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Early Impacts of Covid-19 and Government's Intervention and Prevention Actions in South Africa

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ABSTRACT This paper examines the early impacts of Covid-19 and policy response in South Africa. The study employed a scoping meta review of existing literature on the impacts of the pandemic. Current literature on the epidemiology, vulnerability and preparedness as well as socio-economic impacts of Covid-19 and policy response was collected and summarised. The findings reveal that South Africa was affected and the viral incidence was highest in Cape Town. The pandemic affected social interaction and economic activities through lockdown and social distancing policies. There was a reduction in gang violence and alcohol related deaths. Large social relief applications showed how poor households are vulnerable to external shocks. The loopholes in the health care system were also exposed. Corporate financial and operating activities were affected leading to retrenchments or temporary lay-offs. Measures to strengthen health care systems, value chains and social protection as well as build economic resilience must be adopted.

INTRODUCTION

Coronavirus disease 2019 (Covid-19) also named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a respiratory illness caused by a novel strain of coronavirus which is an enveloped, positive single-strand RNA virus (Wua et al. 2020). It started in Wuhan, the capital of Hubei Province, China in December 2019 and epidemiological investigations led to the belief that it emerged from seafood (Wu et al. 2020). The virus has spread globally and the number of cases are increasing exponentially daily. The typical clinical symptoms of this virus were found to be fever, dry cough, breathing difficulties, pneumonia and headache and may result in respiratory failure and death (Zhou et al. 2020). It has been found that fever normally exceeds 39 °C but older patients or those with immunodeficiency may not develop fever (Huang et al. 2019). On the 30th of January 2020, the World Health Organization (WHO) declared that the outbreak constitutes a Public Health Emergency of International Concern (PHEIC) and on the 11th of March 2020 it was declared a pandemic.

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Close to 5.8 million people have been infected with close to 360 000 deaths globally as of 29 May 2020 (Johns Hopkins University). The highest number of cases are in America with close to 1.4 million infected people with close 100 000 deaths to date as of 29 May 2020. Europe is the second continent with the highest number of cases and deaths with Britain recording the highest number of deaths of 32 000 as of 5 May 2020. In Africa, the highest number of cases are found in South Africa (SA) with about 27 403 confirmed cases and about 577 deaths as of 28 May 2020 although there is a possibility of underreporting due to low testing facilities in poor communities or even errors that might be more critical for estimating the number of cases.

The first case of Covid-19 infection in SA was in KwaZulu Natal Province on the 5th of March 2020. Subsequently, new cases were recorded in other provinces and Western Cape Province became the epicentre with the more than 60 percent of the total cases and fatalities as of 29 May 2020 (NDHSA 2020).

There still is a lot of research being undertaken but it is believed that it spreads mainly through close contact from one person to another in droplets of the infected person when the person coughs, sneezes or talks (Li et al. 2020). There is a possibility that these droplets

can enter the noses or mouths of nearby people. Recent studies showed that even people with no symptoms can spread the virus without knowing. Several measures have been put in place by the government of South Africa to curb the spread of the virus and mitigate its effects on the economy and livelihoods. These efforts have been applauded by the United Nations as timely and effective even though critics have identified some loopholes. It is against this backdrop that the study seeks to examine the early impacts of Covid-19 and government policy responses in South Africa.

Objectives

More specifically, the study seeks to:

1. Examine the measures put in place by the government to curb the spread of the virus.
2. Assess the socio-economic effects of Covid-19 in South Africa.
3. Analyse policy interventions to prevent the spread of the virus and mitigate its effects on South Africans.

METHODOLOGY

The study covers the period from March to May 2020. This period allows us to capture the early events from when response was minimal to lockdown period and beyond. Secondary data was collected from Statistics South Africa and Department of Health. The study focussed on South Africa because of its distinctiveness from other African countries. According to Statista (2020), South Africa received 10.29 million international tourist arrivals in 2018 coming second after Morocco with 12.29 million. South Africa has a large immunocompromised population owing to high prevalence of HIV/AIDS (Kharsany and Karim 2016), tuberculosis and diabetes. South African economy is the second largest in Africa, has the highest inequality and with president Ramaphosa being the African Union chair, the country becomes a key focal point for Africa-wide policy responses. The country was also noted to have the highest number of corona virus cases.

The study uses a scoping meta review of existing literature including news networks, websites and blogs. Limited research has been carried on the novel virus especially on its socio-economic effects. Scoping reviews are useful when examining areas that are emerging to clarify key concepts and identify gaps (Peters et al. 2015). A qualitative description of the socio-economic effects was carried out and results were presented using frequency distribution and graphs.

RESULTS

The results include the following: measures to curb the spread of the virus, findings on socio-economic impacts and government policy responses.

Control Measures taken by the SA Government

Since, the first case was reported on the 6th of March 2020 there was an exponential growth in infections hence non-pharmaceutical measures were taken to stop the spread of the virus. These include border closures, testing and quarantining of those who are positive, contact tracing and finally lockdown. South Africa was fairly fast in responding to Covid-19 and there was coordination among all departments of the government and consultations across society (Vandome 2020). The different departments have implemented strategies that align with government's goal of minimising the spread of the virus as well as its effects.

Lockdown

The South Africa government locked the country from midnight on the 26 of March 2020 for 21 days. When the infections continued to increase (402 cases), they extended the lockdown by 14 days. There were severe restrictions on travel and movement. They came up with five levels of lockdown of which the full lockdown was level 5. On this level no-one was allowed to leave home except to buy essentials like food and medication. Only industries/companies which provide goods or services classified as essential were allowed to operate such as supermarkets, bakeries and pharmacies. To make sure that people adhere to the restrictions/regulations, the South African National Defence Force was deployed to complement the police.

On 22 May, the minister of police reported that 230 000 cases were opened against people for contravening lockdown rules. There were isolated reports of army and police brutality with one fatality reported. After the 35 days of total lockdown, the country moved to level 4 where some companies were allowed to open and some people were allowed to go back to work (NDH-SA 2020). Road blocks were mounted so as to control movement of people (only those with permits allowed) and to check if motorists are adhering to regulations. Interprovincial travel was still not allowed in level 4.

The Use of Face Masks

The use of masks by ill individuals was also recommended by some health authorities in other countries to prevent onward transmission (Chughtai et al. 2013). USA Centres for Disease Control and Prevention (US CDC), also advises the use of simple cloth face coverings to slow the spread of the virus. In South Africa during level 4 of lockdown, all citizens were required to wear masks when in public places such as grocery shops or travelling on public transport. Since surgical masks/N-95 respirators are in critical supplies, it is recommended that they should be reserved for frontline workers. The use of surgical face masks was originally meant to protect patients from wound infection and contamination from surgeons during surgical procedures, and at a later stage to protect healthcare employees from being infected by patients (Leung et al. 2020). Although the use of these face masks is being encouraged, there is little information on their efficacy in filtering respiratory viruses and reducing viral release from an individual with respiratory infections (Chughtai et al. 2013; Leung et al. 2020). A study on surgical masks was recently carried out by Leung et al. (2020) and they demonstrated their efficacy to reduce coronavirus detection in large respiratory droplets and aerosols. They concluded that their use by ill people can reduce onward transmission thus controlling COVID-19 but they are not recommended for use by young children under the age of two years (Leung et al. 2020).

Due to the shortage of medical grade masks, the SA government allowed the production of cloth masks to be used although they cannot prevent the risk of contracting the virus if it is in very fine droplets. These masks when manufactured using fabrics carefully chosen and designed are believed to offer some degree of protection and reduce the transmission of the virus when talking, coughing and sneezing. Since researchers believe that the virus enter the human body through the nose, mouth and eyes, the proper use of masks may act as a barrier to touching one's face with contaminated hands hence preventing infection.

The department of trade and competition have authorised Clothing and Textile Manufacturing Industry to make cloth face masks using its guidelines that they developed through research, recommendations from organisations such as the World Health Organisation (WHO 2020a) as well as engagements with University of Stellenbosch, University of Witwatersrand, the Southern African Clothing Textile and Workers Union (SACTWU) and National Department of Health. The major requirement of the face cloth face mask is that it should be able to act as a physical barrier to small droplets (>5 μm) as indicated in WHO Report 8, Novel coronavirus 2020. They should also be washable, reusable, comfortable, and should not make breathing difficult.

The only disadvantage of using face masks could be discomfort and might lead to the breathing of some of your own exhaled air particularly when the fabric selection is poor.

Communication and Raising Awareness

Some mobile networks on behalf of the SA government are sending messages about Covid-19 on a daily basis to remind people to stay at home and giving information about the virus although there is a possibility that people might ignore messages from numbers that they do not know. Toll free and Whatsapp numbers were set up for ease of communication. This is an important initiative since the population needs to be informed about the virus and get as much information as possible. Information is also widely available on the internet and social media platforms. However, a lot of fake news has circulated on these platforms and the government announced that circulating fake news is a criminal offence. Two channels to report fake news were opened; Real411 website and Whatsapp. The

President and government officials effectively communicated with citizens through national television about developments pertaining Covid-19.

Other Control Measures

South Africa is one of the very few countries that banned the consumption and selling of alcohol which contributes 3 percent to gross domestic product (GDP) although there is no scientific evidence that alcohol and smoking helps curb the virus. This helped in promoting social distancing and reduce alcohol related mishaps. The ban on alcohol and illicit trading deprive the fiscus of tax revenue as a result of unpaid customs duties, excise duties and value-added tax, and harms legitimate traders and also contribute to unemployment. The ban on tobacco was met with resistance culminating into a legal battle of government against British American Tobacco and other bodies in the industry such as Fair-Trade Independent Tobacco Association (FITA).

The SA government embarked on screening and testing of people and as of 13 May 2020, the field workers had screened over 9 million people and tested about 370 000 people (NDHSA 2020). Contact tracing was also done when someone tests positive. Those who might have been exposed to the virus were asked to self-quarantine to reduce further spread.

The use of hand sanitizer that contains at least 60 percent alcohol is recommended. Businesses are required to sanitise their customers at the entrance to kill the virus. In some cases, there is no testing of the sanitizers to make sure it contains the required alcohol percentage as most people just mix and sale. In addition, the government emphasized the hygienic practice of washing hands regularly with soap and disinfecting frequently touched surfaces. The government emphasised that workplaces and schools should be re-organised to ensure a social distance of at least 1 metre is maintained (Jefferson and Katz 2020). The government announced that no gatherings will be allowed of people more than 50 even in churches and funerals. Even though the government encouraged social distancing, this is not possible in high density informal settlements where shacks are too close to each other. It also encouraged people to work from home whenever it was possible to do so. Public transport operators were mandated to sanitize the minibus after every trip and to reduce the number of passengers by operating at 70 percent capacity. Social distancing in these instances has cost implications. Companies, schools and government departments have to be innovative in order to make their spaces social distancing compliant.

The South African government repatriated its citizens from Wuhan, China where the virus started. They were then quarantined for 14 days at a hotel in Polokwane and were allowed to join their families when they tested negative. Some citizens were also repatriated from the United States of America which is now leading in the number of Covid-19 cases.

Socio-economic Impacts of Covid-19 on South Africa

Covid-19 has affected the socio-economic and political outlook of the world irrespective of borders. It is no longer business as usual as the world braces itself to fight the pandemic. Social distancing and 'stay-at-home' has disrupted many social activities which are vital for life leading to an increase in mental health associated challenges such as anxiety and depression (Ozili 2020).

Impact on Education

The effective continuity of good education is fundamentally dependent on the health of learners and healthy learning environment (Mahaye 2020). A nation-wide call for the closure of schools in South Africa was announced on 18 March 2020. This included day care centres, preparatory and primary schools, high schools and tertiary institutions. According to Ozili (2020) these closures have impacted on 85 percent of student population in Africa. To ensure continuity of education, the civic society has also stepped in for example Mindset Network on DSTV offer classroom solutions thereby allowing remote learning. Online learning has also been recommended but this remains a huge challenge in African countries without robust online learning platforms (Mahaye 2020; Ozili 2020). Subjects such as Mathematics are difficult to

understand when taught via e-learning platforms and on the other end subjects such as Chemistry and Physics involve practical modules which can only be taught in laboratories and these can no longer be done due to lockdown.

Impact on Livelihoods

Bethune and Korinek (2020) analysed the externalities that arise when social and economic interactions transmit infectious diseases such as COVID-19. Statistics South Africa (2020) noted that the actual impact of the pandemic remains unknown until critical variables can be identified. These variables have not been adequately identified and the actual costs of Covid-19 have been miscalculated with implications on how society ultimately overcomes the pandemic (Bethune and Korinek 2020).

Some companies were closed due to lockdown and some were closed due to the fact that some of the workers tested positive. For instance on the 5th of May 2020, SASCO in Durban closed after 11 workers tested positive for Covid-19. Some closures have resulted in loss of jobs especially in the small to medium enterprise (SME) sector. The hardest hit are informal traders and commission based employees whose stream of income was totally cut-off. Not only in SA were jobs lost, but also in other countries such as USA where the unemployment rate jumped to 14.7 percent in April 2020, the highest level since the Great Depression.

Smallholder farmers incurred losses on their produce and the majority of rural farmers rely on farm incomes for sustenance (Mujuru and Obi 2020). Many were locked in rural areas without adequate amenities exacerbating food shortages. The pandemic facing the informal sector became double-faced; inside the house hunger was glaring its evil eyes yet the anticipation of making a living was dashed by the virus out there.

The South African Police Service (SAPS) reported a decline in contact crime during lockdown comparing with the same period in the previous year. Four thousand gang violence related deaths in Cape Town alone were recorded between January 2019 and March 2020. In the first week of lockdown the overall homicide rate fell by more than 70 percent. Table 1 summarises the changes in contact crime.

Economic Impact

There are no quantitative studies that have been carried out to assess the magnitude of harm inflicted on the South African economy by Covid-19. The closure of businesses resulted in a reduction in government revenue through less tax revenue being collected. The minister of Cooperate Governance and Traditional Affairs, Dr Nkosazana Dlamini Zuma announced on the 26th of May that the South African Revenue Service (SARS) is projected to lose R250bn in revenue collection.

However, since the implementation of lockdown, prices of some essentials have gone up and others have gone down. Statistics South Africa (2020) reported a 0.5 percent decrease of essential products using the Essential Product Consumer Price Index (EPCPI). Major price changes in food using the week on week EPCPI for the week ending 23 April 2020 were recorded as follows; with increases in fruit and cooking oil by 6.5 percent and 3.5 percent respectively, decreases in rice (2.8%), frozen pastry (11.4%), cheddar cheese (8.2%) and margarine (5.6%). Regular washing of hands and cleaning of surfaces led to an increase in demand for household maintenance products and the prices of dishwashing liquid and toilet cleaners rose by 2.55 percent and 2.2 percent respectively. There have been isolated reports of businesses charg-

Table 1: Contact crime before and during lockdown in South Africa (SAPS 2020)

	29 March 2019 to 21 May 2019	*27 March 2020 to 19 May 2020*	*Case decline*	*Percentage change (%)*
Murder	2 970	1 072	1 898	63.9
Rape	5 350	919	4 431	82.8
Attempted murder	2 571	1 132	1 439	56.0
Assault	22 144	4 348	17 796	80.4
Robbery with aggravating circumstances	14 822	5 397	9 425	63.6

ing higher prices but the Competition Commission of South Africa has showed no mercy on such unscrupulous businesses. The stabilisation of basics' prices during lockdown ensures minimal disruptions on livelihoods for income earners.

As of 5 May 2020, it was reported on the South African Broadcasting Cooperation (SABC News) that the South Africa's new car sales plunged by 98.4 percent. Such a huge drop in sales has immense adverse effects on companies' profitability and hence ripple effects may be felt through non-payment of salaries and or retrenchments. Worst case scenario would be closure of companies that fail to recover their losses post-Covid-19 era thereby exacerbating the already disturbing unemployment and poverty rates in the country.

Some hospitals were closed due to Covid-19 as some workers tested positive. Two big hospitals in UKZN were closed putting a lot of pressure on the remaining health facilities. In other parts of the Eastern Cape Province, clinics were only taking 60 to 80 patients per day and the rest were asked to go back home and come the following day. This could be inconveniencing other people who would have travelled long distances or need immediate medical attention.

As the country was under lockdown, the closure of the border meant that there was no travelling allowed either by road or air. The metro rail, all bus operators, taxes, Ubers and South African airways among others were not operating and no money was being generated.

The foreign nationals were heavily affected especially those without permits to stay or work in South Africa. Most of them worked in the informal sector as domestic workers, vendors or traders selling on the streets or door to door. Such illegal immigrants do not qualify for the benefits provided by the government. This has seen many of them being repatriated or returning to their countries.

Government Interventions to Minimise Impacts of Covid-19

The outbreak of Covid-19 in South Africa was declared a national pandemic and hence measures had to be put in place to tackle the challenges ahead. The government of South Africa had to re-allocate and mobilise funds to help the vulnerable with cash transfers and food parcels, provision of water and water tanks and other essential services. The president announced the 'extraordinary corona virus budget' of R500 billion rands which was to be sourced from internal sources (UIF) and external sources (World Bank and International Monetary Fund). The budget stands at 10 percent of GDP and recipients include health sector being the priority, social grants for the poor and vulnerable and subsidies for business and wages. The IMF availed $4.2 billion but the Minister of Finance announced that the government would negotiate for a facility ranging from $55 to $60 million. He further explained that there were no onerous conditions as this borrowing was specific to the crisis.

Top government officials including the president donated 33 percent worth of their 3 months' salary by taking a pay cut contributing R13.4 million towards solidarity funding. The government also accepted support from local billionaires such as Patrice Motsepe and Oppenheimer and Rupert families, as well as individuals raising in total R2.2 billion by 9 April 2020. The fight against the pandemic requires the government to collaborate with private sector, civic society and households and present a united front.

Measures were put in place to support businesses, farmers and other organisations so as to sustain production levels through state loans or credit (Ozili 2020). The agriculture and food sector was allocated R1.2 billion under the auspice of the Department of Agriculture, Land Reform and Rural Development (DALRRD). The stimulus fund is a short-term development initiative (for the duration of six months) primarily meant to assist small-scale farmers who are financially distressed to minimize disruptions in the supply chain. Additional funds were availed through the Social Development Department which allocated R350/month social relief of distress grant for individuals in dire need. As at 22 April 2020, a recipient of this grant would afford to purchase approximately the following basket of commodities; 10kg mealie-meal, 2litres cooking oil, 5kg rice, 7kg pocket of potatoes, crate of eggs, 2kg sugar, 2.5kg flour and 2kg frozen chicken using EPCPI. This would go a long way in

alleviating hunger although not sufficient to sustain livelihoods in the absence of other streams of income.

Some resources were released through a special benefit created under the Unemployment Insurance Fund (UIF) as per the Directive Covid-19 Temporary Employer/Employee Relief Scheme to prevent an escalation of the infections. This was funded through the National Disaster Benefit to enable employers to pay employees temporarily affected by the pandemic when the country was on lockdown to save jobs. Some informal workers, poor families and unemployed people were also assisted from the social relief package that was introduced by receiving special Covid-19 grant for a period of six months.

Implications on Internal Migration

The district-based lockdown would see the country's districts being effectively designated into areas of vigilance (less than 5 cases per 100 000), emerging hotspots (less than 5 cases per 100 000 people, but rapid rise), hotspots (more than 5 cases per 100 000 people). Hotspot areas have been identified as those with high cases and rates of infection thus, high risk. In South Africa the four leading provinces are Western Cape, Gauteng, Eastern Cape and KwaZulu Natal in that particular order as shown in Table 2. Fourteen districts have been identified as hotspots, 13 of these are from the four leading provinces and only one district is from Free State Province. The Western Cape Province is presently the epicentre with the highest number of confirmed cases and deaths which accounts to about 65 percent of the total cases in the country.

Table 2: Confirmed Covid-19 cases, deaths and recoveries as of 31 May 2020 in South Africa (National Department of Health South Africa 2020)

Province	*Confirmed cases*	*Recoveries*	*Deaths*
Western Cape	21382	503	11099
Eastern Cape	3927	82	1987
Gauteng	4003	33	2060
Kwazulu-Natal	2545	52	1248
Limpopo	177	3	143
North West	175	1	45
Mpumalanga	121	0	72
Northern Cape	69	1	31

Covid-19 is spread through movement hence, it is paramount to analyse the movement of people across provinces and the interconnectedness thereof. The WHO regional director for Africa, Dr Matshidiso Moeti noted that about half of the countries in Africa are experiencing community transmission thus understanding the interconnection of provinces, cities, towns and communities is paramount in fighting the spread of the virus. Due to the interconnectedness of the world, a virus which started in Wuhan, China has spread across the planet. Figure 1 shows internal migration within South Africa from 2016 till 2021 when the next census would take place. The four leading provinces were picked to analyse movements within the country.

Using Figure 1, it is observed that Gauteng is highly connected with all provinces due to its strong economy and top three provinces are Limpopo, KwaZulu Natal and Eastern Cape. Once people migrate, they establish social and economic ties between two provinces. Eastern Cape has a striking outlook when it comes to in-migration, it is highly connected to Western Cape, Gauteng and KwaZulu Natal provinces. This has socio-economic implications. Family gatherings due to funerals, celebrations and ceremonies would imply movement across the provinces and these require strict monitoring from authorities.

Population density measures the number of people per square kilometre in a given area and time. This variable may also help in identifying potential hotspots. It is expected that the higher the population density, the higher the number of Covid-19 cases. However, this has not been the case considering Gauteng and Western Cape as shown in Figure 2. With reference to Figure 2, a comparison of Covid-19 cases and population density for Gauteng and Western Cape contradicts expected results. A look at Eastern Cape also shows that the province is sparsely populated with 40 people per square kilometre but it is third leading in the number of active cases. In as much as there is no relationship at this stage, the lockdown restrictions should be cautiously eased in such areas. Further statistical inferences may assist in ascertaining the relationship.

Age- Gender Perspectives

Covid-19 does not discriminate against race or nationality. In South Africa, it is noteworthy

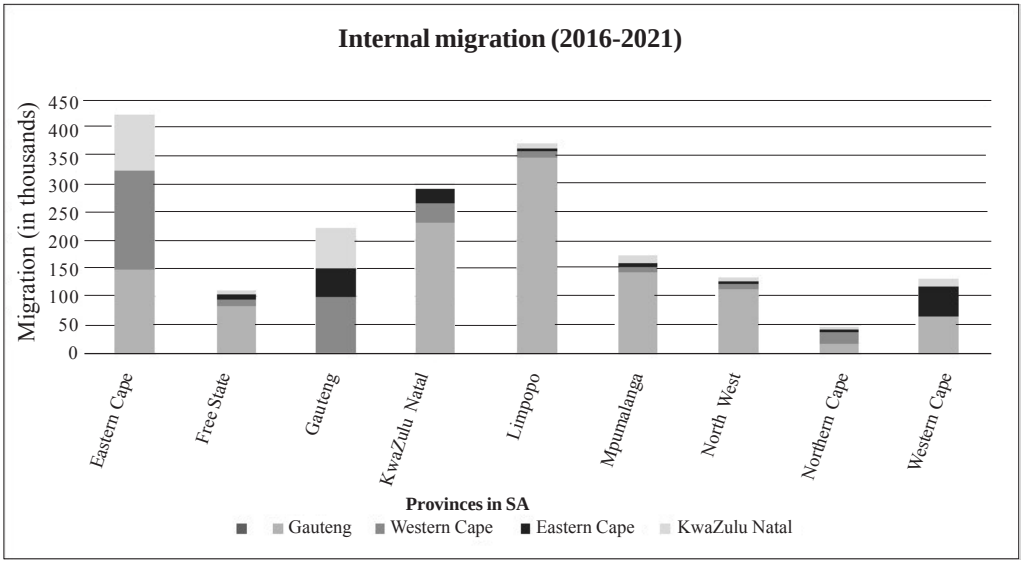

Fig. 1. Internal migration across Covid-19 hotspots
Source: Statistics South Africa 2019 and South Africa Institute of Race Relations 2020

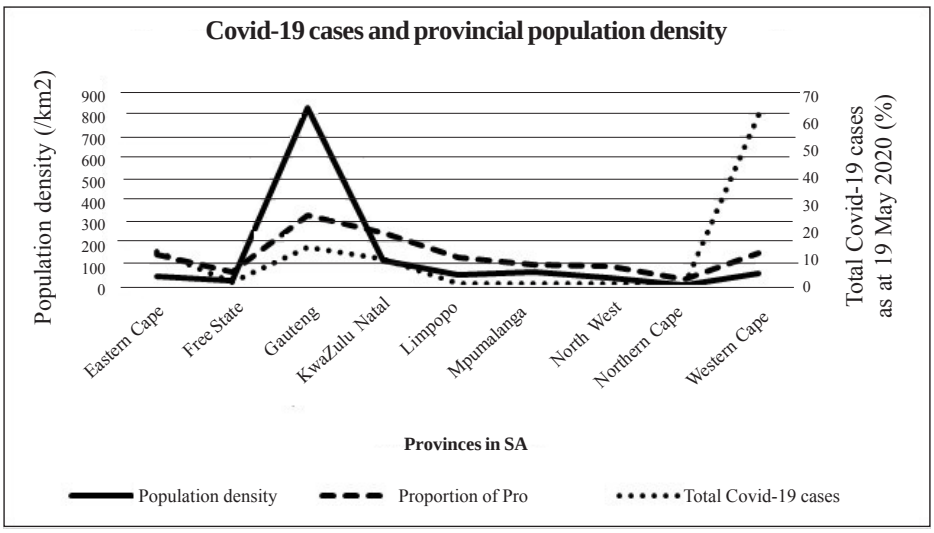

Fig. 2. Covid-19 cases and population density
Source: National Department of Health 2020

to consider the distribution of the virus across age and gender. According to data released by the National Department of Health on 25 May 2020, high mortality rates were recorded between the ages of 40-79, with the 60-69 age group recording the highest fatalities. There is high incidence of the virus among males with 53.6 percent of deaths and 46.2 percent deaths in fe-

males. There are slight changes in the number of deaths across gender in the month of May. The rate of mortality for male decreased by 1.9 percent and females increased by 1.7 percent from figures reported on 19 May 2020, with 0.2 percent reported as unknown gender.

DISCUSSION

The paper focussed on measures to curb and mitigate the socio-economic impacts of Covid-19 in South Africa. From the findings, it can be argued that the government took stringent steps in the first three months to control the spread of the virus. According to Ozili (2020) a number of common policy responses by the South African government as at 30 April 2020 were rated as strict. These include closure of schools and work places, restrictions on gatherings and international travel controls. Other measures were considered to be less strict and these include cancellation of public events, closure of public transport, stay home and restrictions on internal movement. A surge in the number of new cases resulted in a total lockdown where movement was restricted within a town or city and curfews were put in place.

The government has provided stronger safety nets through the Department of Social Development. The informal sector was severely affected by the pandemic and several households benefited from the relief grants as well as increased child grants. The government has one of the largest social security systems in Africa and it is vital where the South African society is marked with huge inequalities dating back to apartheid. However, this may have adverse implications on the taxpayer in future and also further constrain the fiscus.

A remarkable decline in contact crime was recorded in the country between March and May 2020. Lockdown may have reduced the statistics but certainly it has not solved the problem of crime. The lift on the alcohol ban in June saw an unprecedented increase in alcohol related road accidents and fatalities. There should be a holistic approach by the SAPS which seeks to address the problems at the grass root level and this requires concerted efforts of everyone in the society.

Covid-19 has proved no discrimination across social and economic platforms. It affects the rich and the poor, from multinational companies to small 'spaza' shops on the street corners. This calls for an approach that reduces the discomfort of one party while inflicting pain on the other. In Pareto Optimality principle, reallocation of resources in order to feed and shelter the poor should result in the rich losing in the form of taxes. The short-term relief from internal and external donors and funders will not sustain the medium to long-term policy goals by the government to curb the spread of Covid-19 and alleviate its negative impacts. Since, equity is not addressed in this principle it is imperative for the government to embark on wealth distribution and social welfare programmes to reduce inequalities. This debate has been ongoing in Africa resulting in some failed land reform policies.

In his address on 24 May 2020, the president of South Africa cited serious shortages in testing kits which has hampered efforts to expand testing country wide. This led to the prioritisation of certain provinces with high rates of infections. Waiting for too long for test results might lead to more infections from the tested persons hence there is a need for an increase in the local manufacturing of test kits instead of heavily relying on imports from companies abroad which are overwhelmed with a possible delay in getting them due to cancellation of international flights. The number of tests done should be increased and polymerase chain reaction (PCR) tests should be the standard for diagnosis instead of trying to culture the virus.

There is a huge challenge on how to restart economic and social activities while minimising Covid-19 impacts and resurgence of transmission. In the immediate term, the South African Government used lockdown, increased testing, detection mechanisms and emergency relief to mitigate Covid-19 transmission and impacts. These policy measures should continue in the short-term period in addition to focus on Small to Medium Enterprises SMEs, households and the informal sector. In the medium to long term the government should focus on strengthening health systems, extend health and social protection coverage. Opportunities exist to make private health care affordable to poor citizens.

CONCLUSION

The COVID-19 pandemic is definitely a public health problem for all countries worldwide. The measures taken by South Africa have worked to some extent in reducing the spread of the virus but its rapid transmission requires countries around the world to work together in increasing special attention into disease surveillance systems and readiness among others. Easing of lockdowns should be gradual to avoid risk in increase in infections in the communities. South Africa is a key focal point for Africa-wide policy responses as it is one of the strongest economies being led by a president who is the current Chairperson of Africa Union. It is crucial for Covid-19 to be under control in South Africa to avoid spill-overs in other African nations. With the highest in-migration of foreign nationals in Southern Africa region, the repatriation of non-South African citizens may result in increased transmission in destination countries if proper procedures are not followed.

RECOMMENDATIONS

Covid-19 outbreak is currently not under control and there is a high risk of it infecting more people, hence there is a need to manage the outbreak through cooperation and following the orders or regulations of the lockdown. More health facilities should be constructed and necessary equipment procured in case the virus gets out of control. Shortage of medical masks is a huge challenge in South Africa and it has been recommended that they should be used by health workers but still it's overwhelmed. PPE could reduce the spread of infections among workers.

Although the use of masks is currently being practised by almost all people in public places, there is challenge as most people are making their own masks using the wrong fabric which has large pore sizes offering very low to no protection. Community engagement to offer more knowledge on fabric selection should be conducted with small-scale tailors who are making a sizeable quantity of cloth masks. It is recommended that a coating which is hydrophobic or water repellent should be applied on the cloth masks but more research should be conducted so that the adhesion of the coating is good on fabrics. The authors also recommend the use of an antimicrobial coating on the cloth masks so that any virus that happens to land on the masks will be killed.

Frontline workers such as nurses, doctors and till operators are always in contact with people at work and they should be tested regularly. The risk of exposure is very high and a test is likely to be valid only at the time at which it was taken because no one knows how many people that person will be in contact with after being tested. Measures to prevent transmission in shops, healthcare facilities and other frontline workers (hand sanitisation, social distancing and face masks) should be strictly adhered to in order to safeguard these risk groups.

The healthcare systems should be strengthened and proper planning must be done in case there is resurgence in COVID-19 cases. The number of community health workers should be increased through training to conduct contact tracing. The community should be taught that even if they put on cloth masks, it is still very important to practise essential precautionary hygiene and social distancing and they should always inform local health authorities whenever they identify suspected cases.

The researchers recommend that the use of gloves be discontinued in some supermarkets or fuel stations. Some till operators in some small shops owned by individuals wear gloves hence they end up not using sanitizers because they feel protected. This is a huge problem because repeated use of gloves throughout the day without proper sanitisation may increase transmission.

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