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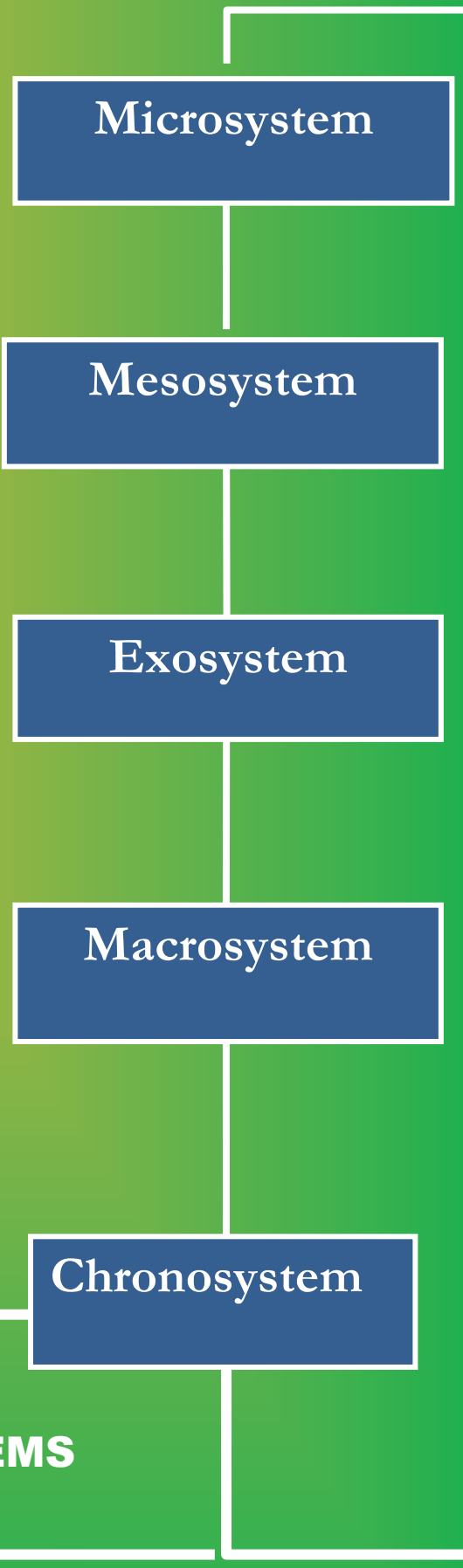
LITERATURE REVIEW

OCTOBER 2016



NUTRITION AND HEALTH SYSTEMS

Theoretical framework

There are four broad theories that guide practice in the ECD namely, behaviourism, social learning theory, cognitive developmental theory, socio-cultural theory and the ecological systems theory (Grisham-Brown, 2009). For the purposes of this study the Ecological Systems theory by Bronfenbrenner will be adopted, justification and relevance of this theory to implement ECD programme for the 0-4 year olds in the context of legislation and policy in two District Municipalities of Buffalo City, Chris Hani and Joe Gqabi in the Eastern Cape Province.

Bronfenbrenner's Ecological System Theory

This study is guided by the Bronfenbrenner's 1979 theory, which states that children develop within a complex system of relationships affected by multiple levels of the environmental factors. According to Bronfenbrenner (1998) child development takes place through processes of progressive more complex interactions between children and the different levels of the exosystemic layers which include: the immediate environment, such as the family, the peer group, the child's characteristics, and the wide community. It is what happens within the child's settings such as the family, playground, the peers, service institutions and the larger community that influences his/her development and education (Bronfenbrenner, 2005).

Bronfenbrenner's theory has four basic levels which all can affect the development of the individual child. These ecosystem layers include; the ***microsystem, mesosystem, exosystem, macrosystem*** and the ***chronosystem*** all of which can directly or directly influence the development of the child depending on the nature of the impact. Accordingly, this theory was established to make available guidance on the transaction of children within a broader societal context (Goldfield, 2014) through those five provided systemic layers. The following is a brief explanation of the layers and the explanation on how they can influence development of the ECD child regardless of the existence of policies and legislations.

Microsystem- this the innermost level, the one that is closest to the chid. This system involves those that are part of the children's most immediate environment such as the child parents, the playmates, parenting style, socio-economic status and other primary care givers who in his case are the ECD practitioners who care for the children in the ECDCs. Therefore, the interaction between the child, siblings,

parents and caregivers in the ECDCs impacts on the child development. The ECDC in this instance is a microsystem for the child through its physical environment. It is the space for the child's initial learning about the world (Sotuku, Okeke and Mathwasa, 2016). At this level, relationships may influence the child in two ways in two ways. Relationship with the child during this critical period is very important (Christensen, 2010; Mlalazi, 2015). Accordingly, parental involvement in the ECDC is considered critical to the child's development because he/she will work with the ECDC to assist the child to have a health development.

Mesosystem – this systemic layer is unique in the sense that it involves those systems that interact with people in the microsystem (Clamptett, 2016) such as ECDC in communities and schools and playmate settings and the relationship between the family experiences and the ECDC experiences. For instance what takes place in the microsystem such as the living conditions of a child at home influences what happens in the ECDC and vice versa. The relationship will assist the child to feel safe as it bridges the gap between the home environment and the school environment, allowing children to feel safe and needing to achieve (Shumba, Rembe and Goje, 2014). Therefore, parents and the teacher's interaction will result in the influence of the mesosystem. Such interaction can always seek to promote development of the ECD learner, so that the child continues to be guided even at home.

Exosystem – According to Volger, Crivello and Martin (2008), Bronfenbrenner states that they are certain layers that do not work directly but these have some impacts on the child's development. The examples of this system include parents' work place, family friends, policies such as those from the Department of Social Welfare, and from the Department of Health and these from the department of Education. In the current scenario, it may also imply the institutions of researchers. Though the ECD child does not directly deal with these departments, their involvement affects and influence children's development (Chinhara, 2015). For instance parents may be unable to take care of their children due to either long or late working hours (Berk, 2000). The provisioning of social welfare services such as supplementary food child protection regulations can also influence the young child's development because limitation or the absence of these will definitely impact on the child (Chinhara, 2016). As such, it is paramount that the ECDC should take into cognisance some

of the external factors that may negatively affect the child and where necessary can take steps to address them through advocacy and education of parents on how the affect the ECD child's development.

Macrosystem - The last system is termed the macrosystem which is a societal blue print of a particular culture or subculture and comprises of values, law, customs and resources, life-styles and opportunity structures (Bronfenbrenner, 1994). To a larger part these systems of values of a certain culture, group of people may have an impact on the development of ECD children. For instance they are certain cultural belief such as making young children not go for immunisations or vaccinations. Undoubtedly these can impact on the development of these children as they will be affected with childhood diseases. This system is all-encompassing because it covers the micro, meso and exosystems characteristics. In other words the ECDC must operate and be fully aware of the customs and belief of the community so that strategies can be put in place to assist those parents that may be insisting on culture which affect development of the young children. In the context of this project, the communities might need education on the issue of government policies and legislations that govern the operational standards of ECD programmes for the children aged 0-4 years.

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Chronosystem- The fifth ecological level Bronfenbrenner focused on is the chronosystem, constitute other levels. The chronosystemic level refers to the way, each level has an influence on the one before and after it in a back and forth motion. It also implies to the historical context relating to the time the child is raised. For instance, hunger and poverty may have an impact on the development trajectory of children in rural and township ECD centres. For this study, the researchers will investigate the patterning of environmental events and the transitions over the life course: socio-historical conditions and the (socio-historical conditions and time since life events. The role of non-governmental organisations and international policies and legislations in assisting in the development of the young children will also be investigated.

Linked with the foregoing, the ecological systems theory will be used in this longitudinal study because it embraces the fact that children are also active participants in their own development, while admitting that parents and the community involvement, out of school (ECDC) activities and culture must not be left out of the equation in promoting early

childhood development programmes. The ecological systems theory will be utilised in this study because it is a holistic approach which can analyse multilevel systems and the way they interact to influence development of children in the 0-4 year age-group. The theory fits well into this longitudinal study because the idea is to find out how all the systems work to promote good ECDC practices in the Eastern Cape Province. it has the potential to address issues of socio-economic inequalities which affect development of children worse than any other cause, and can be at the core of policies and legislations governing ECD programmes (Erasmus, et al,. 2016) targeting children at community level. In other words, this theory helps to bring into the limelight an understanding of the consequences of childhood environmental factors such as poverty, lack of access to basic needs and services, poor parent-child relationship and social structures (Clampett, 2016).

The sections that follow present a review of literature related to the provision of ECD services in ECD centres.

Nutrition and Health

As international development community embarks on a journey towards achieving newly defined Sustainable Development Goals (SDGs), large differences remain in nutrition, health, education and ECD outcomes not only between countries, but also within countries according to characteristics such as location, gender and socio-economic status (World Bank, 2014 and Wodon and Sheker, 2016). Nutrition, health and safety can be defined as strategies put in place by the teachers, parents and other school stakeholders so that there can be comprehensive long term benefits for early childhood development. (United Nations Educational, Scientific and Cultural Organization (UNESCO), 2010). Marozt, Cross and Rush, (2012) state that nutrition is all process used by human being to take in food and digest, transport, utilize and excrete food substances. Whereas heath is quality of total physical, mental and social wellbeing where each element is considered to have an equal contribution (Chikutuma, 2013).

These definitions indicate that nutrition and health have the same cyclic connection and play a pivotal role in education of children in ECD centres (Aguayo and Paintal, 2016). Hence, different strategies employed by ECD centres from improving nutrition and health of 0-4 years have been linked to positive child development. Moreover, the United Nations Convention on the Rights of the Child (1989) highlights that every child

has “the right to the enjoyment of the highest attainable standard of health”. To achieve this, current literature advocates for the development and testing of integrated interventions through policy (Hurley, Yousafzai and Lopez-Boo, 2016) to promote best practices in ECD through health and nutrition. Moreover, one of the reasons why the study seeks to identify the best practices tied to nutrition and health is because the Education For All (EFA) (2015) states that “despite a drop in child mortality rates of nearly 50%, 6.3 million children under the age of 5 died in 2013 from causes that are mostly preventable and globally, 1 in 4 children under the age of 5 were stunted in 2013 - a sign of a chronic deficiency in essential nutrients”.

Policies provide guidance to ECD centres and can protect and guide the centre in a number of ways. There are a variety of policies that should be in place in ECD centres and these should be readily accessible to all stakeholders (Clampett, 2016). Hyde and Kabiru (2003) state that a policy is some form of action that provides strategies and defines action that needs to be taken. In ECD, a policy gives guidelines about how policy makers and implementers deal with ECD issues within the ECD centres (Kathyanga, 2011). Consequently, the ECD policies are expected to illuminate in a transparent manner interventions that integrate health, nutrition and education so as to promote early childhood development in ECDC. In South Africa, The Government’s recognition of ECD as a universal and inter-dependent body of rights has long been recognized in a host of policies and laws dating back to 1995. Accordingly, The Bill of Rights in the South African Constitution states that everyone has the right to have access to sufficient food and water and that every child has the right to basic nutrition, while The Constitution of South Africa of 1996 sets the stage for addressing sufficient food and water in the country as outlined in Section 27(1) (b).

Furthermore, the recent National Integrated Early Childhood Development Policy (2015:19) highlights that Government recognizes ECD as a fundamental and universal human right to which all young children are equally entitled without discrimination and that the training of ECD practitioners should be invested in, upgrading their qualifications and developing clear career paths. This policy goes on to say that ECD services need to expand and reach out to all vulnerable children, including children with disabilities and ensuring that they and their families receive a comprehensive package of ECD services. Thus, the study also seeks to identify if the ECD centres do

have the national policy which guides them on how to promote inclusive education. Reason being, these policies and laws recognize and seek to give effect to the rights of every infant and young child to develop to his or her full potential, to become physically healthy, mentally alert, socially competent, and emotionally sound and ready to learn. As such good quality ECD and Education through nutrition and health is a basic physical need and contributes to the quality of education system as a whole (Wanjiku, 2016).

Research studies indicate that the deficiency of passable nutrition and health critically affects a child's early development which can lead to substantial and deleterious adult outcomes, such as a dearth of learning potential in adulthood (Clampett, 2016; Atmore et al, 2012). Children who lack certain nutrients (such as iron and iodine) or those who suffer from general malnourishment, or simply hunger, have been identified as not having the same readiness for learning as their healthy, adequately nourished counterparts. Thus, it is paramount for ECD centres to review the foundation and practicability of combining nutrition, health and safety interventions to assist in clarifying platforms that might be leveraged for optimizing integration (Hurley, et al. 2016) and identifying those best practices that can promote holistic early childhood development.

Early childhood development services provide education and care to children in the temporary absence of their parents or adult caregivers. The child in a centre spends a large part of the day away from home. For this reason the health, safety and nutrition are important everyday jobs (National Development Plan of Social Development, 2006) for ECD centres, its practitioners and teachers. In addition, globally ECD centres serve millions of meals to children each day and are in a unique position to promote nutrition and health learning experiences during these meals (Child Care Aware of America, 2015). These services should be holistic and demonstrate the appreciation of the importance of considering the child's health, nutrition, education, psychosocial and other needs within the context of the family and the community (National Development of Social Development, 2006).

In South Africa, according to the (Children's Institute, 2012) a staggering 13 million children live in poverty. A study by (Walker, et al. 2011) showed that some ECD programs actually deliver nutritious supplementary food to address nutrient gaps, cognition school readiness and

learning outcomes. These studies show that health and nutrition are important to avoid children in ECD centres being placed at a risk of death and also acquiring diseases that may require special attention in the case of severe infection (Perry and Halsey, 2004). This has resulted in (Human Science Research Council and Early Learning Resource Unit, 2010) attesting that provisioning of quality early childhood development programmes, nutrition, health and safety cannot be under stated.

Moreover, the connection between poverty and issues such as poor health, inadequate nutrition, reduced access to healthcare and education is well documented (Atmore et al. 2012). Children in rural areas are often hardest hit by these distressing factors. Similarly research work done by (Brink 2016, Clampett, 2016, Fourie and Fourie, 2016, Biersteker and Dawes 2008) is indicative that recently, ECD and education programmes, as a means to help close the performance gaps between children from different social and economic backgrounds has been increasingly on the forefront of South African education agenda. In other words, the study also want to establish if really, there is political will, good governance, adequate resources and capacity building programs which have been identified principal ingredients that are required to promote health and nutrition in ECD centres in South Africa.

In ECD centres (Adelman, Gilligan and Lehrer, 2008 and Bundy, Burbano, Gosh and Gelli (2009) show that health and nutrition interventions may include:

- Food fortification and ensuring that children receive the right quantities of essential vitamins and minerals
- Regular de-worming for children to control intestinal work infestation
- Integrating nutrition in the ECD programs and curriculum.

Similarly research in Kenya, Tanzania, Bangladesh and Ghana is not immune to the above ,(Kabiru, 2003; UNICEF, 2006) posit that ECD centres in these countries have employed strategies such as deworming, adequate sanitation, nutrition, infusing of health care and nutrition in ECD programs and teaching and learning. The findings of the these studies indicate that employing these strategies led to increased attendance in ECD centres. Unfortunately, these best practices are hindered by the fact that a majority of policymakers especially those in low-and middle-income countries are faced with lack of adequate resources to deliver viable programs that are in a position to encompass the age-related and health

needs of young children and their families (Atmore, et al. 2012; DiGirolamo, Stansbery, Lung'aho, 2014). In other words, if ECD centres have a common understanding at various levels about child development, health, nutrition and safely, then all stakeholders involved in ECD begin to hear a simple, clear, and concrete message about the importance ECD. But, low maternal education is also a factor in poor nutrition, as findings in Burkina Faso, Kenya, Malawi, the United Republic of Tanzania and Zimbabwe have shown (Abuya, Ciera and Kimani-Murage, 2012)

Undoubtedly, as was found out in a study by (Aboud and Yousafazai, 2015) on Global Health and Development in Early Childhood, nutrition, health and safety are the epitome of ECD centres. As such they are expected to play a role of ensuring that integrated nutrition and early child development intervention have additive or synergistic benefits for child development. However, it is necessary to recognize that integrated interventions must be designed to not only affect a single child outcome but also multiple outcomes, including growth, health, and development of all children including those with special needs (Hurley, et al. 2016). For instance Chinhara found in his study that in countries like Belarus provides ECD health programmes to children with special education needs, where such children have compulsory free access to special health, medication, nutrition, and education services. There are also polyclinic-based early childhood intervention centres, which cater for children with special education needs, through early intervention and identification programme. Whereas, in Ireland, there is a national programme provides adequate clinical and therapeutic supports for young children with special educational needs, irrespective of school placement (NCSE, 2013). In view of the indicators stated above, the study will also ascertain if the ECD centres in questions have adopted any best practices especially with regard to special needs education and promotion of inclusive education for ECD in Buffalo City Eastern Cape South Africa.

Meanwhile, literature shows that child care providers serve millions of meals to children including those with special needs each day and are in a unique position to promote nutrition learning experiences during these meals (Child Care Aware of America, 2015). In addition, recent literature shows that few early childhood interventions that occur within the first 2–3 years of life are not child-directed alone but instead target the ECD practitioners as well.

Similarly, the provision of optimal infant and young children's feeding practices depends upon the caregiver's knowledge and capacity to provide age-appropriate feeding and nutritional sufficiency, quality, and diversity so as to meet the needs of all children because, this influences children's existence, health, growth and development (Hurley, et al, 2016). Therefore, to able to come up with best practices that promote ECD through nutrition, health and safely, it is paramount that the caregivers of children in ECD are in a position to identify and respond to the children cues, especially during feeding time such as, responding appropriately to nonverbal and verbal cues of hunger, satiety.

These have both been singled out as effective ways of supporting responsive caregiving and this can avoid under and over feeding of these children (Bentley, Wasser and Creed-Kanashiro, 2011 and Engle and Pelto, 2011).

In order for ECD centres to be effective in providing services that facilitate children's holistic development, nutrition needs to be provided through meals and snacks (Atmore, 2013). Supporting the above is (DiGirolamo, et al, 2014) who highlight that in Malawi strides have been made through the Government and the World Bank to ensure that all children are exposed health and nutrition programs. This has been achieved through community volunteers who are employed and trained to work hand in hand 200 ECD centres by disseminating critical health and nutrition messages enrolled in Community-based Child Care Centres get nutritious snacks and meals. This is an indication that ECD centres in conjunction with relevant stakeholders are responsible for identifying strategies on how to best prioritize messages and the reinforcement of best practices in a way that is simple, coordinated, and easily heard by caregivers and those delivering the messages with regard to the vital role that health, nutrition and safely play in ECD.

Conclusively, this means that looking for areas of synergy and how these areas of health, nutrition, and development are interconnected and reinforce one another provides a concise and meaningful way to promote best practices in these areas (DiGirolamo, et al, 2014).

On the other hand, a study done in Zimbabwe on Management and Administration of Early Childhood Development Centres: The Roles of School Heads shows that to support the implementation of ECD and ECDC policy guidelines were put in place. These include The Secretary's Circular Number 14 of

2004, Statutory (SI) 106 of 2005 (Zimbabwe), Director's Circular Number 12 of 2005 (Zimbabwe) and Director's Circular Number 48 of 2007 (Samkange, 2016). In addition, the Statutory Instrument 106 of 2005: Education (Early Childhood Development Centres) Regulations 2005 highlights that as a way of enhancing health and safety in these institutions, there should be water and sanitation facilities at the ECD centre. For example, flush water closets or squat hole toilets have to be provided in the ratio one squat hole toilet to 12 children for a centre; and many other requirements relating to running water, separation of toilet facilities between staff and children and general well-being.

On the contrary a study done by Gunhu, Mugweni and Dhlomo (2011) on Integrating early childhood development education into mainstream primary school education in Zimbabwe: Implications to water, sanitation and hygiene delivery was indicative that policies on ECD did not match practice. This study found out that the ECD centres in their study did not have adequate WASH facilities and this compromised the quality of ECD programs. The study recommended that ECD centres and schools need to have accessible and safe latrines and toilets for all children including those with disabilities. Commensurate with the foregoing, WaterAid, in its response to WASH and disability, has been addressing the barriers to accessible water and sanitation facilities to ensure that children with disabilities, especially girls, are able to attend school (Jones and Reed, 2005). This clearly shows that various strategies should be put in place to improve the quality of ECD because it covers range of sectors including early learning and education, nutrition, water, sanitation and hygiene (WASH), health, social protection, parental and community engagement (Lynch, 2016). Supporting the extant literature is the recently approved South African National Integrated ECD policy (2015: 23) where the criticality of health, food and nutrition support and how it is encompassed in international and national instruments is underscored.

In the same line of thought (Chinhara, 2016; Govindasamy, 2010) state that health factors in educational institutions should comprise of cleanliness, environmental influences, consideration of children with health challenges or learning needs, nutrition, learning behaviour, licensing of the programme and immunization programmes for the young learners. Reason being, the government policies require all learners to learn in safe, spacious learning environments.

Moreover, the formative years are viewed as critical for children to have health experiences as well as to learn about health issues. This will avoid a situation whereby (Ackerman and Barnett, 2009) ECD environments offer poor health standards which maybe inhibitive to inclusive education. Therefore, forming relationships with a local clinic is valuable for ECD centres and can contribute toward their effectiveness. These healthcare professionals are trained to identify conditions, such as stunting, malnourishment, and a variety of disabilities, which may go unnoticed by the ECD staff and parents (Department of Social Development and Economic Policy Research Institute, 2014). In Ireland, children with special educational needs are a key health priority (NCSE, 2013).

However, according to (Schober, Sella, Fernandez, Ferrel and Yaroch, 2016) observations have been made that though ECD centres are meant to offer an ideal setting to promote more healthful eating through nutrition education, many child care providers lack knowledge about nutrition and receive infrequent nutrition training. Thus, appropriate delivery techniques and platforms are critical to the success of nutrition interventions (Hurley, et al. 2016). Best practices for child nutrition in ECD interventions should include nutrition-sensitive strategies that will infuse agriculture, social safety nets, early child development and schooling so as to be able to address the underlying determinants of poor health and nutrition, limited access to healthy foods, lack of adequate care and lack of professional development of ECD practitioners and teachers. The study will also establish the perceived impact of ECD programmes that are specifically meant to address professional development of ECD practitioners and teachers.

However, (Cuimwari, 2010) posit that a number of countries do not have in place programs that combine services such as nutrition and health for young children including those with special needs yet, studies show that investment in health, nutrition and safety and ECD have positive returns in future. Echoing the above, (Hurley, et al. 2016 :320) posit that despite global policies and different instruments underlining the importance of health, nutrition, safety in ECD centres and development interventions, the best practices for implementing integrated nutrition and development interventions are poorly understood. Additionally, Fourie and Fourie (2016:800) state that ECD practitioners and teachers encounter problem in teaching learners suffering from HIV/AIDS and other disabilities,

socio-economic problems leading to non-payment of learners' school fees, a lack of parental involvement as well as a lack of any form of financial support. These authors further posit that these have resulted in a situation where most of the practitioners did not experience their work environments to be positive. Hence, this study also seeks to find out which strategies have been put in place and adopted to promote best practices in ECD centres.

Meanwhile, UNICEF (2000) indicates that children from high income families benefit more because they are exposed to high quality ECD care programs from a tender age as compared to children from low income families. Children living in impoverished communities often arrive at ECD centres malnourished. Malnourishment can cause 'direct and irreversible structural damage to the brain; impair motor development; cause significant developmental retardation; affect cognitive development; impair exploratory behaviour; impair learning abilities and educational achievement; and can have long-lasting impact on a child's health' (Duggan, Watkins, and Walker 2008; Atmore, 2013). Hunger and malnutrition affects a child's performance, cognitive ability and reduces their ability to actively learn. Hence, the reason why, the policies, programs and legislative documents recognize the importance of inclusive and quality ECD practices by not only viewing it as a basic human right but also by recognizing the short and the long term benefits of ECD learning and growing experiences for children through health and nutrition. (Vorster, Sacks, Amond, Seabi, and Kern, 2016).

These views are supported by (Engle, 2008) that in Denmark observations have been made that supplementary feeding programmes are effective in disadvantaged communities and this is infused with maternal education to increase child stimulation. Therefore, ECD centres are seen as intervention centres which are expected to provide health and nutritious meals to these children. Moreover, the implementation of ECD and education may prove critical especially among low income countries (Murithi, 2016). On the contrary a recent study by Makokoro (2015) revealed that in most ECD centres especially in developing countries, the issue of health and nutrition is rarely considered and no supplementary feeding for learners even in full-day programmes is offered.

Moreover, shortage of classrooms and toilets high teacher to pupil ratio, lack of sufficient funding and monitoring and evaluation which has resulted in health

barrier to poor women and children's access to life-saving facilities (UNICEF-Zimbabwe, 2011; Gunhu, et al, 2012, DiGirolamo, et al, 2014) substantiate that health facilities offered in ECD centres lack the facilities, thus, risking children's lives.

According to Samkange (2016) in some ECD centres in Zimbabwe, parents had taken it upon themselves to support the ECD centres through the health and nutrition programme. For instance, they took turns to help and prepare food at the centre. This was common in four (67%) centres; whilst in the other two (33%) children brought their own food. Furthermore, (Vegas and Silva, 2012) posit that in selected communities of Panama, Kitchens were erected by Government and the community mothers where tasked to prepare two snacks which are rich and comprise of a balanced diet throughout the day from morning to noon. In South Africa, (Atmore et al. 2012) indicate that health and nutrition in schools is promoted through different interventions.

These interventions include school feeding schemes, the provision of deficient micronutrients through fortified sachet powders/pap to homes and community based ECD facilities, the facilitation and start-up of food gardens, as well as skills development and training on nutrition and agricultural development. Government, specifically the Department of Social Development, in the form of an ECD subsidy, and the Department of Education, in the form of the National School Nutrition Programme (NSNP), also contribute to, and run, nutrition programmes. It emerged from the findings of this study that, more than three quarters (79%) of the unregistered ECD facilities provide meals themselves, and only 37% indicated that meals were provided by the parents and sent from home. In other words the high percentage of ECD centres and interventions in place play a critical role in ascertaining and responding to children who are most vulnerable, and have the potential to break intergenerational cycles of poverty in their communities (Albino and Berry, 2016).

However, a disturbing factor was that the quality and quantity of the meals varied and there appeared to be lack of community health promoters or nutrition counsellors failing to integrate with ECD staff. This is despite the fact that (DSD and EPRI, 2014) highlighted that in any ECD centre there should be provision of a daily menu and should clearly show that meals offered incorporate nutritional requirements of children and parents must have access to the food provision. In

addition, the meal offered to these children should comprise of carbohydrates, proteins and vegetables. Proteins are essential for development of tissues in children and vegetables which contain vitamins and minerals are critical for a healthy diet (DSD and EPRI, 2014).

This is an indication that perhaps there is need to employ more usable knowledge mobilization strategies and making use of multidimensional, interactive strategies in order to ensure health and nutrition will be more closely aligned with the vast diversity of situations within which early childhood development and education take place in the country (Brink, 2016). Simply put, addressing all three variables simultaneously will truly and positively affect a child's growth and development, while at the same time reduces children's mortality (WHO, 2008).

Unfortunately, those ECD centre in improvised communities are not exposed to these facilities, as such cases of malnutrition and poor health in most environmental settings where young children spend their time continue to be experienced.

References

Aboud, F.E. and Yousafzai, A.K. (2015). Global health and development in early childhood. *Annual Review Psychology* 66, 433–57.

Abuya, B., Ciera, J. and Kimani-Murage, E. (2012). Effect of mother's education on child's nutritional status in the slums of Nairobi. *BMC Pediatrics*, 12, (80), 1-10.

Adelman, S., Gilligan, D.O., and Lehrer, K. (2008). How effective are food for education programs? A critical assessment of the evidence from developing countries. Policy review paper 9. Washington DC. International Food Policy Research.

Albino, A. and Berry, L. (2016). Early childhood development services in South Africa: What are the next steps? *South Africa Child Gauge*, 78-81.

Atmore, E. (2012). Challenges facing the early childhood development sector in South Africa. South African Journal of Childhood Education, 2(1), 121-140.

Atmore, E. (2013). Early childhood development in South Africa–progress since the end of apartheid. *International Journal of Early Years Education*, 21(2-3), 152-162.

Bentley, M.E., Wasser, H.M., and Creed-Kanashiro, H.M. (2011). Responsive feeding and child under nutrition in low- and middle-income countries. *Journal of Nutrition,* 141: 502–507.

Biersteker, L. 2012. *Early Childhood Development Services: Increasing Access to Benefit the Most Vulnerable*

DiGirolamo, A.M., Stansbery, P., and Lung'aho, M. (2014). Advantages and challenges of integration: opportunities for integrating early childhood development and nutrition programming. *Annals of The New York Academy of Sciences,* 1308, 46-53.

Engle, P.L. and Pelto, G.H. (2011). Responsive Feeding: Implications for Policy and Program Implementation. *Journal of Nutrition,* 141, 508-511.

Fourie, J.E and Fourie, U. (2016). Obstacles in Implementing Innovative Practices in Early Childhood Development Centers. *Anthropologist,* 24 (3), 799-809.

Gunhu, M. R., Mugweni, R. & Dhlomo, T. (2011). *Integrating ECD into mainstream primary school education in Zimbabwe: Implication to water, sanitation and hygiene delivery. Journal of African Studies and Development,* 3(7),135-143

Hurley, K.M., Yousafzai, A.K., and Lopez-Boo, F. (2016). Early Child Development and Nutrition: A Review of the Benefits and Challenges of Implementing Integrated Interventions. *Advances in Nutrition,* 7, 357–63.

Mooijman, A. (2012). Water, Sanitation and Hygiene (WASH) in schools: A companion to the child friendly school's manual. New York: UNICEF. Retrieved from: http://www.unicef.org/publications/files/CFS_WASH_E_web.pdf

WHO (2008). *Closing the gap in a generation: Health equity through action on the social determinants of health. Final report of the Commission on Social Determinants of Health. Commission on Social Determinants of Health,* World Health Organisation: Geneva.

Wood, E. (2013b). Play, Learning and the Early Childhood Curriculum, Third Edition, SAGE Publications Ltd: London

Woodhead, M. (2014). How Inequalities Develop through Childhood Life Course Evidence from the Young Lives Cohort Study, Innocent Discussion Paper, UNICEF.

World Health Organization (WHO) (2002). *World Health Report 2002 – Reducing Risks, Promoting Healthy Life*. Geneva: WHO.

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