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The Impact of COVID-19 on Learning and School Readiness of Children Aged 0-8 Years

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ABSTRACT
This study aimed to understand the connection between reception of children aged 0-8 years experiences of the COVID-19 pandemic and their academic achievements in regards to reading, writing, numbers and school readiness. This was an exploratory study which combined parents, caregivers, and teachers' surveys with children's assessments to measure children's language, numeracy and social emotional development. Comparisons were made between the scores of children in study programs in the previous years before the outbreak of COVID-19 pandemic. This study employs a scoping review of latest systematic literature reviews consisting of a review of reviews and meta-analysis studies on the impact of COVID-19 pandemic on children aged 0 - 8 years

INTRODUCTION

The COVID-19 crisis greatly challenged the early childhood care and education (ECCE) worldwide, schools and ECCE centers were closed for several months leading to remote learning, which decreased learning gains and increased learning challenges for children. The pandemic also highlighted the increased contrasting beliefs in education due to a number of elements. For example, there was a pool of regional and global solutions and restrictions due to COVID-19 (UNESCO, 2022), the pandemic also produced challenges in digital infrastructure and technical capacities in schools, such as lack of enough learning environments at home (Huber & Helm, 2020), parents also had very few and varying resources for homeschooling their children during school closures and this resulted into children spending less time on learning and put no efforts to learning tasks. The most severe learning loss was reported in reading and numeracy especially among low SES children (Schult et al., 2022). Therefore, school closures as result of the pandemic presented significant losses in academic outcomes especially the risk for dropout of school among

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vulnerable children, worsened the quality of life of the already underprivileged children, and negatively impacted children's socio-emotional and psychological well-being. However, there is still limited evidence of the impact of the pandemic on children especially in relation to the learning losses and most findings are contradictory (Hammerstein et al., 2021).

In general, by taking into account all aspects of children's lives, the possible effects of COVID-19 pandemic on children's well-being are substantial. The findings section will present key findings on the impact of COVID-19 pandemic on children derived from the literature reviews conducted. To effectively represent these findings, key insights will be categorized into different themes, such as learning readiness, health and nutritional services, and orphan-hood, child poverty and social protection.

METHODOLOGY

This report employs a scoping review of latest systematic literature reviews consisting of a review of reviews and meta-analysis studies on the impact of COVID-19 pandemic on children aged 0 - 8 years. The intention is to assess a body of robust literature on the impact of COVID-19 on children, define key terms and conceptual boundaries of COVID-19 effects and establish the gaps within the research. This scoping review extracts literature mostly on a core set of peer reviewed academic articles lately published in peer reviewed journals, and non - peer reviewed reports of international organizations on the impact of COVID-19 on children recently published on organizations' websites as the primary origin or root of data. All the academic articles and reports included in this scoping review were published within the previous four years between 2020 and 2023, and most of them between 2021 and 2023. The articles cover a wide range of countries from Africa, North America, South America, Europe, Asia and the Caribbean; and reports are from international organizations such as UNESCO, UNICEF, ILO, IMF, Save the Children, and WHO etc which are very pivotal in national and international policy making.

FINDINGS

The COVID-19 pandemic was characterized by profound implications for the education and care of young children particularly from 0-8 years of age during school closures. The pandemic was associated with significant direct and indirect effects on various areas of child development, school readiness, education attainment, socialization skills, mental and physical health and other risks based on social determinants. This section of the report discusses the impact of COVID-19 pandemic on children in relation to their learning, social and health life. The section is categorized into different themes in relation to the COVID-19 literature. (1) Learning readiness, (2) Health and nutritional services and (3) Orphan-hood, child poverty and social protection. Each theme is

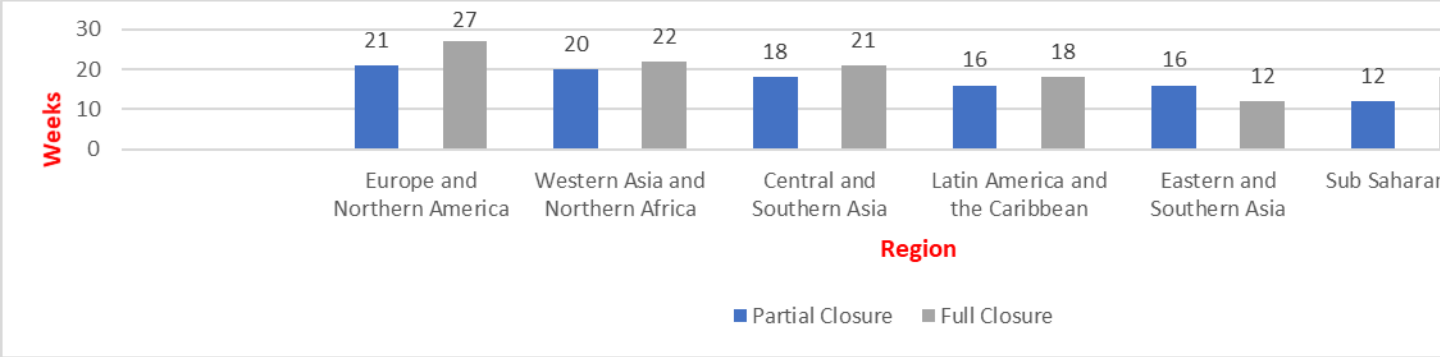
compiled by high quality reviewed online literature developed by different researchers and international organizations to understand the extent of the impact of COVID-19 on children.

Learning Readiness

This section highlights key aspects that are foundational to the discussion of the effects of COVID-19 pandemic on children's learning readiness. Learning readiness refers to the motor, social, linguistic and cognitive skills which show children's preparedness to receive formal education (Millians, 2011).

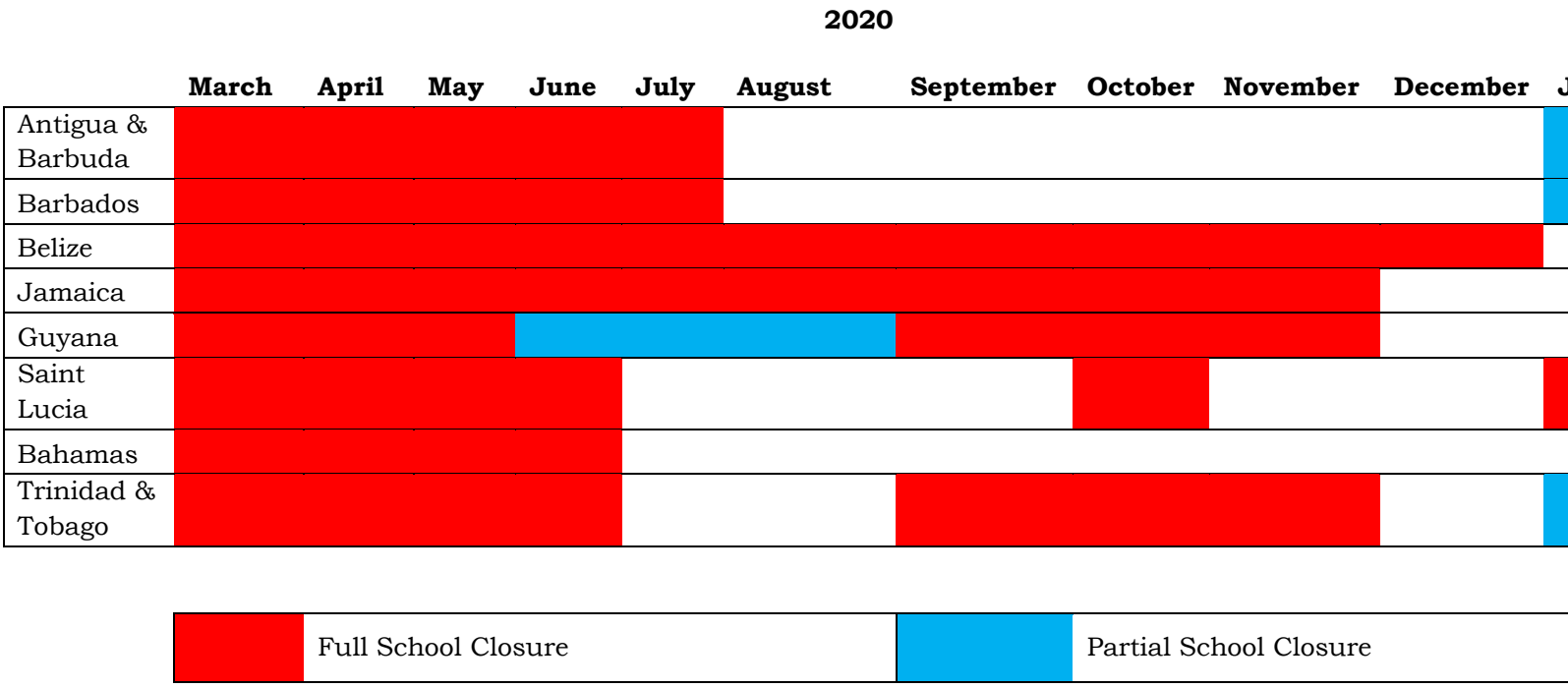
The COVID-19 pandemic led to the closure of schools for all school going children in almost all countries. The extent of learning disruptions caused by closing schools during the pandemic to prevent the spread of the virus disrupted educational service for children on a large unprecedented scale, and school closure durations varied in different regions (See. Figure. 1). By the end of August 2020, school closures had occurred in almost every part of the world covering 194 countries. In addition, schools closed completely for a period of 18 weeks by mid-September 2021 after the onset of the pandemic; and when partial school closures are also considered or factored in, it leads to an additional 16 weeks and this is equivalent to almost two thirds of a regular school calendar wasted in school closures which significantly affected children's learning opportunities (UNESCO, 2021). This affected 1.6 billion ECEC children of all ages in 190 countries equivalent to over 90% of world learner's population (UNESCO, 2020; UN, 2020). In different parts of the world, the progress of children's experiences differed, with some children experiencing much longer quarantine periods and school closures than others. For example, all countries in the Caribbean instituted at least some COVID-19 lockdown measures and nearly all of them closed schools, and the school closures lasted more than 225 days in March 2020 (See. Figure. 2) (Pablo, 2021)). This led to the development of remote learning modalities to be implemented in all closed schools in the Caribbean, but were mostly a poor substitute for face-to-face learning, and this was because of the broad digital divide (World Bank, 2022). It is also learned that the learning poverty in low and middle-income Caribbean countries rose to 70% in 2022 due to the disruptions in educational services caused by the COVID-19 pandemic. Furthermore, the learning poverty experienced especially by early childhood children has been enormous in the Caribbean, South Asia and Latin America because of the extremely long school closures in the regions (World Bank, 2022; Kulfeld, 2020; Maldonado & De White, 2022). So, all the learning gains attained in 2000 have been lost due to COVID-19 pandemic (World Bank, 2022).

<Figure.1>: Length of School Closure by regions from February 2020 to mid-September 2020



Source: UNESCO global monitoring of school closures caused by COVID-19

<Figure.2>: School closure period for some countries in the Caribbean



Source: UNESCO Data for Global Monitoring of School Closures

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According to UNESCO, the COVID-19 pandemic resulted into a devastating impact on ECCE (UNESCO,2020). The pandemic led to short and long-term consequences on ECCE services. A study to evaluate the effect of remote learning on kindergarten children, 1st and 2nd graders' school readiness skills and performance in mathematics and reading in Hungary showed that; kindergarten children and 1st-3rd grade learners were significantly impacted by the COVID-19 restrictions. This extremely affected a large number of children from disadvantaged backgrounds particularly low SES children made little or no progress at all while learning from home (Kaffenberger, 2021), and this caused learning loss because at some point there was clearly no teaching conducted at home (Hammerstein et al., 2021). The first three months of total lockdown in 2020 caused lack of targeted kindergarten instruction which exacerbated a significant learning loss of 16% in numeracy and basic math skills; an additional 16 weeks of explicit lockdown a year later in 2021 greatly worsened the cumulative impact of schools' closures on learning loss in numeracy and basic math skills to 23% (Hammerstein et al., 2021). This was greater than the learning loss ascertained after the first three months of school closures. In relation to the precursors of reading and reasoning skills, the learning loss reached 10% and 12% for reading comprehension and reasoning skills respectively, and the learning loss registered in mathematics and reading comprehension proved to be the largest among kindergarten and lower primary learners (Kaffenberger, 2021; Hammerstein et al., 2021).

The impact of COVID-19 also negatively impacted learning outcomes for children 4-6 years of age in relation to reading and mathematics. In Uruguay, a study on the impact of COVID-19 pandemic on school readiness among preschoolers aged 4-6 years identified that the pandemic harmed various domains of childhood development especially within the cognitive and motor skills which caused inequalities in school readiness (Vasquez-Echeverria et al., 2022); before COVID-19, preschoolers aged 4-6 in Uruguay possessed a 23.44% and 17.3% learning gap in language and mathematical skills respectively (UNESCO, UNICEF, WORLD BANK, 2021). However, the learning gap increased in the first wave of COVID-19 to 24.25% in language and 18.19% in mathematical skills; this dramatically increased again in the second wave of COVID-19 pandemic to 35.10% and 28.64% for language and mathematics respectively (UNESCO, UNICEF, WORLD BANK, 2021).

In a study conducted on parents' beliefs, attitudes toward school, and school readiness of preschoolers after social restrictions of COVID-19, the study discovered that the COVID-19 pandemic caused limited opportunities for children aged 5.1 years to 7.3 years of age to learn classroom academic skills such as general knowledge, letter recognition, reading simple word and to participate in activities which could enhance their socioemotional skills such as project peer cooperation, play and working with friends; it is predicted that preschoolers failed to meet sufficient development in kindergarten and at home (Setiowati & Warmansyah, 2023). For example, the move to online learning forced children to learn to use digital platforms for completing homeworks and this left them with fewer opportunities for reading and writing on paper practice, and handwriting as a fine motor skill in children declined during the pandemic (Mulkey et al., 2023). The development of remote learning

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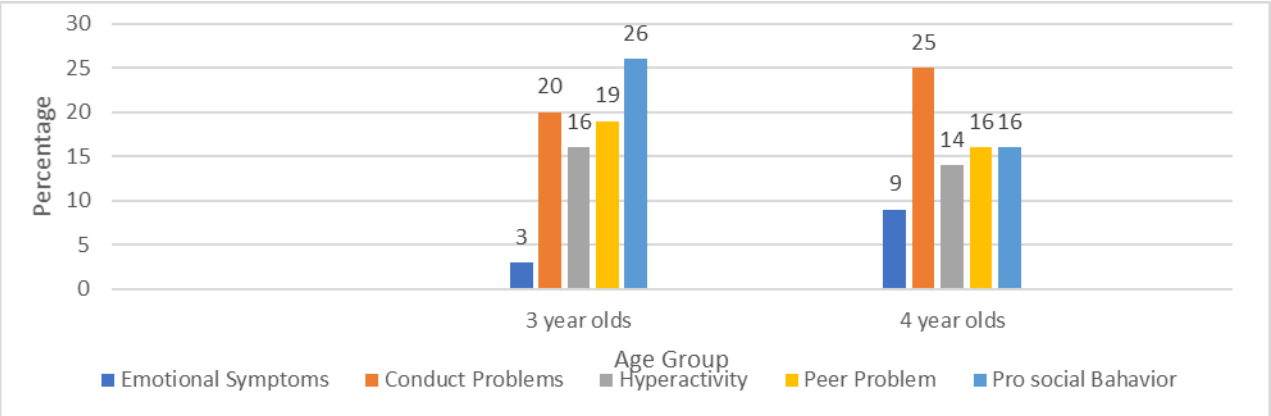
modalities which proliferated at a breathtaking pace to enhance learning still presented severe impediments for children's learning. The lack of access to digital technologies and internet was a significant barrier to participation in remote learning and educational service-related activities during the pandemic period. For example, children who accessed remote learning experienced difficulties in participating consistently in a remote learning environment, between 120 to 500 million learners in pre-primary had no access to any form of remote learning, and three quarters of these children lived in the poorest families especially in rural areas (UNESCO, 2021d), this was majorly due to the limitations to online learning gadgets, such as lack of home assets for remote learning especially text books, internet, computers, and smart phones for children aged 3-5 years of age (UNESCO, 2021d). Furthermore, in a survey of 6000 families conducted by PEI department of education on Prince Edward Island, 29% of them lacked internet-based services and subsequently children from those families could not access remote learning services (Department of Education and lifelong learning, 2020). In Manitoba, the Winnipeg School District reported that 40% learners lacked a computer at home (Froese, 2020).

In addition, parents play a major role in preparing their children to start primary school and even in the transition from kindergarten to primary school. However, due to the limitations brought about by the pandemic, a large number of parents experienced difficulties in helping their children with online learning and this caused delays in development of children's school readiness skills in terms of academic skills, self-management and mental preparation because children turned out not prepared to face learning activities after full reopening of schools, and this was caused by limited learning opportunities and facilities due to the pandemic (Setiowati & Warmansyah, 2023). Even parental support for home learning activities during the pandemic declined especially for parents reading to their children and teaching fundamentals of literacy and numeracy. For example, in the surveys conducted by NIEER, parents who reported to have read to their children 3 or more times a week declined from 85% in pre-pandemic periods to 71% in December 2020 during pandemic (Barnett & Jung, 2021). This was attributed to fatigue experienced by parents due to large responsibilities for child care and other stress factors such as unemployment associated with the effects of the pandemic which reduced their capacity to support children's learning activities at home (Barnett & Jung, 2021). The support for vulnerable children such as children with disabilities also significantly declined from lower rates of identification to struggles in providing such children with all the services they needed. For instance, the number of children with Individualized Education Plan (IEP) declined from 9% to 7% from Spring to Fall 2020 (Barnett & Jung, 2021); in Vietnam, 5.1% of children studied less than required or did not study at all and remote study programs for early childhood education were significantly less by 53% of the required curriculum coverage during homeschooling (UNESCO, 2021). All these learning losses presented a negative impact on children's development whereby an assessment of 500 preschoolers in Vietnam revealed a significant gap in school readiness skills especially in language comprehension in preschool education (UNESCO, 2021), and since the assessment for early childhood is emphasized on process and not by videos, photos and children's activity sheets; teachers also failed to enhance children's knowledge and skills because of the absence of in-person learning during COVID-19 (Setiowati & Warmansyah, 2023).

Besides that, in efforts to keep children safe and prevent increase in the spread of COVID-19 pandemic, parents were guided and advised to keep their children at home by ECEC centers (Linnavalli & Kalland, 2021). In countries like Vietnam, schools and ECE centers closed for 11 weeks and this affected the learning of 21.2 million children which comprised of 4.6 million ECE children and 7.4 million primary children (UNESCO, 2021). However, keeping children away from ECEC centers was associated with children missing routine aspects of ECEC settings such as socialization with peers, and the socio emotional behavioral effects of missing out on these aspects throughout the COVID-19 pandemic period presented negative changes in children's social and academic skills (Barnett & Jung, 2021). Most parents, teachers and care givers perceived that their children were not prepared for entry into primary school in terms of academic knowledge and social skills. Parents also reported high increased levels of significant ant-social emotional problems among their children, and the number of children with serious social emotional problems increased especially among 3- and 4-year aged children in relation to conduct and prosocial behaviors (See. Figure.3) (Barnett & Jung, 2021). For example, children of 1-5 years of age in Ireland presented significant effects for missing various aspects of ECEC such as missing child care and playing with their friends; a parent of a 4-year-old reported that his boy turned out to be very sad and not willing to share (Egan et al., 2021). Likewise, based on a Hong Kong children's school readiness study in times of COVID-19, children aged 0-8 years scored 2.88 out of 4 on social skills (social skills refers to any competence which facilitates interaction and communication with others where relations are formed and communicated in verbal, nonverbal, written and visual ways), 2.68 out of 4 on mental preparation (mental preparation is the act of preparing a person to have as much confidence as possible that the mind needs to meet or overcome challenges whether in academics or extra-curricular activities), 2.47 out of 4 on academic knowledge (academic knowledge refers to the information and understanding of a particular subject in schools which involve studying, reasoning, practical and technical skills) and 2.67 out of 4 on self-management (self-management refers to the ability to regulate your behavior, thoughts and emotions effectively in different situations) (Lau & Li, 2021). Other studies in the US, Canada and China found decreases in motor and communication skills, problem solving, personal-social skills for children aged between 6-96 months (Imboden et al., 2022; Huang et al., 2021).

<Figure.3> Percentage of 3- and 4-year-old children with high levels of behavioral problems



Source: NIEER Survey 2021

A further study conducted in the UK assessed language growth and executive functioning such as working memory, flexible thinking and self-control in 8-36 months old children by surveying the influence of time spent in ECCE and socio-economic background. The study discovered that receptive vocabulary growth (the number of words a child can understand) was greater in pre-COVID-19 ECCE children and lower or declined during COVID-19 in ECCE children (Davies et al., 2021). However, a multinational study examined vocabularies of 1,724 children of the same age 8-36 months from 13 countries (Norway, Spain, Netherlands, UK, USA, Germany, Israel, Saudi Arabia, Canada, Turkey, Russia, Poland and France) and discovered that during the period of increased time at home with care givers, children who accessed internet, computers, books and other learning materials presented significant improvement in their vocabulary set and comprehension than those who never had access to such materials (Kartushinam, 2022). Therefore, children who got isolated at home and could not access distance early childhood services during the COVID-19 pandemic, lacked and some still lack executive cognitive function skills compared to those who accessed early childhood services during the pandemic (Davies et al., 2021), and it can be said that school closures for a long-time deprived children of educational and developmental attainment (Sama et al., 2021).

A different study conducted to assess the impact of COVID-19 on children's experiences in relation to their academic achievement and socio-emotional development during the first year at school in September 2020 in the East Midlands, West Midlands, South East, South West, and East of England also discovered that; parents and schools believed that children had been deprived in their socio-emotional well-being, language and numeracy skills when started reception classes in 2020 because of their negative experiences associated with the pandemic. (Tracey et al., 2022). For example, the pandemic differently affected children learning English as an Additional Language (EAL) where the number of 2020/2021 EAL children cohort who achieved good level of development was 16% smaller than the 2018/2019 cohort. Schools experienced various difficulties with the 2020/2021 reception year children where the main learning difficulties reached 97.8% in communication and language, 96.7% in literacy and math stood at 90.1% (Tracey et al., 2022). At the end of 2021, the overall school learning concerns had reduced a bit, but schools still possessed learning concerns because children's literacy decline levels where still high at 73.6%, and communication and language at 63.9% (Tracey et al., 2022). This was attributed to the fact that those children who made improvements continued with learning during the lockdown compared to those who were unable to learn. For example, children who attended early years settings during COVID-19 lockdown had better executive functioning and vocabulary skills than their peers who did not (Davies et al., 2021). However, although there was some education recovery achieved at the end of the 2020/2021 academic year by schools, early years foundation stage attainment levels in the core areas of language and numeracy skills were still below what was expected in 2020/2021 academic year compared to the pre-pandemic 2018/2019 reception year cohort (Tracey et al., 2022). The study also discovered that children born during the COVID-19 pandemic, children with special needs and disabilities, and children with lower quality home learning environment experienced lower early years tool box vocabulary scores. In the same study; as a consequence of the pandemic, the number of children who attained a good level of development in 2020/2021 was 58.7%, this was smaller by 13% compared to the 2018/2019 cohort

with a 72% proportion (Tracey et al., 2022). Based to the study, such children require adjusted and responsive curriculum to support their learning and development (Tracey et al., 2022).

Furthermore, the COVID-19 pandemic contributed to massive school dropout. Learners' absenteeism and disengagement from learning activities regardless of the modality of learning increased globally, and each additional day that passed by with the absence of in-person learning put vulnerable children at risk of dropping out of school forever (Goldstein et al., 2020). According to UNESCO, it is estimated that a total of 23.8 million children of all ages dropped out of school due to COVID-19 pandemic. Out of the 23.8 million children, a total of 7,063,000 million are pre-primary and primary school aged children (See.Table.1) (UNESCO, 2020; UN, 2020). For example; the number of schools drop outs in South Africa increased from 250,000 in 2020 to 750,000 in 2021 (UNICEF, 2021). In the UK; prior to the pandemic, 95% of 3,253 children who participated in a study to assess the impact of COVID-19 on children's experiences in relation to their academic achievement and socio-emotional development during the first year at school in September 2020 in the East Midlands, West Midlands, South East, South West, and East of England attended ECEC, but only 17 % of these children continued to attend ECEC during COVID-19 lockdown, and less than half of the 3,253 children managed to go back to ECEC after COVID-19 lockdown (Tracey et al., 2022). In the surveys conducted in Spring and December 2020 on parents of children aged 3 to 5 years by NIEER, it was discovered that the pandemic resulted in weighty loss of very significant learning opportunities for children through fall to December where children's participation in preschool activities significantly declined from pre pandemic levels. According to NIEER, children from poor households had less than one thirds access to any type of learning during the pandemic, and children lost learning opportunities both at home and in preschool activities (Barnett & Jung, 2021). Likewise; before the onset of the COVID-19 pandemic, 51% of 3 years aged children and 71% of 4 years aged children attended preschool classrooms; however, these figures significantly dropped in December 2020 to 39% and 54% for 3 year and 4-year-olds respectively, and the declines in enrollment were large among children from households with income under $25,000 per year (Barnett & Jung, 2021).

<Table.1>: Number of preprimary and primary children who dropped out of school

	Girls	Boys
Preprimary	2,440,000	2,573,000
Primary	976,000	1,074,000
Total	3,416,000	3,647,000

Source: UNESCO & UN 2020 Data

In general, the pandemic deprived children of essential services to promote their learning. The pandemic induced school closures caused children to fall behind on their academic benchmarks and achievements associated with learning losses in school readiness skills (Kuhfeld et al., 2020). Some children started basic education in 2021 without organized school readiness The closure of ECCE services resulted in 19 billion in-person days of ECCE instruction lost which impacted 10.75 million

children not being able to reach their development potential (UNESCO,2020), and 5 out of every 10 children learned very little during remote learning and 49% did not understand home schooling assignments (UNESCO, 2021).

Health and Nutritional Services

In this report, health and nutritional services are referred to as services of wellness oriented towards optimal health and wellbeing in which the physical, mental and spiritual wellbeing are integrated to fuel the body and engage the mind to live more fully (Stoewen, 2017). In this section, health and nutritional concepts highlight aspects of physical and mental health.

The COVID-19 pandemic disruptions to physical and mental health activities created limited or no opportunities for children to play, socialize and engage in physical activities that could have helped to promote children's physical, social and emotional well-being. For example, a study on the impact of COVID-19 on childhood education and care in Australia found that children who spent a lot of time at home especially 3-8 years of age experienced a reduction in physical activity and an increase in screen time (Lopez-Bueno, 2020). Different studies have highlighted increased likelihood of obesity, noncommunicable diseases, and mental health problems such as depression, schizophrenia basing on the time of in utero exposure (Yoshikawa et al., 2020). A meta- analysis study found increased weight to 3.6Ibs and obesity rates 2% higher in children born during and those who lived through the COVID-19 pandemic (Anderson et al., 2023). In addition, the early life experiences for children who were born during the pandemic were altered, infants were immediately quarantined away from their mothers to protect both of them from COVID-19 related infections. This affected the breast-feeding success and duration for a large number of mother-infant pairs and other significant aspects of maternal infant bonding such as lack of exposure to family members (Mulkey et al., 2022). This increased the risk of lower development attainment in infants born during the pandemic (Shuffrey et al., 2022; Mulkey et al., 2023).

Schools, health care centers and hospitals play a significant part in the learning and development of learner's physical and mental health. Such institutions are equally important in providing services that help children to be healthy and ready to learn. The COVID-19 pandemic disrupted routine health care services in schools, health care centers and hospitals which led to delays in child vaccinations, health check-ups and nutrition support programs which exacerbated increased child malnutrition. By the end of 2020, between 6 to 7 million children under the age of 5 suffered from wasting or acute malnutrition (UNICEF-WHO-World Bank, 2021; UNICEF, 2021). Vulnerable children became malnourished due to the deteriorated quality of their diets and lack of health care caused by the disruptions in food systems which increased food insecurity; for example, (In Lebanon, the percentage of people who lacked enough food during the pandemic rose from 31% in 2018 to 50% in 2020 and this exacerbated children's drop out of schools due to the economic distress of losing meals), upending health and nutrition services caused by the COVID-19 pandemic caused 160 million children under the age of 5 to miss a crucial dose of Vitamin A (UNICEF-WHO-World Bank, 2021; UNICEF, 2021). A policy brief published on the impact of COVID-19 on children in India found that

1,315 children aged 6 to 59 months were admitted across 966 nutrition rehabilitations centers in April 2020 (CBGA & CRY, 2021).

The indirect effects of COVID-19 pandemic which emanated from the strained health care systems and disarrangement to life saving health services such as immunization and antenatal care to respond to the pandemic resulted in devastating increase in child mortality (Yoshikawa et al., 2020). For example, there was a 15% decline in the coverage of extremely important life-saving health care intervention for 6 months during the pandemic in low- and middle-income countries, and this led to a 9.8% increase in child mortality for children below 5 years of age. (Yoshikawa et al., 2020). In the US, one third of parents of children below 6 years of age informed of the delayed health care visits due to COVID-19 conditions which placed their children at risk of vertical transmission of diseases such as HIV, and such health care service disruptions also increased the number of stillbirths. It is estimated that during the peak of the COVID-19 pandemic, 200,000 additional stillbirths occurred in 12 months because women were unable to access health care services (UNICEF, 2021). The health care service disruption also caused approximately 80 million children under the age of 1 in 68 countries to miss out on receiving vaccination against life threatening diseases (WHO, UNICEF, GAVI, 2020). As of November 2020, more than 94 million children missed measles vaccines due to the paused measles campaigns in 26 countries as a measure to control the spread of COVID-19 pandemic (WHO, UNICEF, GAVI, 2020). The vaccination coverage for all diseases for children aged 0 to 24 months of age declined in all age groups during the COVID-19 pandemic excluding for hepatitis B coverage which is commonly administered in the hospital settings at birth (1 months of age). For example; vaccinations for 5 months and 16 months aged children for all recommended vaccines declined for two thirds of the children from 67.9% in 2019 to 49.7% in 2020 and from 71.1% in 2019 to 70.9% in 2020 respectively, and the quantity of doses administered to 24 months aged children decreased by 15.5% (Bramer, 2020). Such indirect impacts of COVID-19 pandemic caused by the disruptions to health services through reduced access to essential reproductive, maternal, newborn and child health interventions like skilled attendance at birth and vaccination led to an estimated 44.7% increase in child mortality per month across 118 low-income and middle-income countries (Roberton, 2020). This reversed the 2 to 3 years of progress in decreasing infant mortality before the pandemic (UN, 2020).

Finally, and above all, the psychological impact of COVID-19 pandemic on children have had a wide scale from mood swings, anxiety disorders to depression and suicidal tendencies. In a study conducted on the impact of COVID-19 on behavioral and emotional disorders in children, parents revealed that their children suffered from sleep disturbances, loss of appetite, fear of their own death and fear of losing a loved one (Jiao et al., 2020). Children also developed feelings of sadness and the fear of being isolated in hospitals had a detrimental impact on children's psychological development. Evidence shows that children as young as 2 years of age got aware of the changes around them during the COVDI-19 pandemic; for example, a parent revealed that children got upset when a care giver left and sought their return (Yoshikawa et al., 2020). In a different web study conducted on parents in India, parents disclosed that 73.15% of children showed symptoms of increased irritation and 51.25% developed anger; all these psychological disorders were exacerbated by loss of sleep, changes in diet, isolation and frequent use of electronic gadgets (Sama et al., 2021)

Orphan-hood, Child Poverty and Social Protection

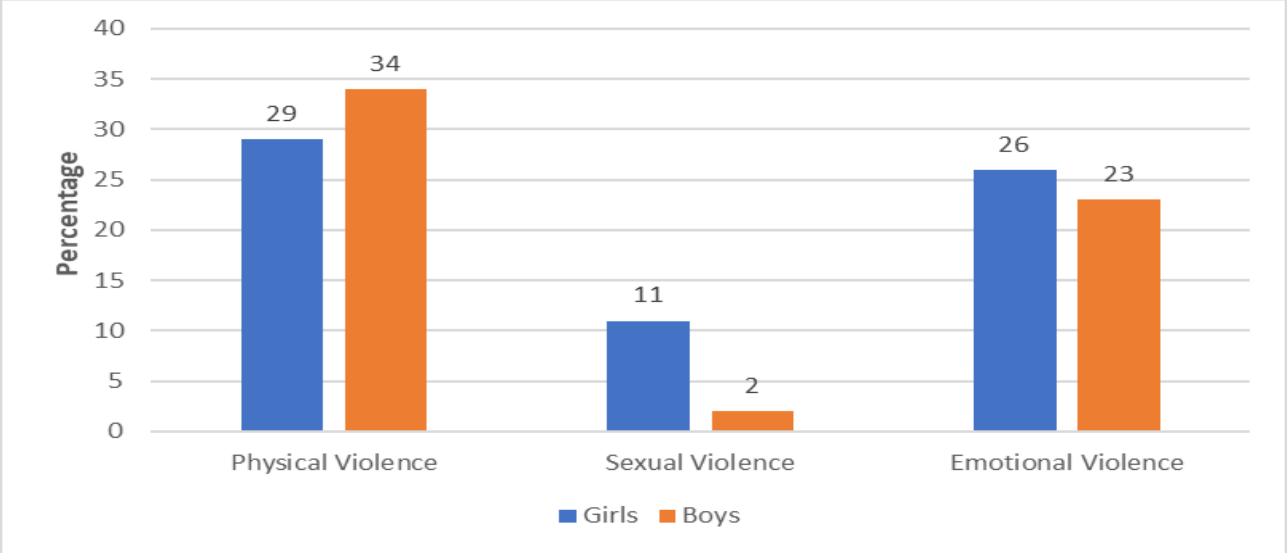
This section draws on a review of literature to highlight the divergent conceptualization of orphanhood, child poverty and social protection, and how the hurdles of COVID-19 pandemic reflected wider issues of children living alone, lack of access to material needs and inequalities in responding to risks and vulnerabilities.

The impact of COVID-19 pandemic forced a large number of children to become susceptible to orphanhood and child poverty and this intensified hardships for the already poor children. The IMF predicted the global economic recession to extend beyond 2021 and this resulted into household unemployment and exposed children to childhood poverty (IMF, 2020). It is estimated that the pandemic led to an additional 42 to 66 million children who lived in extreme poverty in 2020 (UN, 2020). For example, in the US, there are an estimated number of 3 million children who could not have access to internet connections at home to participate in online learning and other gadgets like radio, television and app-based learning for children during the closure of schools due to child poverty which manifested as a result of the COVID-19 effects (Fishbane & Tomer 2020), and this was predicted to cause lower educational attainment and lifelong earnings (Yoshikawa et al., 2020). According to a study on global minimum estimates of children affected by COVID-19 associated orphanhood and death of care givers conducted in 21 countries (Argentina, Brazil, Colombia, England, Wales, France, Germany, India, Italy, Kenya, Malawi, Mexico, Nigeria, Peru, Philippines, Poland, Russia, South Africa, Spain, USA and Zimbabwe) discovered that between March 2020 and April 2021 approximately 1,134,000 children lost a primary care giver and 1,562,000 children experienced the death of at least one secondary care giver (Hillis et al., 2021). Based on the study, the following countries have had the highest COVID-19 related deaths rates of primary care giver per 1000 children; Peru (10.2), South Africa (5.1), Mexico (3.5), Brazil (2.4), Colombia (2.3), Iran (1.7), USA (1.5), Argentina (1.1) and Russia (1.0) (Hillis et al., 2021). Globally, it is estimated that 10,512,700 million children lost one or both parents or guardians to COVID-19 related deaths; such deaths exacerbated uncertainties in children such as multidimensional child poverty (multidimensional child poverty is a state of poverty that encompasses child deprivation of material needs and human rights in their daily lives; for example, children are deprived of nutrition, water, education, shelter and protection, and the lack of such goods and services can represent a severe threat to children's growth and development) (Global Reference Group on Children Affected by COVID-19, 2020). In 2020, approximately 150 million children fell into multidimensional child poverty and this deprived them of their access to remote learning materials, health care, nutrition or water due to the disruptions in the social and economic services caused by the COVID-19 pandemic (UNICEF, 2020).

The effects of the COVID-19 pandemic which included containment measures like lockdowns rendered children more susceptible to sexual abuse and violence. The home isolation produced constant contact between perpetuators and victims which led to increased violence where cases of child maltreatment, domestic abuse and abandonment soared to high levels (Kourti, 2023). A study on the prevention and response service on effects of COVID-19 on violence against children in Uganda reported over 400 cases of violence against children between April and August 2020; these

included child neglect, physical and sexual violence and this compounded a 65% increase in child abuse cases compared to pre-COVID-19 cases (Africhild, 2021). In Uganda, the violence perpetuated against children during the COVID-19 pandemic times were impermissibly high and this caused psychological disorders in many children especially for children of 3-8 years of age (Africhild, 2021). The disruptions to social protection services compounded higher rates of physical violence, subsequently followed by emotional and sexual violence. Every three in ten children got exposed to physical violence and this accounted for 31% during the COVID-19 lockdown period. Physical violence was more perpetuated against boys (34%) than girls (29%); then one in every ten children (8%) were sexually violated and this accounted for 11% for girls and 2% for boys as well as three in every ten children (25%) faced emotional violence and this was high among girls (26%) than boys (23%) (Africhild, 2021) (See: Figure. 4). In the Philippines, the child abuse related calls which reported psychosocial violence related problems during COVID-19 pandemic increased by 200% (Council for the Welfare of Children, 2020).

<Figure 4>: Prevalence of physical, sexual and emotional violence against children in Uganda during COVID-19 pandemic



Source: Africhild primary data on prevalence of violence against children aged 0-17 years during COVID-19

The impact of the COVID-19 pandemic in relation to violence against children is that the lockdown measures implemented to control the spread of the COVID-19 presented an opportunity for child abusers to harm children and walked scot-free (Africhild, 2021). Abused children were not in position to disclose and report such appalling acts. This is because during COVID-19, children did not have access to report to teachers the abusive incidents experienced at home, while child social work and other related legal and protective services were suspended. In addition, some children never disclosed or reported abusive acts because of fear of being abandoned in case the child was a dependent on the perpetrator (Africhild, 2021). In regards to estimates, five in every ten children who experienced

physical violence from an adult family member or relative did not disclose to anyone or child protective services (Africhild, 2021).

In general, due to the COVID-19 crisis, primary care givers and parents struggled to keep up with the provision of safety and care of their children, and the pandemic worsened the conditions for the already vulnerable families who lived in precarious conditions. The shift to online learning after closure of in person learning was associated with serious challenges for children. For example, the legitimate move of educational services for children to online platforms and the constant use of online platforms without proper monitoring in the long run exposed children and increased their risk to online threads such as exposure to exploitation and inappropriate content (UN, 2020). The closure of early childhood care centers globally disrupted family interactions and gatherings which deprived children of social protection, social and cognitive development beyond their homes, this increased violence against children, mental health difficulties and child behaviors related problems since the onset of the COVID-19 pandemic (Yoshikawa et al., 2020; Fisher, 2020).

CONCLUSION AND FUTURE RESEARCH

The literature reviewed to contribute to this report's knowledge and understanding of the impact of COVID-19 on children has illustrated changes in children's learning readiness skills, social-emotional and psychological behavioral skills, quality time, health and physical abilities which are invaluable during early childhood years and if children do not gain such skills, then the consequences will significantly impact their academic future and development. However, basing on the complexion of a rapid scoping review, this report is not grounded on a comprehensive literature search. but the information included in this report was gathered only from a selection of small-scale studies conducted in English which have already examined the impact of COVID-19 on children and mostly on generalized age groups of all children, this leaves a knowledge gap in statistics about the impact of COVID-19 especially on children aged 0-8 years. Thus, the report acts to bring awareness of latest trends and calls for attention for the need for further research on the impact of the pandemic particularly on children aged 0-8years.

Although the literature reviewed for this report is drawn from almost every region of the world, it focuses on a few countries, so generalization of the findings and their applicability to other countries need to be carefully assessed. As a result of the nature of different measures constituted to curb the spread of COVID-19, it is believed that the context and extent of the impact of COVID-19 varied significantly. For example, it is reported that children's vocabulary skills declined during lockdown, and for others drastically increased based on different surveys. Thus, this report has not been able to follow both cohorts of children to ascertain the evidence and parity, and additional research is required to explore children's features to help ascertain whether some children experienced greater COVID-19 impact in relation to learning readiness during the pandemic, because prior research identified that children from different socioeconomic background presented differences in learning readiness.

Secondly, the report explores perceptions of general learning readiness, not actual individual readiness, another study examining actual individual readiness data is needed. For example, when assessing the impact of COVID-19 on children, both parents and teachers found children to be ill prepared for school than they were before COVID-19. However, some also reported that children were able to enhance their self-help skills, implying that such children were ready for primary school and possessed the abilities and skills needed for learning readiness. Thus; future studies should explore the present-day learning readiness expectations and standards to determine the accuracy of the perception.

Additionally, this report was not based on experimental design with random assignment of participants, but rather a review of literature, thus, there are various variables that the report did not include in the findings which are capable of impacting the results of the findings, and there could also be extra factors from the COVID-19 pandemic which could have significantly impacted children's assessments differently. For instance, children who were enrolled in preschool and attended regularly in the 2021-2022 school calendar year were evaluated, but the same children may also have been more presumably to attend preschool during the COVID-19 pandemic. This prevented researchers from reaching the actual children who attended less preschool during the pandemic. Future research needs to be done to determine if the learning loss found in this report were related to learning loss experienced during learning periods in the course of the pandemic.

Considering all the above, the findings of this report provide awareness of the experiences of children during the COVID-19 pandemic. However, it is possible that different children may have had different characteristics, lived in more stretching and adverse conditions, or children from other countries had completely different experiences of the pandemic. For example, different countries all over the world implemented quite different COVID-19 restrictions in different ways in relation to school and ECCE closures, where some countries had shorter periods of complete ECCE and school closures, while others had more longer and strict school closures; all these affected children differently. Another concern is that studies reviewed explored the experiences of all family as a unit, and not directly as an individual because it was not possible to collect data in person due to the restrictions. For instance, mothers were the main respondents to a PLEY survey, yet the perspectives of children themselves should have been ascertained in subsequent studies such as through interviews and surveys. Therefore, the assumption of parents, and secondary caregivers as the primary source of information on the impact of COVID-19 on children has implications on the findings of this report, and the findings surpass the scope of review of this report.

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