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Preventive Measures Against the Spread of COVID-19: Exploring Policy Responses in Selected Primary Schools in Lusaka, Zambia

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Abstract

This is a brief report on a survey conducted to establish preventive measures against the spread of COVID-19 in selected primary schools in the city of Lusaka, Zambia. The survey was necessitated by the fact that even in the midst of the pandemic declared by the World Health Organization as a Public Health Emergency of International Concern on 30 January 2020, schools were reopened. The sample for the survey was purposively selected and largely comprised school administrators. Data were collected through phone interviews. The main findings of the survey were that new operational policies for schools had been introduced, while key preventive measures against the spread of COVID-19 included the use of face masks, physical distancing and observance of high standards of hygiene and sanitation. The major challenges experienced included unwillingness by some parents to allow their children to return to school, non-adherence to physical distancing among pupils and reduced learning time following the splitting of large classes to enhance social distancing.

Key words: COVID-19, masking, physical/social distancing, preventive measures, sanitising

Overview

COVID-19, which is caused by the novel coronavirus, was first discovered in December 2019 in the city of Wuhan, China (Simulundu et al., 2021). Since then, it has continued to spread worldwide, and Zambia has been no exception. The virus causes respiratory illness, with many symptoms similar to a common cold. In severe cases, the virus causes pneumonia, which can result in death. The World Health Organization (WHO) (2020a) declared COVID-19 a Public Health Emergency of International Concern (PHEIC) on 30 January 2020 and, later, a pandemic on 11 March 2020. According to Simulundu et al. (2020:456), 32,700,000 COVID-19 cases, including 991,000 deaths, were reported to the WHO. The first COVID-19 case in Africa was reported in Egypt on 14 February 2020 (Simulundu et al., 2021), while in Zambia, it was reported in mid-March 2020 (Sintema, 2020). The rapid spread of the pandemic began to have a negative effect on various human activities, such as economic and educational activities, including people's way of life. The impact was felt even more in the educational sector as schools, colleges and universities were subsequently closed.

Country context

Zambia is located in Southern Africa between latitudes 8° and 18° south and longitudes 22° and 34° east and covers a total area of 752,612 square kilometres. It is completely surrounded by other countries: the Democratic Republic of Congo, Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola. Zambia is thus a landlocked country, as it has no direct access to the sea.

The focus of this paper is on primary schools in the city of Lusaka. Thus, some basic facts about primary schools in Lusaka must first be presented. Lusaka has 90 primary schools distributed in both urban and rural areas. According to the 2010 Census of Population and Housing National Analytical Report, Zambia's population in 2010 was 13,092,666 (Central Statistical Office, 2012), of which the total population of Lusaka Province comprised 2,191,225. Of this population, 558,900 people were under 16 years of age. It is important to state that in Zambia, the age group below 16 years is essentially found at the primary-school level because the official primary-school entry age is seven years. However, those in the age range of 13 to 16 are more likely to be in junior secondary school. Thus, grades 1 to 7 correspond to pupils aged 7 to 13 years, while grades 8 to 9 correspond to pupils aged 14 to 15 years (Central Statistical Office, 2012). However, based on a 2012 estimate of 14.3 million and an annual growth rate of 3.3 percent, the population of Zambia is now estimated at eighteen million (Ministry of General Education, 2020a). This figure implies that the population of young children has also increased steadily over the past decade. As a country, Zambia is considered to have a young population, which makes the provision of education to this population of paramount importance to the government (UNESCO, 2015).

In response to the rapid spread of the pandemic, the Government of the Republic of Zambia, through the Minister of Health on 17 March 2020, issued a prompt closure notice of all schools, colleges and universities in Zambia with effect from Friday on 20 March 2020 to stem a further spread of the COVID-19 pandemic. As a consequence of this decision, learning at all levels of education in all parts of the country was immediately disrupted.

However, just over five months after the closure of all learning institutions, the Government of the Republic of Zambia advised that all institutions of learning should be reopened under strict adherence to health regulations issued by both the WHO and Zambia's Ministry of Health. With this pronouncement, primary schools in Lusaka and other parts of the country opened their doors to pupils in examination classes to commence learning on 14 September 2020. While the pandemic has continued to spread rapidly and poses a great danger to human life, learning in Zambia's primary schools continued after reopening until December 2020. The danger that COVID-19 poses to human life as well as education systems cannot be underestimated. This is evident, for example, in the number of deaths that WHO (2020b) has reported since the emergence of the pandemic. According to the United Nations (UN) policy brief of August 2020 on education during COVID-19 and beyond, 94 percent of learners, representing 1.58 billion children and youth from pre-primary to higher education in 200 countries, were affected by the pandemic at varying levels. In developed countries, only 20 percent of children were affected by the pandemic, whereas in developing countries, 86 percent of children were affected. This discrepancy implies that the education sector in developing countries has been more adversely affected by the pandemic than in developed countries.

For learning in primary schools to take place in the midst of this life-threatening pandemic, it is expected that various preventive measures must have been put in place by the Government of the Republic of Zambia. It is the author's interest, therefore, to investigate how primary schools in the city of Lusaka responded to the COVID-19 pandemic and continued to run. The major focus of this paper, therefore, is to investigate preventive measures that enabled primary schools to continue operating in the midst of COVID-19.

In light of the foregoing, the paper seeks to address the following questions:

a. How has COVID-19 influenced government policy in the education sector?
b. What preventive measures have primary schools in Lusaka city employed against the spread of COVID-19?
c. What major challenges did primary schools in Lusaka city experience during COVID-19?

This brief survey is significant because it provides information that can help inform government policy in the education sector. The information gathered may be used to address current and future pandemics. It is also likely to enhance the level of preparedness

in schools because lessons learned about the best practices in managing schools during the pandemic may be shared and implemented in other regions of the country.

Literature review

According to Sintema (2020), there is little literature on COVID-19 in relation to education, and much of the available literature is directly related to medical studies (Chinazzi et al., 2020; Hopman et al., 2020; Wu & McGoogan, 2020; Zu et al., 2020). This gap can be explained by the rarity of studies in education that incorporate the effects of disease on the effective provision of education to learners worldwide (Sintema, 2020). Most of the available literature has tended to examine how COVID-19 may affect the world economy, particularly in developing countries that are more vulnerable due to weak economies (See Gondwe, 2020; Ozili, 2020; UNESCO, 2020). The author observes that what is overlooked in most of the literature focusing on the impact of the COVID-19 pandemic is a discussion of the kind of impact that a 'failed' education system may exert on a country's economy. It is a truism that a poorly organised education system can severely impact the well-being of a country's economy because the growth and sustenance of any country's economy are heavily dependent on trained human resources tapped from the education system. Given the devastating effects of the COVID-19 pandemic, its persistence will adversely affect the effectiveness of learning in schools. Therefore, it is vitally important through this survey to learn about the best practices, if any, for managing schools during a pandemic so that the knowledge gained can be shared and implemented elsewhere. This dissemination may help avoid a complete 'lockdown' of the education system, particularly of primary schools where a foundation for learning is first established.

As soon as Zambia recorded the first case of COVID-19 in March 2020, schools were immediately ordered to close. This move negatively impacted the education system. In Zambia, it was reported that the learning of more than 4.4 million students was disrupted, and progress that had been made in attaining Sustainable Development Goal number 4, including the attainment of high-quality education (World Vision, 2020), was potentially negatively impacted. In addition, children's way of life was interrupted, resulting in unprecedented stress among young people, as access to education was completely impossible. As rightly observed by the Ministry of General Education (2020a), when schools remain closed for a long time, children face many challenges. Teenage pregnancy, sexual abuse, and child marriages were cited as dangers that girls in particular would be faced with.

To mitigate the challenges that children were likely to face during the closure, the Government of the Republic of Zambia, through the Ministry of Education, developed a two-phase plan. The first phase focused on how learning could continue while schools remained closed. The second phase was concerned with how schools across the country could be turned into safe environments in which learning could continue once schools were reopened.

In the first phase, the key interventions, among others, to mitigate the impact of school closure included the following:

- Implementing continuity of learning by utilising various platforms, with particular attention to disadvantaged and marginalised children and adolescents;
- Empowering teachers to provide learner support for structured lessons delivered through various platforms as well as guidance for self-directed learning;
- Planning for the remedial programme and accelerated learning; and
- Designing and implementing strategies for monitoring coverage and access to continuity learning programmes.

The second phase proposed implementing, among others, the following key interventions:

- Back-to-school campaign and community outreach to ensure that no child failed to report back to school due to the COVID-19 emergency;
- Provision of school grants for a safe and protective learning environment;
- Implementation of accelerated learning in line with the revised school calendar; and
- Strengthening of prevention efforts and/or reduction of the future effect of similar or related outbreaks through improved school environments.

Challenges to the implementation of the first phase were discovered following a mapping survey conducted to establish the availability of education content for the various levels of education and potentially feasible platforms for distance learning programmes during the period of school closure. The feasible platforms included information and communication technologies (ICTs). To function effectively, ICTs require a stable electricity supply and access to radio, TV, computers and/or mobile phones. Another major requirement was reliable Internet connectivity. In addition, pupils needed to possess essential skills to enable them to operate phones and computers to access learning materials.

The findings revealed a number of disparities among households and between rural and urban areas. The 2018 national survey on access to and usage of ICT by households and individuals revealed that only a small percentage of people had access to electricity and owned a radio, television and computer (Zambia Information and Communications Technology Authority, 2018).) For example, whereas 14.7 percent of urban residents owned a computer, a meagre 2.7 percent of rural households owned one. A similar picture emerged of radio ownership, as urban households again had more access than their rural counterparts. Additionally of significance was the fact that, according to the survey, only 6.8 percent of individuals across the country aged 10 years and above knew how to use a computer. This finding indicates that the majority of primary-school-aged children were unable to use a computer for learning purposes. It is probable that the disparities noted in the survey between urban and rural areas described above have not changed considerably in the last two years.

Despite the aforementioned and anticipated challenges, the Ministry of General Education was determined to find ways to keep the school environment safe for learning once schools reopened. In this regard, in May 2020, the Ministry of General Education held a series of meetings with the Ministry of Health and other stakeholders that culminated in the publication of the "COVID-19 Guidelines for School" document. In relation to this survey, the most important aspects of this document are the key measures and actions generated by the Ministry of General Education to prevent the spread of COVID-19 in schools, which included four key measures: physical distancing, wearing face masks, maintaining high standards of sanitation and hygiene, and promoting health education in schools.

Physical distancing, also known as 'social distancing', meant that people should maintain a physical distance from others of at least one metre. In practice, teachers were expected to maintain physical distance among themselves as well as with pupils. This measure implied that class size would have to be reduced or limited to avoid overcrowding. Both teachers and pupils were mandated to wear face masks at all times while in school. Similarly, visitors to the school were expected to wear face masks.

Another area that required substantial investment was sanitation and hygiene. All schools, for example, were expected to maintain high standards of sanitation and hygiene. More than ever before, schools needed, among other things, a reliable supply of clean water, alcohol-based hand sanitisers and clean classrooms, offices, public spaces, dormitories, dining rooms and toilets. Finally, while these measures were being executed, it was also vitally important that health education in schools be enhanced. One of the strategies to be used was to distribute Ministry of Health messages on COVID-19 through information, education, and communication materials (Ministry of General Education, 2020b). It was crucial that teachers and pupils adhere to prevention and control principles to create a safe learning environment and, in the process, help stop the spread of the virus. Kuhfeld et al. (2020) observe that educational administrators must balance the health concerns associated with in-person learning against the educational needs of children, which may be best addressed when children are in their physical schools. This kind of thinking, together with the challenges that accompanied distance learning, could potentially have influenced the government's decision to re-open schools earlier.

Methods

This paper is largely qualitative, as it is based on brief reports on the COVID-19 pandemic submitted by University of Zambia students studying through distance learning. Distance-learning students usually have a two-week residential school period, during which they meet with their lecturers face-to-face at the main campus of the University of Zambia in the city of Lusaka. However, due to the COVID-19 pandemic, students were not allowed to attend the residential school scheduled for January 2021. Instead, management directed that learning should be conducted online. In two consecutive

online meetings, the author of this paper arranged with students to discuss how the latter could help collect the views of head teachers and/or teachers of schools on preventive measures they had put in place to operate their schools in the midst of the pandemic. The involvement of students in collecting information to address the current theme was necessitated by the restrictions on people's movement imposed by COVID-19. It was, therefore, anticipated that it would be easier and faster for individual students to collect information from schools located in their area of residence. In addition, the collection of data would be faster through this approach because the period coincided with the school holiday, when only school administrators and teachers would be available in school.

Only seven students, who had registered for a course in organisational theory and management under the adult education degree programme, agreed to take part in collecting information from school administrators, in particular, head teachers and/or deputy head teachers in primary schools. The students were asked to collect information relating to preventive measures employed against the spread of COVID-19 in primary schools in urban Lusaka, along with other related issues. It was resolved that students would conduct cell phone interviews with head teachers and/or deputy head teachers of primary schools. Furthermore, the author agreed to pay for the cost of students' phone use to arrange and conduct interviews.

The sample comprised six head teachers and one senior teacher from seven different schools within the city of Lusaka. At one of the schools, a senior teacher was included in the study because neither the head teacher nor deputy head was available to participate in the study. In Zambia, a senior teacher in a primary school is part of the management team. All the participants were purposively selected by the students themselves. The sample comprised head teachers and/or deputy head teachers with whom students had interacted in their area of residence. In other words, purposive sampling was deliberatively employed to enable access to reliable information in the shortest possible time. Purposive sampling is a procedure in which a researcher identifies key informants, that is, persons who are considered to be knowledgeable about the topic being investigated (Lodico et al., 2006:140). The choice of purposive sampling was appropriate because the objective of this survey was not to generalise the results but to obtain 'a deeper understanding of experience from the perspectives of the participants selected for the study' (Maykut & Morehouse, 1994:40; Henn et al., 2006:156). The sample was also appropriate as it comprised participants who were implementing measures provided to all schools by the Government of Zambia's Ministry of Education.

Additionally, in light of the restrictions imposed on people's movements during the COVID-19 pandemic, it was decided that the survey should be restricted to only school administrators who would be willing and available to participate in an interview with the students. These movement restrictions generally indicated that only a small sample might be available for the study. As acknowledged by many qualitative researchers, including Silverman and Marvasti (2008:14), Gray (2009:180), Merriam (2009:16) and Manyasi (2014:55), there is a tendency in qualitative research designs such as this one to research

fewer cases. Additionally, qualitative researchers choose study participants whom they believe understand the issue being investigated (Lodico et al., 2006:140). In this study, therefore, school administrators or school management teams were considered key informants to provide adequate and reliable information to address the objectives of the survey. Six of the seven students managed to interview only one head teacher or deputy head teacher each, while one student, in the absence of both the head teacher and deputy head teacher, conducted a face-to-face interview with a senior teacher instead.

To maintain and enhance uniformity, a short interview guide was prepared and administered by the students. Before the students went out to collect data, they were briefed on the various principles relating to research ethics. These ethical principles included a briefing of participants on, among other things, the purpose and process of the study, their right to withdraw from the study and the confidentiality of the research process (Luchembe, 2020).

All data were collected from individual interviews conducted via cell phone. However, in one incident, as previously reported, a student was able to conduct a face-to-face interview with one senior teacher (instead of the head teacher or deputy head) whom he knew and who lived near his home. Once the interview had been completed, each student wrote a brief report in line with the interview questions. All seven students submitted a brief report of their findings within two weeks of the interview. The length of the reports ranged from 4 to 7 pages.

Following the students' submission of the reports, the author began to identify common ideas across all the reports in line with the across-case approach adopted in this study, in which answers to common questions from the different participants can be brought together (Patton, 2002:376). The findings are, therefore, presented using common ideas, not as themes, due to the nature of the submitted reports. The majority of the reports did not, for example, capture the actual words spoken but were merely descriptive. This format means that the analysis of the ideas is not as detailed as would normally appear in a qualitative survey, which requires a thick description of what the participants said during the interview.

Presentation and discussion of findings

This section presents and discusses the findings of this study, which aimed to investigate selected primary schools' response to the COVID-19 pandemic within Lusaka, Zambia. It is divided into three parts. The first part describes the influence of COVID-19 on government policy. The second part focuses on the findings relating to preventive measures that selected primary schools employed in response to the COVID-19 pandemic. The third and final part of this section deliberates on the major challenges that primary schools encountered as they responded to the COVID-19 pandemic in a bid to keep schools open and safe for children's learning. The findings are presented and discussed below.

Influence of the COVID-19 pandemic on government policy

The COVID-19 pandemic was so severe that it influenced how the Government of the Republic of Zambia operated primary schools and other learning institutions. In light of the pandemic, the government developed a number of policy directives for the education sector. The first governmental policy change involved changes to the academic calendar. In ordinary times, the academic calendar for primary schools is divided into three terms. The first term runs from the second week of January to the first week of April, while the second term runs from the second week of May to the first week of August. The third term runs from the second week of September to the first week of December. In reality, a term is approximately 3 months. However, due to the COVID-19 pandemic, schools closed three weeks earlier than usual. In addition, school closure was prolonged. These changes forced the government to alter the academic calendar to give teachers more time to cover as many topics as possible when the schools reopened. Schools reopened on 14 September 2020 for grade 7 (i.e., the examination class), while non-examination classes (i.e., grades 1 to 6) reported for school on 28 September 2020. The 'new' term ended on 4 December 2020, while grade 7 final examinations were held from 21 December to 24 December 2020.

Another policy change by the government in relation to schools was the mode of funding for educational institutions. Previously, schools were given grants at the beginning of the term. However, with the change in the academic calendar and in response to COVID-19, government expenditures continued while schools were on recess. This approach was aimed at ensuring that schools had the necessary resources to enable them to clean their premises and make them conducive for learning once schools reopened. In light of this, government expenditure on schools rose beyond what had been budgeted for to sustain the operations of schools amidst the COVID-19 pandemic. Non-governmental organisations and other stakeholders played a pivotal role by supplementing the government's efforts through contributions to schools in the form of hand-washing facilities, sanitisers and face masks to make schools safe learning environments for pupils.

Educational programmes on radio and television to enable pupils to continue learning at home following the abrupt closure of schools was another policy introduced by the Government of the Republic of Zambia. However, the use of radio and television for learning purposes did not seem to achieve their intended objectives. This project was short-lived for several reasons, including that not every household owned a radio and/or television, and the project also operated during the same period when load shedding in electricity supply was very common. The failure to implement this mode of learning supports earlier findings in the 2018 national survey regarding access to and usage of ICTs by households and individuals, which established that only a small percentage of people in Zambia had access to electricity and owned a radio, television and/or computer (Zambia Information & Communications Technology Authority, 2018). For these reasons, learning through radio and television was problematic.

Primary schools' response to the spread of COVID-19

All the reports submitted by the 7 students indicated that the four key measures prescribed for primary schools by the Ministry of General Education were being followed. One of these measures was the mandatory wearing of face masks at all times by both teachers and pupils while on school premises. Some teachers were assigned to ensure daily that pupils wore clean face masks correctly. Before pupils were allowed to enter class, they were required to wash their hands thoroughly using hand-washing facilities that had been placed at strategic locations within the school premises. In addition, as pupils entered the school premises, their body temperature was checked with digital thermometers. Pupils who recorded unusually high body temperatures were rushed to the clinic for medical attention, and their parents were notified.

In addition, those schools with sufficient supplies of hand sanitiser required pupils to sanitise their hands each time they moved between classrooms. Schools were also reported to be disinfecting and cleaning classrooms at the end of each session before allowing the next group of pupils to enter. Surroundings were also cleaned but not as regularly as the classrooms, where pupils spent more time.

Another strategy employed by schools was physical distancing, whereby every pupil or teacher was required to maintain at least one metre distance from others. This strategy greatly affected how classes were organised, especially in an urban area such as Lusaka. For teachers, social distancing included having staff meetings with no more than 30 teachers at a time and for no longer than 30 minutes. Furthermore, to enhance social distancing in schools with limited space, teachers would report for work only when they were teaching. In addition, in the wake of the COVID-19 pandemic, visitors were rarely allowed to enter school premises.

Most schools in Lusaka city are 'densely' populated or overcrowded, as classes that can accommodate a maximum of 35 pupils nonetheless may sometimes have as many as 60 pupils. Due to the introduction of physical distancing, schools were forced to split any class that exceeded 30 pupils. A major consequence of splitting classes was the formation of more classes, which subsequently reduced the time for learning. For example, previously, the lower grades (grades 1 to 4) would be in class for three hours, but during the pandemic, the learning hours were reduced to two. For grades 5 to 7, learning hours were reduced from four to three. It must nevertheless be mentioned that the amount of learning time varied from one school to another. Schools with large student populations had to create more streams of learners, thereby reducing the learning time for each stream. In fact, three of the seven reports indicated that some schools with large numbers of pupils formed so many classes that pupils would come to learn on alternate days, as they could not all attend on the same day. Other schools experienced inadequate classroom furniture or benches (a bench can ordinarily cater for up to three children). Such schools had to split classes further so that only a small number of pupils would be taught at a time. The result of this decision was that learning time was drastically reduced to cater to other pupils.

The reduced learning time was maximally utilised, as no break time for pupils was incorporated into the new timetable. The removal of break time between lessons also served other purposes than simply trying to catch up on lost time, one of which was to prevent pupils from interacting freely with one another. The head teachers reported that pupils would share food during break time, which the Ministry of Health had banned to reduce the spread of the virus. In addition, during break time, pupils had a tendency to take off their masks, while others soiled their masks as they played together in open spaces. Furthermore, during break time, pupils found it convenient to exchange other items such as pencils. For these reasons, to enforce the social distancing regulations, it was decided that pupils should not have break time, and they were only allowed to go out to the bathrooms. Importantly, because of the mandate that students wear face masks at all times at school, the Ministry of Health issued guidance to schools to reduce children's learning time, explaining that the prolonged wearing of face masks was not good for children's health, especially for those with health conditions such as asthma.

Maintaining the highest standards of sanitation and hygiene was another strategy that schools used to reduce the spread of COVID-19. Schools were advised to ensure that they had adequate, clean and separate toilets for girls and boys. They also ensured that soap and safe water was provided at various locations within the school premises. Hand sanitisers were also placed in toilets, classrooms and entry points to other rooms frequently used by both teachers and pupils. Programmes were designed by individual schools to ensure that school buildings, classrooms and frequently touched surfaces (e.g., door and window handles, teaching and learning aids) were cleaned and disinfected on a more regular basis. In addition to school management teams or administrators, other stakeholders joined the fight against the spread of the pandemic in schools to enable pupils to continue learning. One such group comprised the surrounding communities of some schools. What follows is a brief description of community contribution in mitigating the spread of COVID-19.

Community involvement in mitigating the spread of the COVID-19 pandemic

One important piece of information that was reported by four of the seven student interviewers was the involvement of the community in mitigating the spread of the COVID-19 pandemic in schools. The community was involved in two main ways. One indirect way was that schools sent messages through the students to raise awareness among parents about the COVID-19 pandemic. This approach was important as parents helped their children understand more about the pandemic and, in the process, protected their children from contracting the virus. Far from leaving everything to the schoolteachers, parents took part in counselling their children and helping them with school homework wherever possible. Parents also encouraged their children to attend school.

The other primary method was that parents were asked to contribute hygiene supplies such as toilet paper and liquid soap to the school. This was inevitable, as not all

schools were able to provide the required sanitary facilities to all pupils on their own. Nonetheless, it must be mentioned that although there was a call for parents to contribute to the school, some parents could not afford to do so. Additionally, due to the country's many socioeconomic challenges, it was not easy for the government to provide sufficient financial resources to all schools in the city for the purchase of sanitary facilities.

Challenges experienced by schools during COVID-19

A number of challenges were noted in relation to the education system during the COVID-19 outbreak. One challenge that appeared to go unnoticed is the psychological pressure to which both teachers and pupils were subjected. The nature of COVID-19 was such that nobody knew who the next person to contract it would be. Thus, teachers worked as front-liners and had a higher chance of contracting the virus. Every day, teachers met with pupils from homes with unknown sanitary and hygiene conditions. For this reason, teachers' health was at risk, and, consequently, they worked under enormous psychological pressure.

Teachers also had a difficult time completing syllabi due to the compression of the academic calendar. To fulfil one of the Ministry of General Education's guidelines that classes should not have more than 30 pupils, class sizes were reduced, which resulted in teachers spending more time in school, thereby raising their probability of contracting the virus. This situation was exacerbated by some grade-seven pupils who did not attend classes regularly, thereby forcing the teachers to meet them separately to prepare for the final examination at the end of the year.

Another challenge was presented by the pupils themselves, especially in the lower grades (i.e., grades 1 to 4). It was common for pupils in these grades to lose their face masks, which forced school authorities to keep extra face masks in stock at all times. Additionally, some parents did not have the capacity to keep replacing their children's face masks. Since it was mandatory to wear a face mask at school, such children would not be able to attend school until the government and/or well-wishers supplied schools with a new consignment of face masks. The absence of some children from school affected learning. Additionally, a recent survey conducted by some education authorities revealed that 'most learners are finding it difficult to wear face masks for a long time but prefer to have them around their necks or ears' (Mwila & Ntambi, 2021).

Another unexpected challenge to the education system was that some parents were uncertain about their children's safety at school. They shared their sentiments with school head teachers that the schools were being reopened at the wrong time because the COVID-19 pandemic was still spreading rapidly and widely in the country. For this reason, they were reluctant to send their children to school. This action put pressure on teachers, who had to teach the same topics to the 'new arrivals'.

Finally, five of the seven reports mentioned an upward trend in attrition rates, particularly among girls, during the COVID-19 pandemic. There were two reasons for

failure by some girls to report back to school: pregnancy and marriage. This information was also documented on public media, including Zambia National Broadcasting Corporation's radio and television programming. Unfortunately, no statistical information was available on child pregnancy and marriage. The loss of girl children to pregnancy and marriage further disadvantages girls in their access to education. Nkosha et al. (2013) recommend that girls' educational awareness should be supported and that the government and other stakeholders should develop measures to sustain campaigns to retain girl students, as this problem is still prevalent and is both valid and relevant to this survey.

Conclusion

The Republic of Zambia may have to live with the COVID-19 pandemic for some time, but as long as people can understand how it spreads and how it can be avoided, there will be little need to worry about its impact on human activities. Relying on the information obtained from head teachers and deputy head teachers in this survey, one would safely conclude that the measures put in place by schools to address the COVID-19 pandemic have largely achieved their intended objectives. It is heartening to note that no pupil's life has been lost to the COVID-19 pandemic in schools whose head teachers, deputy head teachers and senior teachers were interviewed. This achievement is commendable. However, the best way to approach the pandemic is to support research institutes so that researchers can find ways of handling similar pandemics in the shortest possible time. The challenges experienced by schools in preventing the spread of the coronavirus provide us with a basis on which we can start planning for future pandemics. These challenges largely occurred due to the implementation of accelerated learning in line with the revised school calendar, which were affected by the extent of the spread and severity of the virus, as reported in the media. Although the damage caused by the current pandemic to the education system cannot be quantified until a comprehensive study is undertaken, it is common knowledge that its effects will be felt sooner than later and over a prolonged period.

Finally, some of the new policies introduced by the government in an attempt to control the spread of COVID-19 and the subsequent opening of schools are likely to be sustained as long as the pandemic persists. For example, continuous funding to ensure that schools maintain the highest hygienic conditions for the safety and good health of school-going children may be a priority of the Government of the Republic of Zambia. Similarly, the promotion of educational programmes using radio and television for pupils may continue to support learning even during school holidays.

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