the brain is attuned to the mode of school instructions. Here the participants forwarded the influence of nature and nurture in determining school readiness among ECD B learners. In support of the above, neural-biological research has shown that the brain is almost entirely developed by the time the child enters school (Blair, 2012). However, recent findings also confirm that, environmental conditions during pre-school years substantially affect the growth of children's neural pathways and hence how the brain's circuitry is wired. The wiring of the brain is influenced by the type and consistency of particular stimulations. Regularly used neurons are strengthened while irregularly used neurons are eliminated. This developmental characteristic of brain creates critical periods when the child is at a particular developmental level and is biologically primed to develop more advanced neural structures or skills provided the appropriate stimulation is available (Doherty, 2007). These are the times when the brain is particularly receptive to specific kinds of learning.

In this study, critical period has been shown to affect the various dimensions of school readiness as follows: binocular vision develops best from birth to two years, visual acuity- from birth to five years, gross motor development- from birth to four years, emotional development especially when the child learn to switch off the stress factors is from birth to four years, language development- from two to five years, communication readiness- from 18 months to nine years (Mrs. Garikayi, during interviews). If the appropriate stimulation is not provided at the critical period, such development will be impaired or lost (Van Zyl, 2008). Thus, ECD B teachers should be aware of the importance of the supportive emotional context before learners can learn successfully at school.

Home/family/ Environmental factors

Parents and teachers interviewed aver that home and family factors, include, the risks and protective factors within the family and the home environment. The study established that within the home environment the parent and child interaction, physical environment and the caregivers' emotional well-being affects school readiness outcomes. During an interview, a teacher said,

Many children from households in conditions of poverty experience delays in motor cognitive development that negatively affect their school performance, ability to maximise their educational opportunities and their social functioning later in life. The parents are too busy trying to make ends meet compromising their attachment with their children.

Another teacher also said that,

Family resources including time and the family structure also affect school readiness. Neighbourhood conditions, low socio-economic status has been associated with less favourable child outcomes including school readiness.

On the other hand, one teacher, pseudo named Mrs Vhimisai echoed the below sentiments:

Home learning environment (e.g. reading to children, teaching songs and nursery rhymes, playing with letters and numbers, visiting the library, painting and drawing, having friends round to play etc.) can have more of an effect on children's development than socioeconomic status. ECD B learners from poor

backgrounds do not have colouring books, reading materials at home and ample ground to play. The houses are usually overcrowded.

The above sentiments reinforced views from Bronfenbrenner's ecological theory. The microsystem encompasses the relationships and interactions a child has with her immediate surroundings (Berk, 2007). Structures in the microsystem include family, school, neighborhood, or childcare environments. At this level, relationships have impact in two directions, both away from the child and toward the child. At the microsystem level, bi-directional influences are strongest and have the greatest impact on the child (Bronfenbrenner, 2008). The mesosystem layer provides the connection between the structures of the child's microsystem (Berk, 2007). According to the authors, these findings suggest that poor parents, with few qualifications can improve their children's progress and give them a better start at school, by engaging in activities at home that foster learning. They maintain that what parents do with their children is more important than who parents are and recommend the incorporation of parent support and education in all ECD initiatives.

Given the above, the importance of a caring and nurturing adult is paramount in the healthy growth and development of a child. Parents (or their substitutes) are the child's first and most important teachers and the greatest influence on his or her development. Nurturing caregiver-child relationships have universal features across cultures, regardless of differences in specific childcare practices. They are characterised by children being well-fed and kept safe, and by consistent affection, responsiveness, conversation, stimulation and opportunities to learn about their world (Van Zyl, 2008).

Studies in America have indicated that children living in a neighbourhood where most families are not poor had higher developmental levels than same-aged children living in areas with a high concentration of poverty. In addition, the prevalence of low-income neighbours has been found to increase the incidence of acting-out. Child Trends (2016) discusses five theoretical perspectives on the effect of neighbourhood's effect on child outcomes. These include the contagion theory which suggests that a child's behaviour is influenced by peers; the relative deprivation theory, that hypothesizes child outcomes as a result of social comparison with neighbours; the competition theory, that views poor child outcomes as a result of competition of needs; collective socialisation theory, that sees community social support as an influence on child outcomes; the neighbourhood resources theory, which emphasizes the availability of public and private services in the neighbourhood.

Given the above, the role of the home cannot be under emphasised because the general assumptions that states of poverty in the family or home goes to a long way to determine the extent learning readiness of ECD learners in Zimbabwe. In view of this, some factors that needed to be considered in the home or family background are parents' academic qualification, socio-economic class and facilities available in home or home environment as well as parent status. Social cultural theories view cognitive development as a socially mediated process that depends on the support the adults and more mature peers provide to the child (Rogoff, 1988, cited in Berk, 2007). This premise reinforces the aspect of cooperative dialogue between the child and the caregiver as a critical determinant of later school readiness. Similarly, social-cultural theory recognizes the importance of ECD experiences in determining the child's behaviours and school readiness through guided participation and scaffolding (Berk, 2007).

Poverty, Malnutrition and Health issues

Poverty is one of the most important factors that hinder young children's development all over the world (Chinyoka, 2013). Whether we are talking about families, communities or countries, a lack of resources undermines the capacity to provide adequately for children and to afford them opportunities. Economic pressures are a fundamental obstacle that families face in raising their children. Family poverty has been shown in a number of studies to adversely affect children's health, intellectual capabilities, academic achievement and

behaviour (Weitzman, 2003 in Chinyoka, 2013). Studies have revealed that poverty that occurs during infancy and pre-school years is more damaging than poverty experienced later in childhood (Brooks-Gunn and Duncan, 1997 in Chinyoka, 2013).

Four of the teachers interviewed in this research highlighted that many poor children are denied the opportunity to go to school. They go on to say that even young children, 5 to 7 year olds may be expected to care for younger siblings, watch over sick relatives or guardians, collect water and firewood. Majority of children enter school unready to learn due to poverty as a result. These children do poorly, repeat, and drop-out at high rates. Where families live in poverty, fatigue and general frustration often impact negatively. Families bringing up children in poverty are often understandably focused on keeping children fed, physical skills and social responsibility. Adults feel little sense of agency or control, and it is not surprising that the most disadvantaged families feel powerless to promote their children's best interests. Too often they underestimate their ability (through everyday activities and conversations) to support their young children's enthusiasm for learning, language, and sense of self (Blair, 2012). Yet these are the very capacities that have the greatest significance in enabling children to thrive at school and break the cycle of poverty (Van Zyl, 2008).

The study also established that the nutritional deficiencies strongly associated with poverty result in poor behavioural development in infants and children thus affecting school readiness. Grantham-McGregor's study of children in Jamaica demonstrated that small-for-gestational age, birth weight, vitamin deficiencies, and malnutrition are associated with long-term deficits in cognition and school achievement. Malnourished children were less engaged in their environments and were less active and had shorter attention spans than their counterparts. In school, they had lower grades and showed less emotional control (Grantham-McGregor, 1995 in Chinyoka, 2013). Sigmund Freud in his psychoanalysis theory also purports that the damage related to malnutrition is difficult to address after the age of three. The negative effects of micronutrient malnutrition, especially amongst ECD B learners, have long-term and debilitating effects. Lack of 3 micronutrients – iron, iodine, and vitamin A – have been linked to compromised growth and immune functions, and reduced mental development and educational attainment (Van Zyl, 2008). A longitudinal research conducted in Costa Rica found that children who have iron-deficiency anemia in infancy are at risk for long-lasting developmental disadvantage. Children with chronic iron deficiency in infancy scored lower on measures of overall mental and motor functioning, and most of them had repeated a grade and/or required additional assistance in school.

All the teachers interviewed agreed that children born malnourished are found to be sick more often, are susceptible to infections, and are more likely to drop-out of school and they start primary school at a later age. In sum, health and nutritional status during the early childhood period and at entry to school will affect the ability of children to attend school and learn. Poor health leads to school absences, making it difficult for children to keep pace. A child's health and nutritional status also affects his/her ability to pay attention in school and to capture what is being taught. Prolonged and early malnutrition, parasitic diseases, environmental toxins, difficult births, substance abuse, and limited stimulation all affect brain development (Van Zyl, 2008). Given the above, early physical and mental health of a child is an important determinant of later readiness for school and success. Child health is viewed in terms of health in earliest years, which may affect the child's receptive language, cognitive development and visual motor and spatial skills. Child health also includes immunization that protects children from communicable diseases, nutrition that affect physical and cognitive development, safety, and dental health as well as child emotional and behavioural problems.

Quality of early childcare services/Teachers

Results from this study indicated that quality early childhood care and education programs enhance cognitive, emotional and social development especially among ECD B learners. Quality care involves interactions with care providers who are responsive and sensitive to individual child's needs and cognitively stimulate, provide language inputs and guiding the child to explore the environment. The structural features that facilitate such

interactions include better caregiver-child ratio, small group size, trained caregivers and the motivation of the caregivers (Berk, 2007).

An ECD B teacher interviewed highlighted that,

ECD B classes at my school are over-crowded and over-subscribed. Large early grade classes interfere with the capacity of teachers to teach and children to learn. One class has over 55 children. There is often a serious lack of sufficient teachers, space and learning materials, water and toilets to meet the ballooning figures of the learners.

Another teacher also said,

...child/teacher ratios are often so high that offering quality learning environments is simply impossible. The lack of proper training in teaching and promoting literacy skills in order that fluency in reading and writing are achieved is a serious gap for most ECD B teachers in Zimbabwe.

These authors observed that the teachers are the single most important factor in creating an effective classroom. They can be either the most crucial asset or a major barrier for how young children start off their formal education experience. ECD B teacher absenteeism, rampant in some places, undermines trust and confidence amongst both parents and students. The availability of trusted, motivated teachers who regularly show-up, who have specific training (pre and in-service) to support children's social and emotional development, encourage and promote children's learning and who are supported (rather than only inspected) themselves in their teaching by the school head and system supervisors are all critical to achieving the SDG goals agreed to by the international community.

The teachers' status, application of skills and competencies and whether they have access to core teaching and learning materials (e.g. teacher's guides, textbooks), all influence what happens for children and their learning. In practice, the least qualified and least experienced teachers are too often assigned to the lower grades whereas teachers of higher grades (where exams are scheduled) have more access to any training opportunities that come available.

Ms Dura, one of the ECD B teachers also highlighted that,

Children's access to learning materials, particularly to storybooks and manipulatives that can be used in learning early numeracy and problem-solving skills is essential. It is hard to learn to read without books, and hard to establish basic language and mathematics concepts without concrete objects to handle.

The study also established that the motivation of teachers may be an influence that operates, in conjunction with, or independently of, their training. Motivation is related to pay scales, to non-monetary recognition, to the treatment and support received from headmasters and sometimes parents and to other more personal factors. An unmotivated teacher may be hard to change, no matter how many materials or training courses are provided (Landsberg, Kruger & Nel, 2015).

Conclusion and Recommendations

This study established that poverty decreases a child's readiness for school through aspects of, poor health and nutrition, financial constraints, neglect, parental level of education, stressful living conditions, low-quality preschools and low attachment to primary caregivers. School readiness gaps are further widened by unavailability of play materials at home and at school.

On the basis of the findings of this study, the following recommendations were made:

- First, given that the study established some incidence of malnutrition of children in the two schools studied and that malnutrition negatively impacts on learners' readiness to schooling, health, physical, social and cognitive development, there is need for all stakeholders to work together to minimise, or eliminate if possible, the root causes of malnutrition (poverty with all its correlates) in Zimbabwean communities and society at large.
- Second, nutrition support programs, such as food support programmes for pregnant women, children in schools, introduction of Nutrition Gardens and running feeding schemes in schools may go a long way in fostering school readiness.
- Government of Zimbabwe needs to take a more active role in this. Third, ECD B teachers need to be warm, supportive and nurturing towards ECD B learners who are psychologically, socially and health-wise traumatised by malnutrition.
- Teachers must foster learning environments that encourage critical thinking, creativity, problem-solving, communication, collaboration, global awareness, and social responsibility.
- Staff training is the linchpin in operating a successful ECD B program. Training should include time for staff to reflect on their attitudes and beliefs. The empathy and dedication displayed by the staff is often the litmus test for a family's decision to send children to school.

References

Babbie, E. 2013. *The Practice of Social Research*. California: Wadsworth

Berk, L. E. (2007). *Development throughout the lifespan*, Needham Heights, Allyn and Bacon.

Bradley, HR., Corwyn, FR., McAdoo, PH., & Coll, GC. 2001. *The home environments of children in the United States Part 1: Variations by age, ethnicity, and poverty status*. *Child Development*, 72, 1844-1867.

Bronfenbrenner, U. 2008. *Ecology of human development*. Cambridge MA: Harvard University Press.

Brooks-Gunn, J. & Duncan, GJ. 2007. *The effects of poverty on children*. In R. Behrman (Ed.), *The Future Of Children: Children And Poverty*, 7, 55-71.

Blair, C. 2012. School readiness. Integrating cognition and emotion in a neurobiological conceptualization of children's functioning at school entry. *American Psychologist*, 57 (2), 111-127.

Broadhead, P. 2014. *Early years play and cooperation*. RoutledgeFalmer, London.

Castro, FG. & Murray, KE. 2010. *Cultural adaptation and resilience: Controversies, issues, and emerging models*. In JW. Reich, AJ. Zautra & JS. Hall (Eds.), *Handbook of adult resilience* (pp. 375-403). New York: Guilford.

Chang, F. & Burns, B.M. 2015. Attention in preschoolers: Association with effortful control and motivation. *Child development*, 76(1), 247-263.

Child Trends. (2016). *Child care*. Available at: <https://www.childtrends.org/?indicators=child-care>

Chinyoka, K. (2013). Psychosocial effects of poverty on the academic performance of the girl child in Zimbabwe. Doctoral thesis published online
http://uir.unisa.ac.za/bitstream/handle/10500/13066/thesis_chinyokai_k.pdf%3Fsequence%3D1

Connolly, C. 2005. *As Teen Pregnancy Dropped, So Did Child Poverty: Study Looks At Decline Over 10-Year Period*. The Washington Post, p. A10.

Doherty, R. W. (2007). Efficacy of five standards in raising student achievement: Findings from three studies. *The Journal of Educational Research*, 96, 78–89.

Evans, GW. 2004. *The Environment of Childhood Poverty*. *American Psychologist*, 59, 77-82.

Jenson, E. 2007. www.jensonlearning.com. National Centre for Children in Poverty. 2006. *Basic facts about low-income children: birth to age 18*.

Kenrick, D. 2010. *Rebuilding Maslow's pyramid on an evolutionary foundation*. *Psychology Today: Health, Help, Happiness* <http://www.psychologytoday.com/blog/sex-murder-and-the-meaning-life/201005/rebuilding-maslow-s-pyramid-evolutionary-foundation>

Landsberg, E., Kruger, D. & Nel, N. 2015. *Addressing Barriers to Learning, A South African Perspective*. Pretoria, van Schaik.

McClelland, M.M., Cameron, C.E., Connor, C.M., Farris, C.L., Jewkes, A.M. & Morrison, F.J. 2007. Links between behavioural regulation and pre-schoolers' literacy, vocabulary, and math skills. *Developmental Psychology*, 43(4), 947-959.

Patton, M.Q. 2012. *Qualitative evaluation and research methods* (7th Ed.). Thousand Oaks, CA: Sage Publications, Inc.

Santo, M and Lesmire, YJ. 2009. *Poverty and Payne: Supporting teachers to work with children of Poverty*. PDK 90:365-370.

Tay L, and Diener E. (2011). *Needs and subjective well-being around the world*. *Journal of Personal Social Psychology*, 101, 2, 354-65.

UNESCO, 2010. *Education for All Global Monitoring Report*, Paris: UNESCO. United Nations Children's Fund (UNICEF), www.unicef.org.

Van Zyl, E. 2008. The Influence of School Readiness and Age on the School Performance of Learners in Grade 1 and 4. *Proceedings of the Paris International Conference on Education, Economy and Society – Paris 17-19 July 2008. Volume 3, Editor: Guy Tchibozo. p. 458-472*.

Willms, JD. (2006). *Learning divides: ten policy questions about the performance and equity of schools and schooling systems*. UIS Working Paper 5. Montreal: UNESCO Institute for Statistics.

Wright, C., Diener, M. & Kay, S.C. 2010: School readiness of low-income children at risk for school failure. *Journal of children & poverty*, 6(2), 99-117.