

ENSURING ADEQUATE SECURITY MEASURES RE-ENGINEERING EARLY CHILDHOOD EDUCATION IN COVID-19 PANDEMIC ERA

UGWUDE, Doris Ifeoma (Ph. D), EKWEOZOR, Edith Chidimma & OLUWATAYO, Jennifer Chizoba

Department of Early Childhood and Primary education
di.ugwude@unizik.edu.ng 08035648221

ABSTRACT

Early Childhood Education programmes are an important part of the infrastructure of communities. They provide safe and supportive care environments for children that support social and emotional development, provide access to critical services, and improve life outcomes. They also employ people and enable parents, guardians, and caregivers to work. Early Childhood Education programmes takes care of children under the age of 12 years old who are not yet eligible for COVID-19 vaccination at this time. Therefore, COVID-19 prevention strategies are necessary to protect people, including children and staff, who are not fully vaccinated, especially in areas of moderate-to-high community transmission levels. Early childhood centres may implement the use of mask in some situations that is by wearing masks indoors by all individuals who are not fully vaccinated. This paper looked at the concept of early childhood education, effects of COVID-19 pandemic on children, COVID-19 and children's digital world, COVID-19 prevention strategies in early childhood education and conclusion.

Keywords: Early childhood education, COVID-19, Pandemic, children, preventive strategies

Introduction

The year 2020 was welcomed by a deadly viral outbreak called coronavirus disease 2019 (COVID-19), previously known as 2019-novel coronavirus (2019-nCoV). COVID-19 was reported from Wuhan, the capital and major business city of Hubei province, China (Wuhan city, 2020). In a very short time, the disease spread across China and cases were reported with an exponential increase in morbidity and mortality rates. The disease has evolved and continues to be a very serious emergency across the globe. On March 11 2020 the WHO declared COVID-19 a pandemic, having met the epidemiological criteria of having infected > 100,000 people in at least 100 countries (Callaway, 2020).

On the African continent, although there had been pockets of recorded infections. The first confirmed incident of the COVID-19 in Nigeria was announced on February 27, 2020, when an Italian citizen arriving Nigeria through the Lagos Airport tested positive for the virus Nigeria Centre for Disease Control (NCDC), (2020). On March 9, 2020, a second

case of the virus was reported in Ogun State, a Nigerian citizen in transit from Milan to Lagos who had contact with the Italian citizen. Afterwards, the Nigerian Health Minister announced that 60 persons who had contact with the index Italian patient were under isolation, 40 persons in Ogun State and 20 in Lagos State. However, there has been an increase in confirmed cases and consequent mortality. On March, 9, 2020, the Nigerian President in a proactive measure to curtail the spread of this virus declared national border closures, State of emergency in the health sector was ordered and cessation of all movements in the FCT, Lagos State and Ogun State for an initial period of 14 days. Relatedly, other states of the federation taking cue, initiated partial lock-downs with each closing their respective borders. During this period, businesses, markets, religious centres, schools and other public institutions and spaces are to be on temporal shut down. Also, all forms of corporate, social and religious gatherings were prohibited, and strict adherence to social distancing is expected in exclusive cases (Agusi, Ijoma, Nnochin, Njoku-Achu, Nwosuh&Meseko, 2020).

World Health Organization (WHO) (2020), declared the rapidly spreading COVID-19 new coronavirus a global pandemic, as, by that moment, it had spread to 114 countries, infecting more than 118,000 people, and causing 4,291 deaths. This has implied the temporary closure of daycares, child development centers, preschools, and schools. The COVID-19 pandemic has had an impact on the global economy and local markets, affecting national budgets, economic activities, and, ultimately, family income. Therefore, families and young children are experiencing unprecedented challenges and risks. This implies the need to maintain, strengthen and develop all required assistance to enable parents and caregivers to protect their children and have access to the necessary means and tools to promote their development, health, and wellbeing (UNICEF, 2020).

Symptoms exhibited by COVID-19 disease range from fever, cough, respiratory symptoms, shortness of breath, and breathing difficulties (World Health Organization (WHO), 2020). Fatal outcomes can include lower-respiratory tract illnesses, such as pneumonia and bronchitis, or acute respiratory distress syndrome (ARDs) and severe acute respiratory syndrome (SARS) in severe diseases. These complications are more pronounced in patients with underlying health conditions such as cardiopulmonary disease, immuno-compromised individuals, infants and the elderly (Centre for Disease Control Prevention (CDC), 2020). Although this disease is more severe with adults it can also be found in children. While fewer children have been sick with COVID-19 compared with adults during the pandemic, children can be infected with the SARS-CoV-2 virus that causes COVID-19, can get sick with COVID-19, and can spread the virus to others. It therefore becomes imperative that children are taught on how to go about this phase early enough. This can be done in schools that is, in early childhood education.

This paper employed the theory of human needs theory by Abraham Maslow proposes a hierarchy of needs beginning with the physiological needs; food, water, sleep, air, warmth, clothing and shelter. Followed by the safety needs; such as security and safety, belongingness and love needs like intimate relationships and friends, self-esteem such as prestige and feeling of accomplishment, and finally, self-actualization. Maslow (1943, 1954), stated that people are motivated to achieve certain needs and that some needs take precedence over others. The most basic need is for physical survival and this will be the first thing that motivates one's behaviour. Once that level is fulfilled, the next level up is what motivates us, and so on. The physiological needs are the biological requirement for human survival. If these needs are not satisfied, the human body cannot function optimally. Maslow considered physiological needs the most important as all other needs becomes secondary until these needs are met.

Once an individual's physiological needs are satisfied, the needs for security and safety become salient. Examples of these safety needs are emotional security, law and order, freedom from fear health and wellbeing among others. Security is important in enhancing children's learning which is the second need according to Maslow. Security measure can be seen as measures put in place by staff, parents, learners and other stakeholders in order to minimize risk conditions that may cause bodily injury, psychological distress or death. This then calls for the security measures to be taken to handle children in this era. Security is important in one's life and nothing can be realized positively without adequate security. In early childhood education centers and schools, security measures are necessary especially in this era of COVID-19 to curb and protect children in these centers. Children needs to be safe and secure in the school environment. This means that the school environment and early childhood centers needs to be healthy and secure at all times. This is to enable the children to have a sense of belonging and feel safe at all times. It therefore becomes imperative to look into the adequate security measures for re-engineering early childhood education in this era of COVID-19 pandemic. This study looked at the concept of early childhood education, effects of COVID-19 pandemic on children, COVID-19 and children's digital world, COVID-19 prevention strategies in early childhood education and conclusion.

Concept of Early Childhood Education

The global pandemic known as COVID-19 has affected every area of life, with perhaps the most dramatic impact on education. Saavedra, the Global Director for Education called it "the largest simultaneous shock to all education systems in our lifetime." Although discussions are done frequently on how COVID-19 has changed elementary and secondary schools, the topic of COVID-19 and early childhood education is often overlooked. However, childcare programmes stand among the hardest-hit and least supported industries, despite the fact that they provide essential needs to children, families, and society.

Early Childhood Education promotes physical health, emotional safety, social connections and engaged learning in children. Early childhood education (ECE) is the education given in an education institution to children prior to their entering into the primary school. The early years are crucial for the development of an individual. It is the foundation for the success or failure of the whole system of education and any support given at this stage with appropriate practice helps to promote development (FRN 2013). Early Childhood Education (ECE) is the understanding that learning is a social process and that children from the very earliest are active participants in the shared construction of knowledge (Obinaju&Umoh, 2012). Early childhood education is the education given to children to develop them morally, socially, intellectually, physically and psychologically for the growth and development of the child in later life (Aleke, 2016).

The ECE has been found to be crucial for satisfactory adult development. It is very useful to the child's physical, emotional, social and intellectual well-being. Early childhood is the period for laying the foundation for the overall development of the child. It is believed that early childhood education facilitates the learning that occurs in the later stage of a child's life. The early childhood years set the foundation for life, ensuring that children have positive experiences and that their needs for health, stimulation and support are met and that they learn to interact with their surroundings. Education plays a particularly significant role in children and adolescents' health and well-being and has a lasting impact on their lives as adults (Hamad et al., 2018). There is little question that the global health pandemic has caused unprecedented disruption to all spheres of human life and to education worldwide (d' Orville, 2020; Zhu & Liu, 2020). UNESCO, (2020a) estimates that 1.2 billion school children had their education put on hold due to COVID-related school closures and, between late March through April of 2020, more than 90 percent of the total enrolled learners worldwide experienced nationwide school closures and were confined at home. In many ways, adapting to COVID-19 has become a huge, international social experiment that not only have caused loss of learning throughout lockdown but also can be expected to diminish educational opportunities in the long term (Jandric`, 2020). The COVID-19 pandemic has really caused serious effects to children and some of the effects are discussed below.

Effects of COVID-19 Pandemic on Children

The COVID-19 pandemic is harming health, social and material well-being of children worldwide (Burgess & Sievertsen, 2020). The COVID-19 pandemic is first and foremost a health crisis, this has affected a lot of things which includes; school closures, social distancing and confinement increase the risk of poor nutrition among children, their exposure to domestic violence, increase their anxiety and stress, and reduce access to vital family and care services (Organization for Economic Cooperation and Development (OECD), 2020). Widespread digitalization mitigates the education loss caused by school-

closures, but the poorest children are least likely to live in good home-learning environments with internet connection. In addition, COVID-19 may present serious challenges for inclusive growth as the poorest children are likely to be hardest hit and their life chances severely limited, unless immediate and comprehensive measures are taken(OECD, 2020).

As the COVID-19 crisis spreads around the world, it is transforming children's day-to-day lives. The pandemic and the associated policy responses of confinement and social distancing touch on almost every part of children's worlds. COVID-19 directly affects formal care arrangements, education and leisure services offered by early childhood services, schools and other organizations are interrupted (OECD 2020). COVID-19 exacerbates the risks of poor nutrition, experiencing maltreatment, and being exposed to violence at home. Recognizing that the impacts of these measures will hit some groups of children harder than others is critical. These groups of vulnerable children include children living in poverty, children with disabilities, children in out-home care, children in detention, and also refugee children and children at risk of child labour. Furthermore, the pandemic has the potential to create new vulnerable children and countries must prepare to respond to growing needs for support (OECD, 2020).

Global COVID-19 trends suggest that children are far less likely to be infected than adults (Gudbjartsson et al., 2020). Studies also show that a significant number of children are asymptomatic even when they are affected. Children who are symptomatic experience milder symptoms than adults: they may show flu like symptoms like such as fever, cough and cold, or may have gastrointestinal symptoms like vomiting and diarrhea. Very few children would have respiratory difficulties and may require intensive care admission. For instance, a Chinese study showed that the proportion of children who went on to develop severe or critical COVID-19 illness with breathlessness, Acute Respiratory Distress Syndrome (ARDS), and shock was much lower (6%) than among Chinese adults (19%)-especially older adults with chronic cardiovascular or respiratory conditions (Dong, Mo and Hu, 2020).

The COVID-19 pandemic and its economic and social consequences hurt some children more than others. In particular, COVID-19 exacerbates the risks of children experiencing maltreatment, violence at home, and poor nutrition, while lockdown measures reduce opportunities for children to participate in extra-circular activities, to come in contact with supportive adults at school and in the community, and to access the justice system and child protection services. To a varying extent, these issues intersect with income poverty and poor housing, with the common denominator being that children in poorer families are more exposed (OECD, 2020).

Access to good nutrition from conception throughout childhood is vital for healthy child physical and cognitive development with long-term effects on adult health outcome and economic self-sufficiency (Currie and Almond, 2011; Hoynes, Schanzenbach and Almond, 2016; Britto et al., 2017; Almond, Currie and Duque, 2018). Even in times of good economic conditions, many children are deprived of basic nutrition. Overall, one in ten children do not have access to fresh fruit and vegetables and/or one meal including meat, chicken, fish or a vegetarian equivalent at least once a day (OECD, 2019).

The period of a child's life between conception and the start of school represents a critical and singular window of opportunity to shape the development of a child's brain (UNICEF, 2017). At this crucial time, brain connections form at an immense speed, giving shape and depth to children's cognitive, emotional and social development-influencing their capacity to learn, to solve problems and to relate to others. This ultimately has a significant impact on their adult lives, affecting their ability to earn a living and contribute to their societies (UNICEF, 2017).

COVID-19 threatens this precious opportunity for children in early childhood to develop healthy brains and lives. To reach their full potential, children need the five interrelated and indivisible components of nurturing care: good health, adequate nutrition, security and safety, responsive caregiving and opportunities for learning (UNICEF, World Bank and WHO, 2018). The pandemic responses have disrupted health services and jeopardized families' access to life-saving health and nutrition services. The restrictions to control the spread of the coronavirus have led to the closure of preschools and childcare centres, thus upsetting opportunities for early learning. The economic fallout of the pandemic has exacerbated unemployment and poverty, resulting in stress among parents and caregivers, increased needs for parenting and family support and fewer resources available to protect and support children's development.

COVID-19 and Children's Digital World

The digital environment offers opportunities for children, such as allowing them to express themselves, acquire information, knowledge and socialize with peers. Furthermore, watching age-appropriate, high-quality programming may promote certain cognitive benefits. "Co-viewing" (i.e., engaging in screen time with a parent or caregiver) can enhance infant attention and their propensity to learn from on-screen content (Gottschalk, 2019), while unsupervised use of digital tools involves risks to children's health and well-being. Cross-national trends suggest that younger children are increasingly using digital technologies and the age of first use is dropping (Hooft Graafland, 2018); and many preschoolers become familiar with digital devices before they are exposed to books (Hopkins, Brookes and Green, 2013). As a result of COVID-19, children are by far more exposed to digital technologies than usual. School-closures have meant that access to the digital environment is essential for children's education, socialization with peers, play,

entertainment and self-expression. As a result of this, policymakers will need to address two major concerns;

- i) how to ensure widespread access to digital technologies so that all children can exercise their rights; and
- ii) how to mitigate against increased risks which may arise out of the increased use of digital technologies.

Whilst the digital environment undoubtedly provides real and important opportunities for children, there are also downsides and risks. To start with, increased activity in the digital environment may translate into growing exposure to content risks for children. Examples of content risks include hateful content that can take the form of pictures, words, videos, games, symbols and even songs. Children might also be troubled by a wide variety of harmful or illegal content, such as pornographic pop-up advertisements, unpleasant or scary news or pictures. At the same time, children may also be exposed to disinformation about COVID-19 that can spread virally and can cause them increased anxiety and fear (Livingstone, 2020), as children can have different interpretations of what makes a news outlet credible and reliable (OECD, 2020).

With the abundance of personal information processed and shared due to the COVID-19 crisis (for instance in educational settings), children can be exposed to increased privacy risks. For instance, online platforms using video conferencing services that are being increasingly used for educational purposes can lead to inappropriate data collection and privacy violations. E-learning platforms can also pose a threat to children's privacy due to the collection, use, reuse and disclosure of personal data (Hye Jung Han, 2020). Whilst these platforms are often presented as 'transformational' to parents and children, the merging of for-profit platforms and business models with public education raises serious privacy concerns (Livingstone, Stoilova and Nandagiri, 2019). In addition, social networking platforms and apps that are used for teacher-student interactions might not have strong privacy and data protections safeguards (World Childhood Foundation et al., 2020).

The potentially increased amount of time that children spend in the digital environment may also expose them to health and wellbeing risks. In particular, excessive social media use is related to the mental and physical health of children, such as through poorer sleeping patterns and body image concerns and associated disordered eating (OECD, 2018). According to UNICEF about 1.6 billion children and young people are unable to be physically present at school due to the temporary closure of schools that have impacted over 91 percent of pupils/students globally (UNICEF, 2020). Although some schools can endeavour to provide online classes, this is unavailable to the majority of children and young people in Africa (Tayo, Thompson & Thompson, 2016). Since school closures, many families in Nigeria have found themselves unable to help their wards keep track with

the education. Although, learning platforms have been launched by UNICEF and Microsoft to aid affected children and young people continue their education at home in other parts of the world (Tayo, Thompson & Thompson, 2016), this is largely unavailable in resource-limited settings like Nigeria where many learners lack computers or high-speed internet services, making a considerable number of families unable to afford or sustain its use as a means for educating their wards (UNICEF, 2020). The government in Nigeria, fully aware of these challenges have opted to have daily live teaching sessions on radio and television at scheduled time intervals in the entire country, albeit, there are many more children in semi-urban and rural areas without access to internet services and very limited electric power supply. These children are more disadvantaged and hence underserved because they have no access to formal education in this period, the impact of home schooling on education especially in families in Nigeria that lack an organizational structure remains to be seen. To minimize the effect of COVID-19, it therefore becomes important to look into the prevention strategies that can help in early childhood education. Some of the preventive strategies are discussed below.

COVID-19 Prevention Strategies in Early Childhood Education

In ensuring that the health and safety of children are taken care of, a common framework for school health was agreed upon by the international agencies that participated in the World Education Forum held in Dakar 2000 (FRESH, 2013). The health framework aimed at implementing health programmes to ensure enrolment and retention of children in schools, and promote knowledge and healthy behaviours that protect them from diseases (FRESH, 2013). With the advent of COVID-19, it then becomes necessary that security measures need to be put in place for children's safety in school in this era of the pandemic.

Early childhood settings need to consider a variety of strategies to support physical distancing and good hygiene practices to reduce the risk of coronavirus (COVID-19) transmission within the practical limitations of an early learning environment. The following actions are to be considered, adapted and implemented as necessary according to the education setting and the individual needs of the staff, children and the wider service community. According to Sutton (2020) perhaps the most important action early childhood services can take to reduce the risk of transmission of coronavirus (COVID-19) is to ensure that;

- i. Any unwell staff and children remain at home. While the risk of transmission of the virus is very low, staff or children are most at risk of severe illness should individually assess appropriateness for on-site attendance at this time, with support from their medical practitioner. Parents/carers of children with complex medical needs (including those with compromised immune systems), should seek advice from the child's medical practitioner to support decision-making about whether on-

- site education and care is suitable, noting that this advice may change depending on the status of the coronavirus (COVID-19) pandemic.
- ii. As the main risk of transmission of coronavirus (COVID-19) in the early learning environment is between adults, it is important that visitors to early childhood services are limited to those delivering or supporting essential services and operations.
 - iii. If possible, limit the access of persons other than those supporting essential service operations. Additional staff, including parent volunteers, should be discouraged from attending the service at this time. Consider maintaining a visitor record to maintain details of any visitors (if necessary) entering the service, including their contact details.
 - iv. Parent information sessions and interviews should meet physical distancing requirements of 1.5 metres between adults, or else be replaced with virtual alternatives.
 - v. Everyone can protect themselves and prevent the spread of coronavirus (COVID-19) by continuing effective hand hygiene. All staff and children should undertake regular hand hygiene, particularly on arrival to the service, before and after eating, after blowing their nose, coughing, sneezing or using the toilet. Teachers are a good role model for the children and their parents/carers, they should actively talk about why everyone needs to wash their hands and the importance of everyone doing this.
 - vi. Make sure liquid soap and running water, or alcohol-based hand sanitizer, is available at the entrance of the facility and throughout.
 - vii. Tissues should be readily accessible with bins provided in each room and in outdoor areas for easy disposal.
 - viii. It is recommended that children do not drink directly from drinking fountains or running taps at this time. Children should bring their own water bottle for use (and refilling) at the centre.
 - ix. Ensure the highest hygiene practices amongst food handlers. Sharing of food should not occur.
 - x. Use of mobile phones by staff should be discouraged if possible. Staff should be reminded to clean their phones regularly.
 - xi. As the main risk of introducing coronavirus (COVID-19) to the early childhood environment is from adults, close proximity between adults should be avoided, particularly during drop-off and pick-up. Consider the arrival and departure procedures for children and, where possible, minimize opportunities for parents and caregiver to gather in groups, especially in foyers and in children's play areas.
 - xii. Greeting parents and children at the front door in the morning and during pick up times will allow for one-on-one communication with families while practicing physical distancing and providing opportunities to consider whether children are showing any sign of being unwell.

- xiii. Maintaining a physical distance of 1.5 metres will not be practical in early childhood services. Physical distancing is most important between adults. Reducing mixing between different age or room groups is recommended as a precautionary measure to minimize risk of spread of transmission and aid containment in the rare event of a confirmed case of coronavirus (COVID-19) on-site.
- xiv. Consider small group play, staggered mealtimes and indoor/outdoor play opportunities whenever possible.
- xv. Windows should be open during the day to promote air flow where possible.
- xvi. Consider the setup of the room and the placement of the activities and limit the number of whole group activities.
- xvii. Rather than having group times where everyone is sitting on the mat, consider using informal opportunities to engage with the children/read books/do storytelling with small groups of children at a time.
- xviii. For younger children, particularly consider the rotation of toys more often and increase the frequency of cleaning toys. Sharing of toys that have been placed in mouths should be monitored and avoided.
- xix. Mixing of staff and children between rooms should be minimized where possible. It is acknowledged that staff may need to move between rooms to support breaks and, in these situations, staff should be reminded of the importance of hand hygiene. Where multiple staff are in a room, remind staff to maintain physical distancing from each other as much as practical.
- xx. As the greatest risk of transmission of coronavirus (COVID-19) in an early childhood service is between adults, close proximity between staff should be avoided, where possible, and especially in offices and staff rooms. Workstations should be spaced out as much as possible, and the number of staff in offices limited. Where possible, staff should use separate offices.
- xxi. Environmental cleaning, coupled with regular hand hygiene, remains important to reduce the risk of coronavirus (COVID-19) transmission. Clean and disinfect high-touch surfaces at least daily (e.g. play gyms, tables, hardbacked chairs, doorknobs, light switches, remotes, handles, desks, toilets, sinks). Wash and launder play items and toys including washable plush toys, as appropriate, in accordance with the manufacturer's instructions. If possible, launder items using the warmest appropriate water setting for the items and dry items completely.
- xxii. Hand hygiene before and after use of shared equipment is recommended. (For example, prior to a new activity).
- xxiii. Physical distancing is not practical when providing direct care. In this situation, standard precautions, including hand hygiene, are important for infection control. Standard precautions are advised when coming in to contact with someone for the purpose of providing routine care, assistance or first aid. Always wash hands with

- soap and water or use a hand sanitizer before and after performing routine care or first aid.
- xxiv. It is important that any staff member or child who becomes unwell while at an early childhood service returns home. While it is unlikely that a staff member or child who is unwell with flu-like symptoms will have coronavirus (COVID-19), there are some sensible steps services can take while a child awaits collection by a parent or caregiver as a precaution.
- xxv. Staff or children experiencing compatible symptoms with coronavirus (COVID-19), such as fever, cough or sore throat, should be isolated in an appropriate space with suitable supervision and collected by a parent/caregiver as soon as possible.
- xxvi. Where staff or children are experiencing compatible symptoms with coronavirus (COVID-19), important actions to take include hand hygiene, physical distance and where possible putting on a face mask. Face masks should not be used in situations where an individual is unable to safely or practically tolerate a mask (e.g., a child with complex medical needs, including existing respiratory needs, and younger children). Urgent medical attention should be sought where indicated.

Early childhood education is a sensitive period in the life of the children and so care should be taken in handling children at this stage. Children learn at the early stage and so these preventive strategies when taught to children early enough will make them to grow with it and also practice them wherever they found themselves. Teachers, parents and care givers should endeavour to always practice these preventive strategies of COVID-19 as this will help the children to learn and also practice them. Early years are formative years so therefore whatsoever that is taught to children at these early years stick to their memory which they carry along to adulthood. Care should be taken when imbibing this knowledge to them.

Conclusion

Early childhood is a decisive period for the fulfillment of children's rights. Early years are critical for laying the foundation for human development. The COVID-19 pandemic has brought about massive disruptive changes and is a threat across multiple sectors that are essential to children's optimal development. The responses to contain its spread have hampered access to programmes and services that promote nurturing care for children. ECE programmes primarily serve children under 12 years of age who are not eligible for the COVID-19 vaccine at this time. Therefore, ECE administrators will have to make decisions about the use of COVID-19 prevention strategies in their programmes to protect people in the centres.

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